THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY

A UNITED PUBLICATION **VOLUME 5, NUMBER 7 JULY 1993**

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Rees Jones' latest renovation project — The Gleneagles Golf Course, a venerable Walter Travis design in Manchester, Vt. - has opened for play. Q&A with Jones, page 25.

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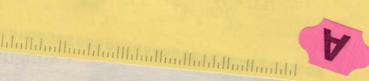
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Michael Hughes of the NGCOA

New tax laws, economy drive trend toward for-profit clubs

By MARK LESLIE

Changing tax laws and difficult economic conditions are causing a massive move of not-for-profit golf courses into the for-profit

That change of status is "a major trend right now," said Kathi Driggs, vice president of Club Managers Association of America (CMAA) in Alexandria, Va. "A lot of our clubs - clubs that have been traditionally not-for-profit - are realizing now it is more feasible for them to be for-profit."

"There's no question it's going on," said Michael Hughes, executive director of the National Golf Course Owners Association in Charleston, S.C. "With the economic difficulties we've experienced in the last two or three years, the private clubs have lost members. Ones that had long waiting lists, have no waiting lists."

Driggs said a change to atue might cost

Sometimes you san't wait on a grow-in, page 46 New life for Arizona projects

By MARK LESLIE

SCOTTSDALE, Ariz. — The Arizona golf course construction industry has a

One of the country's largest water development systems is on-line and golf course projects - on hold for years because of lack of water - are lining up to buy into the new supply. As many as 14 new courses could be built now that nonpotable water has started flowing from the Central Arizona Project (CAP) canal north along Pima Road to the northern reaches of Scottsdale. That is prime golf

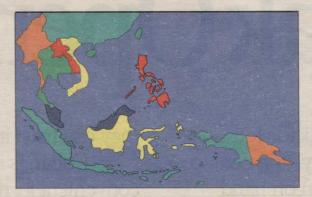
course territory featuring the likes of Desert Mountain Properties, The Boulders, Troon North, Desert Highlands and the Tournament Players Club of Scottsdale.

The \$14 million Reclaimed Water Distribution System (RWDS) is the newest phase of the master plan, begun in the 1950s, to irrigate the West. Next up will be the 1995 start-up of an effluent plant that will treat water from the major development area in north Scottsdale. That water will be reinserted into the pipeline,

Continued on page 32



Or is it Intergraph? It's the latter, a computer design system used by Nicklaus Design architect Carl Mistretta to render this VDT image of no. 17 at the TPC Kaupulehu in Hawaii. See page 25.



One-stop shop comes to Asia

WAL PHILLIPS

GAPORE — After months of posturing on both the Golf Course Superintendents Association of ica (GCSAA) and Connex Private Ltd. appear to joined forces, thereby creating a single megashow serving the entire Asia-Pacific region. part of a written statement, GCSAA indicated the

event will be "two events under one roof," not a single show. Each show will retain its own staffs, resources and, presumably, autonomy. These simultaneous events will be held March 24-27, at the Interna-

tional Merchandise Mart in Singapore. However, further details on the two-show, one-roof arrangement - including proprietary issues - remained sketchy as Golf Course News went to press in

Continued on page 41

Karsten Lab to address desert issues

By MARK LESLIE

TUCSON, Ariz. - Golf courses in desert regions can expect to reap benefits from major research that will be conducted at the University of Arizona's new Desert Turfgrass Research Facility and Karsten Laboratory for Turf Science here.

"We have four or five different, specific problems we have in the desert that need to be addressed," said Dr. David Kopec, Extension specialist for turf in Arizona. Major targets will be developing irrigation schedules and water-use programs, breeding new turfgrasses, dealing with effluent, and perfecting techniques for weed control overseeding.

Continued on page 24

NEWSPAPER



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CIRCLE #101

NEWS IN BRIEF

HANA, Hawaii - A majority of area residents polled oppose Keola Hana Maui Inc.'s proposed 200-acre, 18-hole golf course project. Of the 726 people who cast ballots, 388 - or 53.4 percent - said "nay." The issue of the golf course will come before Maui's County Council's Planning Committee soon.

SCOTTSDALE, Ariz. —TRIMS Software International has announced the TRIMS \$1,000 Scholarship Award, bestowed annually on a student studying turfgrass management in a school or college with TRIMS Grounds Management Software as part of its curriculum. Students may receive information on the TRIMS Software Scholarship by contacting their turfgrass adviser or TRIMS at 1-800-733-9710.

JANESVILLE, Wis. - Rock County officials will soon be accepting proposals for the development of an 18-hole golfcourse on 200 acres of county-owned land just south of the southern Wisconsin airport. The land was specifically set aside for recreational purposes under the Rock County Airport Master Plan.

WILLOUGHBY, Ohio - Lake Metroparks recently spent \$2.7 million to buy the 18-hole Pine Ridge Golf Course, located in Wickliffe. Apparently, the public approves. Since the course went municipal in May, golfers in the immediate area have flooded the phone lines of Lake Metroparks Executive Director David Noble. Greens fees and course hours are the main concerns.

DIXON, Ky. — Golf developer Mike Walker has completed the first nine holes of his Wildwood Golf Course complex just off Kentucky 132 between Dixon and Sebree. Walker, who broke ground in July of 1992, also has plans to build an adjacent 18-hole championship course by next summer.

In California, Coastal Trails finally gains approval...

RANCHO PALOS VERDES, Calif. - The California Coastal Commission's recent approval of an oceanfront golf course here represents a successful conclusion to a four-year battle waged by the local Zuckerman family and Orange County developer Barry Hon.

Local permits are still needed for the Ocean Trails Course at Palos Verdes. And an environmental group — the Coastal Conservation Coalition — has enlisted the support of such heavyweights as the Sierra Club and has a lawsuit pending to stop

But the Zuckermans and Hon — who recruited some big-name support of their own in the persons of state Assembly Speaker Willie Brown and acting Senate President David Roberti — overcame their biggest hurdle April 14.

That's the day the Coastal Commission gave its blessing to the 260-acre project. In so doing, it overruled a

staff recommendation that would have required tripling the amount of land set aside as a public park while reducing the course to just a dozen holes.

"We saw limiting the course to 12 holes as a way of effectively killing the project," Peggy Zuckerman said. "Conditioning something to death is a well-known method of stopping a project in California."

As is, developers agreed to many conditions. Approximately 30 acres of coastal sage scrub areas around the course and another 34 acres along oceanside bluffs have been set aside for public access and as a nesting area for the California gnatcatcher, a threatened species.

"We chose to treat the gnatcatcher as if it were endangered [rather than athreatened species that requires less protection],"

Continued on page 8



... while Ahmanson Ranch project remains in bureaucratic limbo

By PETER BLAIS

VENTURA, Calif. - Aland deal and lawsuit must still be settled before the longawaited Ahmanson Ranch golf project becomes a reality in the hills abutting Santa Monica Mountains National Recreation

The proposed Ahmanson Ranch community includes two golf courses, 3,050 homes, 400,000 square feet of offices and shops, and 300-room hotel. Developer Ahmanson Land Co., a subsidiary of Home

Savings of America, first proposed the project more than six years ago.

A complicated arrangement was near completion earlier this year that would have placed 10,000 acres of private property under federal and state control in exchange for county approval of the multi-milliondollar development.

The land was to be acquired through developer donations as well as funds provided by the Santa Monica Mountains Conservancy and federal government. Approximately 7,000 acres owned by entertainer Bob Hope was part of the package.

But the deal started to unravel in late January when Hope seemed reluctant to part with some of the property, according to Jeff Segol, a reporter who covered the story for the Ventura County Newspapers.

The National Park Service had placed a large amount of money in escrow to cover its share of the purchase. When Hope balked, the NPS threatened to use the

Continued on page 9





GOLF COURSE NEWS

Fax: 408-637-7405

Courts to decide fate of Ventura, Calif. course

lition (EC) of Ventura County has filed a lawsuit to uphold a section of the county's General Plan

seeking to halt the development of a 203-acre private golf course in the Ojai Valley

Approved by the Board of Supervisors in early February, the proposed project calls for the construction of Farmont Golf Club, an 18-hole private golf course on the north side of Highway 150.

Santa Barbara Attorney Philip

A. Seymour filed suit on behalf of the EC against the Farmont Corporation and the County of

VENTURA, Calif. — The Environmental Coa- Ventura. The suit maintains the supervisors failed

Policy that prohibits new golf courses in the county from using drinking water for irrigation unless adequate water supplies exist for the long term.

"This lawsuit aims to make Farmont abide by the rules which govern development in Ventura County, rules which exist to protect our resources and which

must be applied equally to all projects," EC member Alasdair Coyne told the Oxnard Press-Courier.

Vote sought on new golf holes

POLAND, Ohio - A quarry company may seek a referendum in November to gauge public support for its proposals to either establish a three-hole Poland Township Golf Park or relocate Moore Road.

Wayne Emmer, materials district manager for the quarry firm, ESSROC, believes the golf park is a great idea.

Emmer and Mill Creek Metropolitan Park District Superintendent William Schollaert announced at a township trustee meeting that both have

signed an agreement to purchase land near U.S. Route 224 and Moore Road where ESSROC has a limestone

The agreement calls for ESSROC to donate approximately 100 acres to the park district, which would in turn purchase another 61 acres for

Mill Creek would build and maintain a recreational complex, in which three golf holes and baseball and soccer fields have been

It won't play in Peoria, for now

PEORIA, Ill. - The Peoria Park District has temporarily shelved plans to build a sixth golf course, but the park board is pursuing the purchase of land in case a new course is needed in the future.

"The survey last year showed that our courses aren't at their saturation points," John Gostele, district supervisor of golf, told the Journal-Star in reference to a twophase, \$10,000 study done by the National Golf Foundation.

The NGF study, however, surveyed a tract of private land that may in the future make a good golf course. Preliminary estimates put the cost of building the new course at about \$3.5 million.

The district will continue to monitor the local economy and golf course demand.

Court awards Calif. man \$85K

REDWOOD CITY, Calif. - A San Mateo man who was knocked unconscious by a golf ball as he walked near San Mateo Municipal Golf Course has been awarded \$85,000 in a jury verdict.

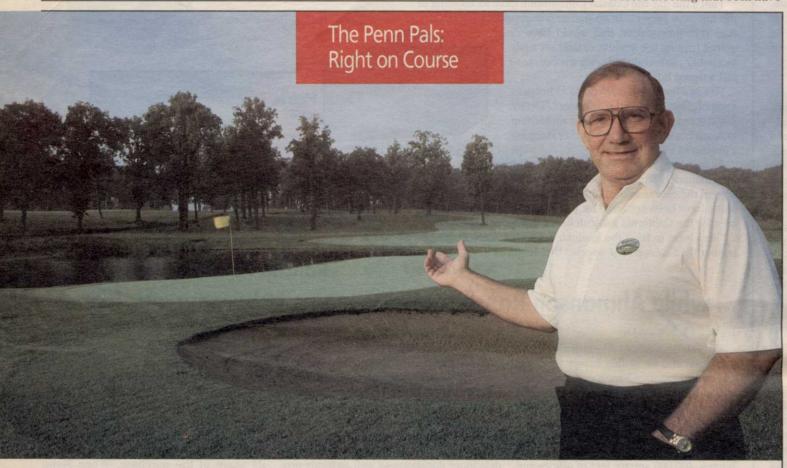
Dennis Eischen, 53, convinced the jury in Superior Court that the city was liable for the jaw injury he suffered.

According to Eschens' testimony, the ball, propelled by a golfer at the first tee, bounced in the parking lot and over an existing five-foot fence before hitting

Indiana club set to begin building

SHELBYVILLE, Ind. - Construction on one of Shelby County's most luxurious housing and golf developments may begin this year if financing becomes available.

Indian Trace, a 300-acre, \$45 million development, would include an 18-hole golf course, 200 luxury homes, and a small shopping center. Construction is scheduled to begin in October and be finished next August. Play will begin June 1, 1995. Arthur Hills Architects of Toledo, Ohio, will design and build the course.



Oscar Miles, CGCS, overlooks the 6th hole at the Merit Club, Libertyville, Illinois.

PennLinks Greens. Penneagle Fairways. Penncross Tees. The 'Penn Pals' Are Picture Perfect At The Merit Club.

Superintendent Oscar Miles, with Club President Ed Oldfield's affirmation, specified all the grassing of this Robert M. Lohmann designed club. With a clean canvas and open palette, Oscar began with PennLinks greens, Penneagle fairways and Penncross tees, framing them with bluegrass/ fine fescue/wildflower and prairiegrass roughs. You couldn't paint a more attractive picture.

Oscar chose PennLinks greens for its rapid establishment, marvelous root system, a crown and stolons that take topdressing, upright, grainless qualities and good, consistent color ... the best putting surface available.

He selected Penncross for tees because they recover from divot scars more quickly.

And the Penneagle fairways? Oscar chose Penneagle for its upright growth, reduced thatch development, low nitrogen requirement and good drought and dollar spot resistance. He seeded at 80 lbs. per acre for immediate turf development and

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erosion control. The fairways were playable in 8 weeks. Oscar's crew usually mows fairways in the evening and leaves the clippings; recycling nutrients while reducing removal and fertilizer costs.

Oscar articulates it best: "The unique coloring of the 'Penn Pals' contrasts beautifully with the grassing around them, defining the target areas. And with the dew on the bents early in the morning, they're a marvelous work of art."

Oscar L. Miles

Citizen group nixes N.M. track

zens' group has refused to endorse a water rights transfer, a move that would allow the developers of La Cienega de Santa Fe to develop a golf course, equestrian center and 140 homes.

The water rights are needed to drill a well at the nearby racetrack owned by Ken Newton, who is part of the development team. The golf course would be kept

SANTAFE, N.M. — A citigreen with treated city waste water, he said.

> To gain preliminary approval for the project last year, developers struck deals with both La Cienega and El Guicu ditch associations to replenish water supplies vital to the farming community.

> Despite this initial agreement, Friends of La Cienega, the citizens' group, recently protested a transfer of water rights to the developers.

Good times and bad times in Wisconsin

MIDDLETON, Wis. — Two proposed golf courses in the area are headed in different directions. One course is under construction, while the developers of another face legal battles.

On the sunny side, Jim Watts, developer of 18-hole Tumbledown Trials, hopes to open nine holes by the end of the summer.

The second nine could open possibly in the fall of 1994 or spring of 1995, said Watts. Madison's Art Johnson designed the course that will wind its way

around 10 ponds.

On the darker side, the Chicago and Northwestern Railroad has blocked the construction of a proposed 18-hole Scottish linkstype course, to be called Royal Lochan.

The railroad company brought an injunction against the construction of the course last year because its tracks run across the property, and it didn't want golfers crossing them.

Instead, the company requested the construction of an

overpass or underpass, which the course developers - Bob Ranguette and Brian McGettigan - felt was too costly. The dispute went to court, and the Dane County Circuit Court ruled in favor of the course developers. But the railroad appealed the case and the Dane County Court of Appeals has yet to rule on it.

In the meantime, the construction is on hold. "The railroad has cost us one whole year of developing," explained McGettigan to the The Capital Times of Madison.

R.I. city counts on Triggs GC to balance budget

PROVIDENCE, R.I. - To balance the city's current budget, city finance officials are looking at collecting \$3.5 million by having the manager of Triggs Memorial Golf Course make 20 years of lease payments immediately.

The course management firm, FCG Associates, is in the first year of a 10-year lease with the city to run the 18-hole course. FCG is scheduled to pay \$2.5 million through 2003.

However, city finance officials said they have asked the company to consider extending the lease for another 10 years and paying for all 20 years when the fiscal year ends on June 30. The lease payments would close the budget deficit, currently estimated at \$3.4 million.

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GOLF COURSE NEWS

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	6.7%	3.4
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Refer: Michigan Turfgrass Proceedings, Vol. 4, Jan. 1975 Boyne Highlands Golf Course Applied July 1973, Evaluated September 1974

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Minn. pair plan Miss. golf resort

BAY ST. LOUIS, Miss.

— Marlin Torguson and Allen Kokesch, two Minnesota-based gambling entrepreneurs, will build a golf course, hotel and entertainment resort complex around their casino in Bay St. Louis, Miss.

In addition to the hotel plans, Torguson, president and chief executive officer of Casino Magic, said the company is in the final stages of negotiations with the Arnold Palmer Design and Management Co. for design of an 27-hole championship golf course and 18-hole putting course adjacent to the casino and hotel.

"There are 14 golf courses here, and 5,000 hotel rooms on the Gulf Coast," Torguson told the *Minneapolis Star Tribune*. "It's similar to Florida with its tourism and convention business."

Hilton Head may get new layout

HILTON HEAD ISLAND, S.C.

— Talk of building a golf course in the Sea Pines Forest Preserve has surfaced again, as 172 acres of the 600-acre preserve has become available for recreational use.

Some golf enthusiasts argue a new golf course is needed to relieve overcrowding at Sea Pines courses. Nature lovers, however, want the ecological treasure — whose trails date back to Civil War horse-and-buggy days — to remain undeveloped.

The new golf course will be discussed in future planning and zoning board meetings. The issue of building a golf course in the preserve first stirred controversy in 1988.

Geneva Nat'l set to start building

MADISON, Wis. — Officials at Geneva National Golf Club hope to begin construction this fall on a scaled-down version of a Gary Player course delayed two years by environmental concerns.

Spokesman John Jachna said the club is awaiting Department of Natural Resources approval for construction of a nine-hole course entirely out of wetlands. The Player course was to have been 18 holes.

Jachna, however, indicated the club is looking into buying land north of the existing development for another nine-hole layout.

Opponents of Ky. course hopeful

COVINGTON, Ky. — Opponents of the proposed \$960,000 nine-hole expansion of Devou Park Golf Course have organized in the hopes of reversing the city's decision to expand the golf facility

The city commission approved the expansion in early May, citing the need to bring people and money to Devou.

Opponents are worried the expansion might ruin Devou's natural setting and interfere with other park activities.

One of the opponents, the

Devou Park Advisory Board, has passed around a petition as a sign of defiance to the expansionary plans.

Two planning bodies — the Northern Kentucky Area Planning Commission and the Kenton County Municipal Planning and Zoning Commission — will hold hearings to address some of the opponents' concerns.

In particular, the boards will examine how much open space the plan displaces and how much it would disturb hillsides by inducing erosion.

Calif. ponders tighter water rules

CONCORD, Calif. — To promote more water recycling, county supervisors are considering tighter water-efficiency rules that could affect existing and future golf course developments in the area.

The Supervisor's Water Committee has discussed a proposal that would require builders to install separate pipes for tap and recycled water if there exists a practical source of recycled water.

This provision would be

aimed at golf courses, parks, industrial park landscaping and shared areas or front yards of residences in large subdivisions.

Sunne McPeak and Tom Torlakson of the Water Committee also said they would look at requiring builders to use recycled water for dust control during construction if a nearby source of water exists.

They will hold more discussions before making a final decision on the proposal.



Mont. layout nearing completion

BILLINGS, Mont. - The Huppert Brothers Construction Company will complete the front nine of the new Peter Yegen Jr. Public Golf Course sometime this month. The \$2 million Yegen course is the seventh new course the Huppert Brothers have built since 1981.

Montana has only two companies that specialize in golf course work — Huppert Brothers and Tom Roe & Sons Construction of Big Timber. Both

family-owned companies have built courses throughout the Rocky Mountain region.

Huppert Brothers is a true family business. Besides the two brothers and their father, Kevin's wife, Patty, works on the construction site. Fred's wife, Darcie, does the company

"This is a good business to be in during the 90s," Kevin told the Billings Gazette, referring to the company's prospects for future projects.

Former Vt. farm to become course

HINESBURG, Vt. - Raymond Ayer and sons, Tom and Tim, will trade in their 250 cows and farm equipment for golf balls and tees within the next year.

The three will be business partners operating Cedar Knoll Country Club, an 18-hole golf course and driving range located here.

The golf course will be located south of Hinesburg Village on Vermont 116 and is expected to open next spring.

The Ayer family got the idea three years ago when Tim Ayer was hitting golf balls around the back yard.

Ruth Ayer, an avid golfer herself, mentioned the area would make a nice course.

The idea stuck, and 278 acres of the 350-acre farm is in the process of being turned from hay and grazing fields to fairways and

"Farming is a tough business nowadays," Raymond Ayer told the Burlington Free Press. "I couldn't think of a better way to keep the land open than a golf course.

GCSAA home city still seeks public course

LAWRENCE, Kan. - A developer's plans to build an 18-hole golf course still face bureaucratic traps.

Questions of financing and gaining water rights have slowed the process of constructing a golf course. Stan Harris, president of the 625-member Lawrence Municipal Golf Course Committee, said green fees can pay for the municipal course. Others like Lawrence Mayor Bob Schulte are not so sure. He claimed the city would have to float bonds to pay for the

Shulte believes the new course would alleviate the heavy demand of golfers wanting to play in the area.

The Lawrence area has 8,000 golfers, many of whom have to leave town for Topeka or Kansas City, Kan., to play golf, a city consultant said.

Officials approve N.J. 18-hole plan

MANCHESTER, N.J. - An 18hole public golf course has won preliminary site approval from the Planning Board here.

But the board balked at an accompanying 5,500-housing-unit proposal, labeling it too dense for the area.

Kenneth Mizerny, a Philadelphia developer, has proposed building 5,500 homes, a corporate office center and an 18-hole public golf course on a nearly 4,000-acre section of the Heritage Minerals tract.

Planning Board Chairman Donald Czekanski said some board members and state agencies have indicated the land should have no more than 840

At a recent meeting, Joel Gove, a wetlands ecologist, verified uplands and wetlands in the tract and estimated 75 percent of the 4,000 acres is usable.

Rainville project to open in Calif.

ESCONDIDO, Calif. - After seeing one of his golf courses, Eagle Crest Country Club completed (GCN June, page 1), architect David Rainville expects another project — the Escondido municipal course — to open late this fall.

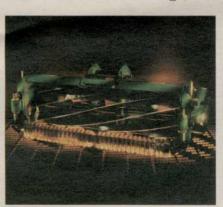
"It's quite a bit different [from Eagle Crest] because it's much more forgiving," Rainville told the Times Advocate.

"I think it's going to surprise a lot of people."

New cutting units have them smiling in Myrtle Beach

Anyone in search of great public golf courses need only travel to Myrtle Beach, South Carolina. Once there, simply visit one of the facilities owned and operated by Larry and Danny Young.

"Our philosophy is to give the public golfer a country club atmosphere," says Danny Young. With courses designed by Dan Maples, P.B. Dye, and Tom Doak in their offerings, the Youngs have placed



Danny Young (left) has found that John Deere ESP cutting units do indeed deliver "Extra Strength and Precision." They stay in adjustment, hold an edge, and deliver a precision cut day after day.

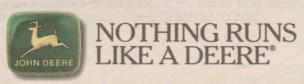
three of their facilities on Golf Digest's prestigious list of the 50 best public courses in America.

"Top-quality maintenance is a high priority for us," says Young."We have a fleet of John Deere equipment, including an 1800 Sprayer, 1200 Bunker Rake, F1145 Front Mower, 955 Tractor, 2355 Tractor, and a 3325 Turf Mower with

the new John Deere ESP cutting units.

"The new ESP cutting units are a huge improvement. We used to feel lucky if we got 9 holes done with the old cutting units before they needed adjustment now we just check them every 3-4 days. And we don't need to sharpen them as often. In fact, we just got a second mower because of how impressed we were with these new ESP models."

For the name of your nearest distributor, or free literature, call 1-800-544-2122. Or write, John Deere, Dept. 956, Moline, IL 61265. Like Danny Young, we know you're going to like what you see.



Ocean Trails

Continued from page 3

Zuckerman explained. "Three gnatcatcher experts have permission to be on the property and were given free rein to make their observations.

"The ecosystem has been degenerating as non-native plants have moved in. We are going to restore that area to its natural state."

Originally, the Zuckermans and Hon owned neighboring-but-separate parcels along the bluffs. The Zuckermans, who built many area homes, planned a 130-lot residential subdivision on their parcel. Hon envisioned a golf resort on

Realizing their plans might not fly separately, the two combined their properties into a 260-acre site that would be home to a golf course community.

The City Council approved the original plan last year.

But the Coastal Commission said "no."

The developers revised the project by reducing the length of certain holes as well as the number and size of some housing lots. This time the City Council and Coastal Commission saw eye-to-

"The city has been terrific from the start," Zuckerman said. "It realized the community wanted the project and will benefit economically.

Nearby Los Verdes Golf Course hosts 130,000 rounds annually, Zuckerman said.

Even at greens fees of \$65 to \$85 per round, upscale Ocean Trails anticipates 40,000 rounds per year. Local golfers hope it will relieve some of the pressure at county-owned Los Verdes, she added.

The \$125 million project includes 83 single-family, oceanview homes on lots ranging from 15,000 to 64,000 square feet.

A 25,000-square-footclubhouse will house a restaurant, lounge, pro shop and locker room facili-

"The economic issues caught the attention of people inside and outside the area," Zuckerman said.

We figure 13,000 jobs will be created during construction."

Given the difficulties of obtaining environmental permits to build just about anything in California, Zuckerman said the developers expected a long battle.

"But we didn't expect it to take this long," she said. "This project represents the difficulty everyone has in getting something done despite California's [depressed] economy. Even a sound project like ours has to wade through months and months of permitting."

Over the next few months, developers plan to implement the habitat plan, finalize a golf course design, seek final approvals from the city (not considered a major problem) and prepare for engineering and grading to start after next spring's rains.

Architect Pete Dye is working on the final course designs for the course

Zuckerman expects construction to get underway within 18

Dye said he has made many site visits and expects some holes to rival the best Pebble Beach and his own Ocean Course at Kiawah Island, S.C., have to offer.

"If I can't route six or seven beautiful holes along oceanfront land near Los Angeles, then you ought to just take me outside and shoot me," Dye said.

Golf economics focus of NGCOA seminar

ORLANDO, Fla. - The National Golf Mike Muetzel, national account manager of the Course Owners Association will hold a seminar focusing on golf economics, "Your Bottom Line," at the Orlando Hyatt, July 20-21

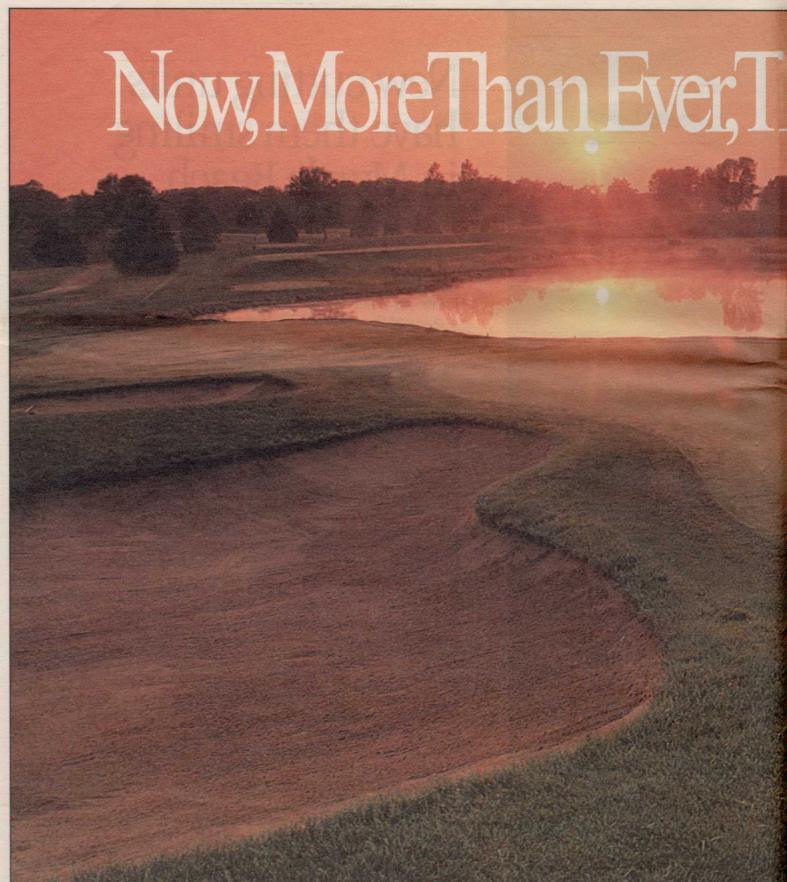
Golf course owners and operators will discuss how such factors as agronomics, golf car fleet management and Americans with Disabilities Act compliance affect their bottom

Speakers include Jim Ellison, director of agronomy at Arnold Palmer's Bay Hill Golf Club; Mike Layel, national sales manager at O.M. Scott & Sons Company; Gary Robb, director of the National Center for Accessibility:

Golf Car Division, Yamaha Motor Corporation, U.S.A.; and Bob McGrath, CEO of Golf Car Sys-

Florida owners and operators will meet before the seminar to address purchasing co-op opportunities, joint marketing efforts, statewide issues impacting Florida owners, and the development of the Florida Chapter of the National Golf Course Owners Association.

For further information on the seminar call 800-933-4262 or write NGCOA, P.O. Box 1061, 14 Exchange Street, Charleston, S.C.



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Mid-Am awards money to four schools

Monetary prizes have been awarded to four colleges and universities for top attendance at Mid-Am's 1993 Career Center, held Jan. 15 at the Hyatt Regency Chicago.

Joliet Junior College received \$400 for the highest attendance, 27 students. The College of DuPage was awarded \$300 for the second-highest attendance (20), and the University of Illinois and the University of Wisconsin each received \$150 for the third and fourth, respectively, highest numbers in attendance at the Career Center. Prizes were awarded to the schools' horticulture departments.

Twenty-two schools participated in the Ca-

reer Center, sending 115 students to meet with 50 industry companies having employment or internship opportunities.

The next Mid-Am Trade Show is scheduled for Jan. 20-22, 1994, at the Hyatt Regency in Chicago.

Mid-Am is sponsored by the Illinois Nursery men's Association, Illinois Landscape Contractors Association, and Wisconsin Landscape Federation. The show is endorsed by the Iowa Nursery & Landscape Association, Minnesota Nursery & Landscape Association, and Nebraska Association of Nurserymen.

For more information, contact 708-526-2010.

Hills' layout opens in Mich.

ROTHBURY, Mich. — Thoroughbred Golf Club at Double JJ Resort, a 6,900-yard championship layout designed by Arthur Hills, debuted in May.

"Arthur Hills did an incredible job designing the Thoroughbred," head pro Jeff Howland said.

"Superintendent Rod DeSmet has done a remarkable job getting the course in top condition. Owners Bob and Joan Lipsitz have set their standards of excellence high with their comfortable, friendly atmosphere in a spectacular setting."

The course opened to resort guests in May and will be available to the public following the official grand opening scheduled for July 2. Numerous corporate outings and fund-raising tournaments, including the LPGA Charity Pro-Am, have already been scheduled for this summer.

Construction of the Thoroughbred, the centerpiece of a \$20-million expansion of the popular Double JJ Resort Ranch, began in March 1992.

ne Environment Is Rig

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RHÔNE-POULENC

Ahmanson Ranch
Continued from page 3

money elsewhere, rather than tying up funds in the non-interest bearing account.

Hope and the federal government compromised. NPS acquired 2,308-acre Jordan Ranch from Hope and 300-acre Liberty Canyon for \$16.75 million.

But Ventura County Supervisors' approval of Ahmanson Ranch was also contingent on the acquisition of Hope's 4,369-acre Runkle Ranch and 339-acre Corral Canyon as well as the donation of 3,025 acres of Ahmanson Ranch property. Those issues had not been resolved as of mid-June.

"Buying the land from Mr. Hope and some other details still need to be worked out," said Ahamanson spokesperson Mary Trigg.

Another fly in the ointment is a lawsuit scheduled to go to trial in mid-November. Nine separate actions were filed this spring, including three by the cities of Malibu, Los Angeles and Calabasas; one by the County of Los Angeles; three by coalitions of homeowner and environmental groups; and two by individuals.

The suits claim the county's environmental assessment study was inadequate and seek to overturn the county supervisors' approval.

The Ventura County Court consolidated the nine suits into one and is expected to hear the case this fall.

"We're actively pursuing the lawsuits against the project at this point," Triggs said. "We want to concentrate on that before doing anything else."

Segol said Ahmanson hopes to settle the suit before November. One scenario has Ahmanson buying Hope's remaining land and donating it to the Conservancy, he added

Ahmanson would have liked to have the matter settled by now. But the project, at least home construction, might have been delayed anyway because of the slumping California economy, Segol said.

"According to most economic experts, California is still very much in a recession," Triggs agreed.

Who said the RTC had no sense of humor?

know it's a dangerous pre cedent, but I was just thinking...
• Don't miss the Landrk auction in Dallas this

• Don't miss the Landmark auction in Dallas this month. It stands to be the biggest free-for-all the golf industry has seen since the superintendents poured out of an effluent seminar and onto Bourbon Street two years ago. Here's a tip for casual observers: Don't fidget in your seat — you're liable to end up with a controlling interest in Mission Hills or something.

But seriously folks, every mover and shaker in the business will be there. If they're not bidding, you can be sure they're keeping a close eye on their competitors who are. Word has it that foreign

GOLFERS

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ONLY

interests will play a major role in the ownership of more than one property.

Then there's the Ross Perot factor (see page 33).

One more thing: If you've ever wondered whether the Resolu-

tion Trust Corp. had a sense of humor, the jury is in. Who else would stage the break-up of golf's destination resort royalty on Bastille Day?

• The government is always the last to know.

As many as four weeks ago, my sources told me that GCSAA and Connex were holding discussions regarding a twoshow, one-roof extravaganza in Singapore next year. Consider-



editor

ing the "damn the torpedoes" attitude displayed by our friends in Lawrence, this came as something of a shock (see story page 1). Indeed, most suppliers were caught off guard when the news broke around

June 10.

But no one was more in the dark than our friends at the U.S. Department of Commerce, which certifies foreign trade shows for their American constituents. When I got the official news, I immediately called the department for a comment on this unique overseas development — but I was met with stunned silence on the other end. After patriotically

divulging all the information I had, the government guy stole my standard, journalistic phone sign-off: "Hey, thanks for your help." Glad to be of service.

• While we're patting ourselves on the back here, let's have a big round of applause for Associate Editor Peter Blais, whose *Development Letter* topped the 100-subscriber level a few weeks ago — and the subscriptions keep rolling in.

For those of you unfamiliar with it, the Golf Course News Development Letter tracks golf course projects under consideration in communities all over the nation and Canada. As subscribers will attest, it's a must read for industry folks who need to find the developer

Continued on page 12

Too often, golf courses are fiscal targets

hen the Central Arizona
Project (CAP) canal was
completed in January, the
repayment of the federal funds
for the 40-year project was supposed to
begin. It appears the government
believes golf course developers and the
like — but never, ever farmers — are
the ones to tap. Or is that "Zap!"?

This illustrates a prevalent attitude in *manag* America today: "Golfers are fat cats.

They've got the dough. Let's suck the money we need out of **their** pockets."

It's open season on golfers all year round. At least deer, elk, ducks and their cousins get a reprieve from hunters most of the year.

Scott Nair, superintendent at The Boulders in Carefree, Ariz., puts it bluntly. "It's frustrating when I pay a fortune for my water and they [farmers] get it all basically given to them on a silver spoon," he said.



Mark Leslie, managing editor

It's cheaper for farmers to pull water out of the ground than pay for CAP water, and how can that change? Most likely, it won't.

"It's hard to convince a guy who's barely making ends meet, or even those who are millionaires with megafarms, to use a commodity that costs three or four times as much money," Nair said.

"That's sad, because if they would take away the [farm] subsidies it would make

things a lot more palatable for people like us.
We're considered a commercial or industrial user.
We produce a lot of money for the state of
Arizona. Farmers do, too. But we're not subsidized by the federal government."

Nair speaks for many superintendents who struggle daily to find and pay for water to keep their turf alive. Which keeps their courses playable. Which attracts golfers to the region.

Continued on page 12

Letters

SETTING THE RECORD STRAIGHT

To the editor:

Thank you for setting the record straight regarding the Paul Harvey commentary.

I was upset to learn that I had been quoted out of context by a local paper regarding this important environmental symposium in Wilmington, North Carolina. The entire golf industry has worked hard to implement proper design, construction and maintenance procedures to reduce the negative perceptions.

The excellent research and the hard work by golf course superintendents across America did not deserve this attack from underinformed media seeking to energize this emotional issue.

Thank you for the explanation in the May issue of *Golf Course News* regarding how I was misquoted. We work hard every day to protect the precious environments across the United States. The American Society of Golf Course Architects will continue to produce innovative solutions to environmentally sensitive design situations. Your support of the

profession through *Golf Course News* is greatly appreciated.

Thomas A. Marzolf Environmental Committee Member A.S.G.C.A.

WHITHER SCHOLARSHIPS

To the editor:

Some 30 years ago, when some of us older superintendents started in the greenkeeping business, there were very few trained and educated. This has changed drastically over the years. We now have a GCSAA Board of Directors that, to my knowledge, are all college graduates. This of course is quite impressive.

So what is my point? We have been giving out scholarships for a number of years encouraging young people to get into the profession. My feeling is that we need to take a good look at what we are trying to accomplish. Some years ago there was a desire to educate more people in our profession. We have done an outstanding job of doing just that.

It is my opinion that scholar-

ships are great to a point. The question is: Are we encouraging too many young people to get into a field that already has a number of college graduates that may have little on-the-job training. This is where the monster comes to the surface.

Let me give you a little background information. When my assistant applied for a position at a club in Wisconsin, there were over 80 applications. In fact they stopped opening letters at 80. And of those applying there was a GCSAA past president. Another interesting point: Those superintendents in the Chicago area looking for assistants this past winter had 30 or 40 applications. Some of these people did little advertising other than word of mouth.

If we are encouraging people to get into the business, we need to be sure that they understand they need to spend some years in training before they might secure a management position, even if they have a college degree.

So do we really need to give out more scholarships? How many other professional groups give out scholarships in their own profession? Who is going to be the first superintendent (probably has already happened) that is let go because of one of the monsters we have created.

There are those of you saying, "Mike, just keep up with the times and you will not have to worry." You are correct for now. But maybe it is money that starts talking. We need to look at the future of the profession. Should we also look at what we are giving to our own people and clubs today, and maybe tomorrow?

What is in the future for you? Think hard as to what we are doing with scholarship money. There still are some jobs available in the profession. Is this going to be true in the near future? The compensation is quite good for those coming out of college. Do we need to pay for their schooling too? Are we talking more foreign aid for Japan? You know what I mean. We need quality, but not quantity. Give the subject some thought.

Mike Bavier, superintendent Inverness GC Palatine, Ill.



Publisher

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Circulation Manager Brenda Boothby

Editorial Office Golf Course News PO Box 997 38 Lafayette Street Yarmouth, ME 04096 (207) 846-0600

Advertising Office National Sales:

Charles E. von Brecht Golf Course News 7901 Fourth St. North Suite 311 St. Petersburg, FL 33702 (813) 576-7077

West Coast Sales:

Robert Sanner Western Territory Manager 2141 Vermont Lawrence, KS 66046 (913) 842-3969

Marketplace Sales: Simone Marstiller (813) 576-7077

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The book no industry member can do without

very occupation or profession has one. A favorite reference book. Each dog-eared page, smudged fingerprint, coffee stain, rip in the book cover (if the cover still exists) testifies to its usefulness.

The manager of the real estate office next door tells me the Maine Multiple Listing Service Directory is her favorite. My wife, the hospital social worker, constantly flips through the pages of Diagnostic and Statistical Manual — Revision III. And doctors, I'm told, keep the Physicians Desk Reference within easy reach.

At least once a day here in the editorial office of *Golf Course*News — where Mark Leslie, Hal Phillips and I sit within easy rubber band-flinging distance of one another — you're guaranteed to hear the words "Hey, who's got *Cornish's Book*."

If you've never heard of Cornish's Book, it's probably because there's no such thing. The actual title is The Architects of Golf. Being former newspapermen, a brevity-loving and basically simple lot, we've shortened it to Cornish's Book.

Once a week we pay homage to architect Geoffrey Cornish and *Golf Digest/Golf World* architecture editor Ron Whitten for assembling and occasionally updating this invaluable 648-page tome.

[Ron, hope you're not insulted we refer to this as *Cornish's Book*. But he is the architect after all. And besides, Geoff is a fellow New Englander.]

The first edition, which appeared about 10 years ago, represented 40 years of research for Cornish.

"Much of the history of architecture was in danger of being lost if someone didn't do this," said the Amherst, Mass. resident, who had tons of paper and photographs stashed in the boxes and closets of his home and office.

"Fortunately, there was a young writer from Kansas [Whitten] who was interested in doing something similar and had assembled much of the same type of information on a computer. We got together and this was the result."

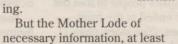
Publisher HarperCollins refers to *The Architects of Golf* as "A unique and indispensable book for golfers." That's certainly a good pitch to the 25 million U.S. club swingers out there. But if it's indispensable to them, then it should be mandatory reading for the 22,000 subscribers to *Golf Course News*.

The book is divided into three sections — one nice and two vital.

The first describes the history of golf courses, how their design evolved and the influence some of the more innovative individuals had on the playing fields. Chapters have been added and a few dropped in the latest redesigned and updated version. It is well-written, thoroughly researched and certainly interesting.

for people in the golf course

industry, is mined from sections





associate editor

two and three.

The second section is 252 pages of bibliographies. Every architect from Englishman John Frederick Abercromby to German Herwig Zisser can be found here. Included are

comments on their designs and how they influenced course architecture. More important is a listing of every course they have originated or designed.

Being able to authoritatively write that in 1906 Abercromby designed the Golf de Chantilly's Old Course, one of France's finest layouts, makes the golf writer appear more knowledgeable than he probably is.

The latest version includes photos of some architects. If you want to see what Jeff Brauer looks like before you make that sales call or he comes to your course to pitch his firm as the one to do that long-planned

redesign, then check page 213.
Section three is equally essential, listing almost 14,000 courses throughout the world and the architects who designed

Again, having someplace to go for such information makes our jobs much easier. And I can easily imagine that knowledge, properly exhibited, making the golf equipment salesman appear he's done his homework when calling on a superintendent or club president.

The first edition ruffled a few feathers 10 years ago.

Continued on page 12



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Tipping our caps to Messrs. Cornish and Whitten

Continued from page 11

"A lot of courses claimed to be Donald Ross designs that weren't. When that first edition came out, I got many calls from club presidents and members upset that we'd dare publish something saying Ross hadn't done their courses," Cornish said.

But it's hard to imagine anyone staying angry with the affable Cornish. And it's even harder to imagine anyone coming away a winner in an argument regarding architectural history once confronted with the knowledge he's gained in his 79 years.

We're all extremely grateful to those who assemble such valuable publications as the National Golf Foundation's Directory of Golf, the Farm Chemicals Handbook and GCSAA's Who's Who in Golf Course Management.

Here's just an extra tip of the hat to Messrs. Cornish and Whitten.

The Architects of Golf costs \$50. It is available in bookstores or by calling 800-331-3761.

Golf an unfair target of water pricing

Continued from page 10

Which earns money for hotels, restaurants, gas stations, what-have-you...
Which generates taxes for, guess who?
— all levels of government.

Since farmers haven't been using CAP water, repaying the billions of dollars for the canal system is extraordinarily difficult.

The search for other people to foot the bill seems to have ended at the front door of golf courses. (See story, page 1)

You can almost hear the bureaucrats saying, "Golf courses can still afford the water. How much can they afford? How

much can we get away with bleeding them? Ah-hah! Let's find out!"

It's time some definitive studies were made public showing the economic impact of golf courses on local economies. Then those studies should be publicized, plastered on bulletin boards and television screens, hammered home in golf publications and your hometown newspaper — whatever-and-wherever.

Then, it will be time to apply those figures to government decisions and create a level playing field — or should I say a level cornfield?

There will be no excuses for unrighteous judgments and one-sided decisions that dog golf courses across the nation. There will be no more whipping-boy status for golf. There may even be a "thank you" from an official or two for the money pumped into local economies.

Then, perhaps, "No Hunting" signs can go up at the doorposts of those golf courses.

Phillips comment

Continued from page 10

first — i.e., before the hiring decisions have been made. Kudos for Peter, who also makes his debut on the editorial page this month. (Questions about the *Letter* can be directed to Peter at 1-207-846-0600.)

- Recently played a true hidden gem in the Portland, Ore. area Oswego Lake Country Club, an old H. Chandler Egan design. The layout was the hilliest I've seen on the West Coast, and the greens thanks to superintendent Richard Fluter were quick and true. Each hole was a treat, but the majestic views of nearby Mt. Hood sealed the deal.
- Still nothing doing on the military course bill.
- During June, I was out in Oregon for the many seed company field days. Some colleagues and I learned a valuable lesson in Canby, Ore., where I stayed in the Willamette Valley. If you want to bowl a few strings on a weeknight, get there early. We showed up at Canby Bowl at 7:30 p.m. on a Thursday, only to find a two-hour wait! The place was absolutely packed and, no, it wasn't league night...

Quote of the Month

"Frankly, golfers care more about maintenance than they do about design. You give a guy a choice between playing a well-maintained but poorly designed golf course or a well-designed, poorly maintained one, and he's always going to take the good maintenance. So maintenance is more important than design. It's a fact of life.

"So when you construct a golf course, you construct it for good maintenance. And zoysia is a constructive tool. You know the old saying: As ye sow, so shall ye mow."

- DR. MICHAEL HURDZAN



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BRIEFS



RENAULT NAMED TO NATIONAL PANEL

BETHESDA, Md. - George Renault III, a disabled American veteran who is

superintendent at

Burning Tree Club

here, is excited

about his recent

appointment to the



George Renault III

Recreation Access Federal Advisory Committee. A director of the Golf Course Superin-

tendents Association of America, Renault is on a 27-person committee chosen to recommend "what's needed and what's minimum to get people up and down on the golf course" and other public facilities, he said. Starting July 15-16, the group will meet twicemonthly, anticipating to make its recommendations in six months.

GCSAA PICKS BYRON NELSON

LAWRENCE, Kan. — Hall of Fame golfing legend Byron Nelson next Feb. 7 will receive the Old Tom Morris Award from the Golf Course Superintendents Association of America. Given in the memory of the Scottish greenkeeper and golf professional, the Morris Award recognizes individuals who have made outstanding lifetime contributions to the game. Nelson will be honored during the closing banquet of the 65th International Golf Course Conference and Show in Dallas.

RHODY FIELD DAY READY

KINGSTON, R.I. - The 62nd annual Turfgrass Field Day at the University of Rhode Island's Turfgrass Research Farm on Plains Road here will be held Aug. 18. Exhibits and sprayer calibration demonstrations will run from 8 a.m. to noon and, after a steak barbecue, tours will be given of research plots from 1:30 to 4 p.m.. More information is available from Dr. Noel Jackson at 401-792-2932, or Dr. Bridget Ruemmele at 401-792-

REGIONAL PESTICIDE REPORT COMPLETE

LAWRENCE, Kan. — The 1993 Golf Course Superintendents Report, a new publication summarizing what



treatments are effective against diseases and pests in various regions of the country, has been completed. The Center for Golf Course Management, the

research arm of the Golf Course Superintendents Association of America, is making the report available for \$25. To order it, superintendents should write CGCM — Superintendents Report, 1421 Research Park Dr., P.O. Box 927, Lawrence, Kan. 66044-0927.

Researchers breed progress

By MARK LESLIE

uffalograss and zoysiagrass have both surpassed even the optimistic forecast of an eminent turfgrass scientist who, three years ago, said they would be "the dominant warm-climate grasses of the next decade."

Dr. Milt Engelke of Texas A&M, who was involved in research on both varieties, predicted great things for them in August 1990.

"Over the next six to 10 years, perceptions about buffalograss will change dramatically," he said.

Asked, halfway toward that six-year point, if the two grasses were reaching expectations, Engelke said: "I think we're right on the money."

Buffalograsses have a jump on the zoysias, mainly because of the introduction of the new turf-type buffalograsses sooner than the introduction of the new zoysias, Engelke said.

"There probably is not another species - save maybe the zoysiagrasses — that has the latitude and flexibility and biological resiliencies of buffalograss," Engelke said.

"We have some zoysias that will be right in there with them, but not as good in winter-hardiness. Zoysia can't handle the compaction. Buffalograss is wonderful for compaction. It might not be an absolutely beautiful bright dark-green color. But there won't be a lot of holes in the ground either. You won't be playing in the mud."

Water crises drive use of Buffalograss

Growing water crises in some areas, combined with an increasing demand and desire to use smaller amounts of chemicals, have made littleknown buffalograss a marquee item in some areas.

"Sod growers in Colorado told me they could sell 200 acres [of buffalograss sod] right now if they had it," said Dr. Terry Riordan of the University of Nebraska.

Riordan, a key breeder of buffalograss, said improved varieties are "just starting to reach the market... There's been a big increase in [production] acreage throughout the South. About every cultivar of sod is sold out.

Continued on page 14

Turfgrass growers "can't produce enough buffalograss," he said. The bulk of the production is still in Texas, but other growers are located in California, Arizona, New Mexico, Oklahoma, Colorado, Kansas, Alabama, all the way to the East Coast.

"In Texas alone, we are running a year behind what I had predicted," Engelke said. "This past year, the Highway Department has 'speced' the use of over 5 million square yards of buffalograss for establishment and revegetation of highway rights-of-way.

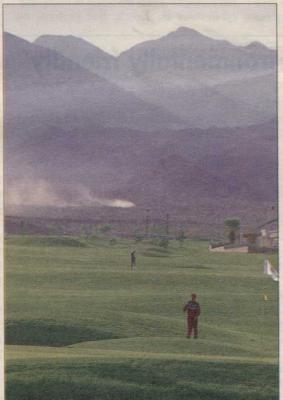
"That is just now starting to snowball, and we're seeing other states doing the same thing."

Buffalograsses are being grown "in places I'd never have dreamed five years ago," Engelke said. "We released Prairie in 1989 marginally for home lawns, but primarily for rough areas for industrial parks, minimal-use areas. I'm finding them on municipal parks, sports fields, home lawns and in some municipal golf courses - even in the fairways."

In 1989 there was one turf-type buffalograss — Prairie. Four years later, there are 22 varieties — a mammoth increase in a short time, emphasizing people's perception of its prospects.

The national trials, Engelke said, show a number of grasses with "very high resiliency and elasticity to environmental conditions. That's really exciting — to know what we know biologically about these grasses."

He promised a lot of laboratory work will be done on both grasses.



Buffalograss is perfect for Las Vegas-type climates, but four years ago when Greg Nash and Billy Casper designed this Palm Valley course, the advanced buffalograsses of today were not available.

Zoysia pluses: hardiness and playability

Pests. Diseases. Drought, High humidity... None seem to faze zoysiagrass. And therein lies part, but not all, of its appeal to turfgrass breeders, golf course superintendents, and architects who specify grasses for new courses.

"There's a lot of diversity in zoysia germplasm. Some are very coarse and suitable for roughs. Some are very fine and suitable even for greens in some areas, like the lower South," said Kevin Morris, national director of the U.S. Department of Agriculture's National

Continued on page 14

EPA compiles studies on pesticides in ground water

The Environmental Protection Agency has published a "Pesticides in Ground Water Database — A compilation of Monitoring Studies: 1971-1991," a summary and analysis of data concerning pesticides in ground water.

The report — divided into one national volume and 10 regional volumes corresponding to the EPA regions - is a collection of data from 153 ground water monitoring studies in 45 states conducted by federal, state and local governments,

universities, the pesticide industry and private

Monitoring data from more than 68,000 wells is reported. Pesticide residues were found in 16,606 wells (15,502 drinking water wells). A total of 117 parent pesticides and 16 pesticide degradates were found in at least one well. The 1992 report supersedes the "Pesticides in Ground Water Database; 1988 Interim Report."

The data indicates where ground water

has been sampled, where additional sampling might be necessary and where contamination occurs in relationship to the intensity of sampling. EPA said great care must be exercised when interpreting this data due to differences in sampling intensity, study design, and analytical methodology of monitoring studies that comprise the report.

EPA uses monitoring data as one tool to help identify pesticides that need additional

Continued on page 22

Buffalograss easy on water, chemicals and clippings, researchers say

Continued from page 13

Of course, 1,000 or 2,000 acres is not a lot, but it's all sold and that's good."

"There's a lot of potential" for buffalograss, said Jim Snow, national director of the United States Golf Association Green Section.

The Green Section is helping fund Riordan's research because buffalograss requires far less water, pesticides and fertilizer than other warm-season grasses like Bermudagrass. All this is becoming more important.

"My guess is, it will probably be 'speced' in a lot more golf courses," said Kevin Morris, national director of the U.S. Department of Agriculture's National Turfgrass Evaluation Program. "The drought situation in wide areas in California and the 1989 drought in the Midwest caused a lot of people to start scrutinizing turfgrasses and the irrigation of turfgrasses, looking for their waterconserving attributes."

Riordan agreed, saying: "I'm getting more and more calls from architects where they're 'specing' it or wanting to use it. Up until last year it wouldn't have been available in quantities that golf courses could have used it."

Buffalograss fulfills some hard demands. Compared to Bermudagrass, it:

- · requires one-fourth to one-half the
- thrives on one-third the nitrogen (one to two pounds annually per 1,000 square

- · is more disease- and insect-resistant and thus requires smaller amounts of pesticides, fungicides and herbicides;
- can be moved as infrequently as once every two months as opposed to once a
 - leaves fewer clippings;
 - has slightly better shade tolerance;
- greens up earlier and goes dormant later in the season;
- · tolerates cold better; and
- better resists soil compaction.

"It's going to be used initially in places where there's a need to use it," Riordan said. "If there's a water shortage or environmental issue, people may be forced to use this grass. If they're successful, others might say, 'I don't have to use this, but it would save some money and some water.' It could snowball."

Dr. Milt Engelke of Texas A&M, who performed a lot of initial research on buffalograsses before the baton was passed to Riordan, said it "fits very nicely" for public golf courses with low-maintenance budgets that play a lot of rounds.

"A tremendous amount of golf by the weekend hacker is played on that kind of course," he said. "We've been cutting buffalograss to 5/8 inch now and I'll put it up against a lot of grasses out there with the same maintenance level. I don't advocate replacing your Bermudagrasses in the South or bluegrassryegrasses up North. But perhaps 60 percent of the golf courses out there fall under the \$400,000-a-year budget for available would add attractiveness in the maintenance.

'Specifically we're only seeing the tip of the iceberg in the buffalograsses. I've seen some of Terry Riordan's stuff and other work that's being done on dwarf buffalograsses that are going to rival Bermudas. They are awesome. They look great. And [the research community] is only starting. They haven't had 30 years to work on this.'

RESEARCH AIMS

Buffalograss breeders are trying to improve turf quality while maintaining natural attributes.

We'd like to make it a better-looking turf," Riordan said. "We'd like to extend its growing season, improve the color and increase its ability to withstand low mowing heights so it could be used on golf course fairways.'

The University of Nebraska breeding program is probably within two or three years of producing material that will be in testing for those characteristics, he said.

"We're having good cooperation with sod growers involved with the Crenshaw & Doguet Turfgrass, Inc. of Austin, Texas," Riordan said. "As soon as we identify something that looks good, we have it on a sod farm the next year. If it looks good there, it's easy to increase it for additional testing and possibly put it into production."

Morris said cultivars that are currently rough areas. "When the grass gets pollen heads on it, it looks natural like a prairie and is attractive," he said.

Meanwhile, major work is being done to produce seeded varieties. Cooperating with Riordan are Native Turf Development Group and Sharp's Brothers Seed Co.

Quite different from other species, buffalograss has male and female plants. Female plants tend to be lower-growing and denser. Male plants have a pollen source (like a seed head) and tend to be less attractive - upright-growing and coarser textured.

The best turf quality generally comes from the female plants. But you must have both to produce a seeded cultivar.

Snow said that while vegetative types are normally higher-quality turfgrass, the goal "over the long haul" is to produce good seeded types, with more uniformity, to lower the cost of using buffalograss.

Until recently, all the cultivars had been found growing in the wild. The first generation of cultivars from the breeding programs are in the ground, and some are not in the national tests.

"We may have some that are as good as those in the test, or that would fit into certain niches," Riordan said. "But we're pretty fortunate with this first material. In nature, there was a lot of natural selection that went on for a long time that we couldn't duplicate in the lab."

Zoysiagrass 'environmentally friendly'

Turfgrass Evaluation Program. "Its strengths are its drought-tolerance and resistance to weed invasion.

"Also, it doesn't have many disease problems. Ryegrass fairways need fungicide through the growing season. But you would rarely have to use fungicide on

Golf course architect Dr. Michael Hurdzan calls zoysia "the Cadillac of fairway grasses in the transition areas.

"It just so happens to be one of the most environmentally friendly grasses as well. But its playing quality is why we believe it's the best golf turf. With its good stiff growth, zoysia holds the ball up, so the average player, who tends to hit the ball thin, will hit it more in the clubface."

A Far East turf that was imported to the United States, zoysiagrass has peaked interest of people in the golf industry who see its potential in a range of areas from low-maintenance roughs to playing turf.

"It is potentially a big market," Morris

Jim Snow, national director of the United States Golf Association Green Section, has high hopes for the diverse zoysia.

"Quite a few courses have zoysiagrass fairways. Most are in the corridor between St. Louis and Washington, D.C., where warm-season grasses aren't hardy enough and cool-season grasses aren't heat-resistant enough," he said.

But Snow tempers his hopes with the thought that zoysia traditionally is slow to establish and most cultivars are vegetatively propagated.

"Buffalo and Bermudagrass are so fast to establish that people prefer them," Snow said. "Since zoysia is so slow, golf courses find it hard to justify renovating to zoysia... So we need zoysia that establish more quickly and that stay green, since they tend to lose their color in the transition

Developing "a good seeded type" is cru-

cial to the golf industry, Snow said, and "that is going to be a slow progress."

But Dr. Milt Engelke, who is doing major research at Texas A&M, reports great progress in several areas, including nearly halving the establishment time of zoysia

"We have accelerated our production time," he said, citing a crop-a-year mode which compares to 19- to 22-month growth period for old standby zoysia Meyer.

"We now have good recuperative ability from damage, divots, traffic or whatever. We have excellent growth characteristics, both for establishment and production,'

At the University of California-Riverside, Superintendent of Agricultural Operations Steve Cockerham said Dr. Victor Gibeault's El Toro zoysia is nearly as fast-growing as Bermudagrass.

On his test plots, Cockerham said, El Toro shows "very little thatch buildup but very stiff grass. We mow our plots at both 5/8 and 1-1/2 inches, and it looks good in

Compared to Bermudagrass, Engelke said zoysia uses one-half to one-third less fertilizer, only two to three pounds of nitrogen per year compared to much more for Bermudagrass, and astonishingly less wa-

"The only place I think I've shifted [his thinking from 1990] is when we look at the water requirements on the buffalograsses and zoysias," he said. "At one time I said we were probably using 30 to 40 percent less water than hybrid Bermudas for a comparable quality turf. Now I'd say we're 70 to 80 percent less."

Engelke said the top criteria for the DALZ cultivar lines he is working with are low water use, very high persistence (competitive ability), very low maintenance levels, and quality of surface.

"I've seen them go 45 to 60 days without

irrigation and hold their color," he said.

Engelke agreed with Snow that a highquality, seeded-type zoysia is in the future.

"We are going to be limited to coarse types, for one simple biological reason: Those species have a very small seed head," he said. "The problem with seeded types is that there is not enough pressure to make them uniform. The TGS [Turfgrass Germplasm Services] lines by [president and chief scientist] Jack Murray have done a very good job in that direction."

While saying "the downside to zoysia is that it comes in slowly," Hurdzan added: "That can be viewed as a positive because it's a great accent grass. We're using it at Cook's Creek Golf Club [outside Columbus, Ohio] on the steep banks and bunker faces to reduce maintenance and to give the golfer a new experience."

FICKLE MARKETPLACE

The marketplace, Engelke said, is "real fickle."

He cited El Toro as "under-used."

He said he expects to see more zoysia sod in the marketplace as more developers decide the expense of solid-sodding is worth

"People say they can't afford it. But, more and more that's going to change," Engelke said. "We're going to be able to take advantage of some good science."

"We have tried to do sod stripping, sprigging and sodding," said Hurdzan, "and there's no question that sodding is the preferred method, although it adds \$250,000 to \$350,000 to construction costs. But it's justified. It's a matter of setting your priorities and looking in the long run. You'll be open quicker. You're not going to have the costs of erosions, delayed openings and repairs. And you're giving the golfer a finished product.

"It's probably a very good value to sod



First nat'l tests on buffalograss, zoysia revealed

BELTSVILLE, Md. — The U.S. Department of Agriculture's National Turfgrass Evaluation Program has released results of its first year of tests on both buffalograss and zoysiagrass. Both are long-awaited but stand as just the first step to fully and justly evaluating the cultivars entered at the two dozen sites from coast to coast, according to the test's national director, Kevin Morris.

Twenty-two buffalograss and 24 zovsiagrass cultivars are being tested for such characteristics as winter hardiness, spring green-up, color, leaf texture, seed head production, and tolerance to frost, drought, leafspot and mites. Density and percent of living ground cover during spring, summer and fall were also calculated. Another year or two of testing will provide more valuable information, Morris said.

Plus, he said the seeds were planted in the fall of 1991 and bad winter kill in the spring of 1992 could skew the data from some North-

"Many of the seeded types [of buffalograss] tended to be more winter-hardy," he added.

University of Nebraska Professor Terry Riordan said, for instance, the 609 and Prairie cultivars will rate more highly in the tests than they did the first year. Both are adapted to the South, and a number of the test locations are in the North.

"They received winter damage that first year because it was a tough winter. They are

just now starting to fill in and perform better," Riordan said.

Jim Snow, national director of the United States Golf Association Green Section, agreed not to take first-year results as gospel.

"Some [cultivars] are very aggressive and establish well. And in the first year they may look better than they are in comparison later on," Snow said. "Any slow-establishing one won't look so good now."

Snow suggested that golf course superintendents, architects and builders contact experts at the regional trial sites to see which varieties perform well in their areas.

"A lot of grasses that come out of breeding programs will be good in one place, but not in

Buffalograss national test results

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Name	AZ1		CA3			ILI	IL2	IL3	KS1	KS2		MOZ			OH2		TX1	TX2	TX3	UB1	WA4	Mean
*315 (NE 84-315)	5.9		5.7	5.8	3.3	4.9		7.4	5.8	7.1	8.3	8.7		6.9	5.8	7.2	4.5	7.3	5.2	6.1	4.9	6.0
*NE 84-378	5.3	5.0	5.4	6.7	3.7	4.2	6.9	6.1	5.5	7.8	7.3	8.0	5.8	6.5	3.9	6.8	4.8	6.5	5.4	6.9	4.8	5.9
AZ 143	5.5	5.2	5.8	7.6	1.0	4.4	6.5	6.7	5.5	6.8	7.8	7.7	5.0	6.6	5.2	6.9	4.5	6.8	5.6	6.9	4.8	5.8
*Buffalawn	6.6	7.1	6.2	8.2	5.3	2.2	7.3	4.7	5.7	7.7	6.8	6.7	6.5	5.5	4.1	6.4	4.9	5.5	5.4	5.8	4.0	5.8
NE 84-436	5.7	5.3	5.3	7.5	2.0	4.0	6.8	6.4	5.6	7.0	7.4	8.0	4.9	5.7	4.8	6.8	4.9	6.5	4.7	6.4	4.7	5.7
(S) NTDG-5	5.7	5.3	5.3	6.4	3.7	5.1	6.5	6.0	5.9	7.2	7.2	5.7	4.8	6.3	4.9	6.1	4.9	6.5	4.8	6.0	5.6	5.7
(S) NTDG-3	5.8	5.3	5.2	6.7	1.7	4.6	6.9	5.9	5.3	7.2	7.8	5.3	4.4	6.5	5.3	6.6	4.9	5.8	4.8	6.2	5.4	5.6
(S) NTDG-1	5.5	5.6	5.0	6.8	1.7	4.8	6.7	6.6	5.9	7.6	7.4	6.3	4.7	5.7	5.1	6.3	4.5	5.7	4.7	5.9	4.6	5.6
(S) NTDG-2	6.2	5.2	5.5	6.9	2.0	4.4	6.9	6.6	5.6	7.1	7.3	5.3	4.2	6.3	5.0	6.9	4.4	5.3	4.6	5.9	4.5	5.5
(S) NTDG-4	5.7	5.3	5.1	6.2	1.0	4.4	6.5	6.1	5.2	7.6	7.5	6.0	5.4	5.8	4.8	6.3	4.3	5.7	4.8	6.0	5.5	5.5
Highlight 4	6.1	6.1	6.2	7.3	3.7	1.7	7.1	4.3	5.8	7.0	6.8	7.3	5.3	3.2	2.9	6.8	5.1	5.2	3.9	6.0	4.8	5.4
*609 (NE 84-609)	6.3	6.0	5.4	4.3	1.0	4.4	6.7	5.3	4.9	7.7	6.8	6.7	5.1	3.1	3.8	6.6	5.5	6.2	3.8	6.0	5.5	5.3
*(S) Sharps Improved	5.9	5.6	4.9	6.3	2.0	4.2	7.2	6.2	5.1	7.3	7.5	5.0	5.0	5.3	4.2	6.3	4.7	4.3	4.0	5.0	4.8	5.3
*(S) Top Gun	5.8	5.7	5.1	6.1	1.0	4.6	6.9	4.6	5.6	7.3	7.5	5.7	5.2	6.1	4.4	6.2	4.6	4.3	4.1	5.5	4.1	5.3
NE 84-45-3	5.5	4.6	5.0	6.3	2.7	2.9	6.9	6.2	4.8	6.0	5.8	6.3	5.3	6.2	4.1	6.4	4.3	6.0	4.3	5.9	3.5	5.2
Rutgers	6.4	6.4	6.2	7.3	1.7	2.9	7.0	4.1	5.5	7.2	6.4	5.7	5.7	2.3	3.0	6.0	5.0	4.8	5.1	4.2	5.9	5.2
Highlight 15	6.3	6.6	5.9	8.1	NA	2.1	7.5	1.7	5.2	7.1	6.3	5.7	5.7	2.8	2.9	6.7	4.8	4.5	3.7	4.1	5.5	5.2
*Prairie	6.2	6.1	5.6	NA	1.3	3.8	7.4	4.2	5.3	6.6	5.7	6.7	4.0	4.5	5.0	6.7	5.2	47	3.1	6.1	4.9	5.1
Highlight 25	6.3	7.1	6.2	7.4	3.3	1.8	7.3	3.6	5.6	7.0	4.6	6.7	5.9	3.0	1.9	6.6	4.9	4.3	4.8	5.4	4.0	5.1
*(S) Plain	5.6	5.5	4.9	6.8	2.0	3.9	6.7	6.1	4.7	6.3	7.8	4.0	4.4	5.1	5.3	5.6	4.6	4.3	3.9	4.8	4.9	5.1
*(S) Bison	6.0	5.7	4.9	6.5	1.3	3.4	6.7	59	4.8	6.7	7.8	4.0	4.3	5.6	4.1	6.2	4.6	4.3	3.9	5.3	5.0	5.1
*(S) Texoka	4.9	5.6	4.6	6.0	2.0	3.2	7.0	5.9	5.3	6.4	7.6	1.0	4.7	5.9	3.8	5.8	3.9	6.0	3.9	5.7	5.3	5.0
LSD Value	0.6	0.7	0.4	1.1	1.8	0.8	1.0	1.4	0.7	0.7	1.3	1.8	1.1	0.7	2.1	0.7	0.6	1.0	1.0	1.0	1.3	0.2
200 10100						0.0				.,			100	0.7		.,,	0.0				1.0	0.2

- Commercially available in the United States in 1993

Following are the location, along with the soil texture, soil pH, nitrogen applied in pounds per 1,000 square feet, mowing height and irrigation practiced, at each of the test

sites.
AZ1 — Tucson, sandy loam, 7.6-8.5, 2.1-3.0, 0.6-1.0, to

prevent stress. CA1 — Santa Clara, loam, 6.6-7.0, 2.1-3.0, 1.6-2.0, to

prevent stress. CA3 — Riverside, sandy loam, 6.6-7.0, 4.1-5.0, 1.6-2.0, to

prevent stress.
CO1 — Ft. Collins, silty clay loam, 7.6-8.5, 1.1-2.0, 2.1-2.5, to prevent dormancy.
ID2 — Post Falls, silt loam and silt, 6.1-6.5, 1.1-2.0, 1.1-

1.5, only during severe stress.
II.1 — Urbana, N/A, N/A, N/A, 1.6-2.0, only during

IL2 — Carbondale, silty clay loam, 6.1-6.5, 2.1-3.0, 2.1-2.5,

only during severe stress. IL3 — Joliet, N/A, N/A, N/A, 1.6-2.0, only during severe

KS1 — Manhattan, silt loam and silt, 6.6-7.0, 1.1-2.0, 1.1-

1.5. to prevent stress.

KS2 — Wichita, silt loam and silt, 6.6-7.0, 1.1-2.0, 2.6-3.0, no

 $\frac{irrigation.}{MO1-Columbia, silt loam and silt, 6.1-6.5, 1.1-2.0, 1.6-2.0, } \\$

to prevent stress.

MO2 — Columbia, silty clay loam, 6.6-7.0, 1.1-2.0, 1.6-2.0,

MO2 — Containing to prevent stress.

MS1 — Mississippi State, sandy clay loam, 7.1-7.5, 1.1-2.0, 2.1-2.5, only during severe stress

NE1 — Lincoln, silty clay loam, 6.6-7.0, 0.0-1.0, 2.1-2.5, to

prevent dormancy.
OH2 — Marysville, silty clay loam, N/A, N/A, 1.6-2.0, no

OK1 — Stillwater, sandy clay loam, 6.1-6.5, 0.0-1.0, 2.1-2.5,

to prevent stress. TX1 — Dallas, silty clay and clay, 7.6-8.5, 1.1-2.0, 1.6-2.0, to prevent stress.

TX2 — Bastrop, N/A.

TX3 — Cleveland, silt loam and silt, 5.6-6.0, 1.1-2.0, 1.6-2.0,

UB1 - Beltsville, loam, 5.6-6.0, 1.1-2.0, 1.6-2.0, no

irrigation.
VA6 — Norton, N/A, N/A0.0-1.0, 2.6-3.0, no irrigation.
WA4 - Yakima, sandy clay loam, 6.1-6.5, 1.1-2.0, 2.6-3.0, to

Zoysiagrass national test results

Name	AZ1	CAI	CA2	CA3FL1	FL2	GAIGA	2 ID2	IL1	KS2	KY1	MO1	MS1	NE1	OH2	TX1	TX3	UB1	UB2	Mean
DALZ 8507	6.3	6.9	6.1	6.9 7.0	8.0	6.9 3.6	6.8	4.2	7.7	5.4	5.8	7.3	3.5	2.4	4.5	6.1	7.9	7.7	6.0
TC 2033	6.3	6.4	5.7	6.4 6.0	7.7	6.6 3.3	8.0	4.6	8.3	4.5	5.7	7.0	5.0	3.0	4.9	6.3	7.5	6.3	6.0
Sunburst	5.8	5.0	5.6	6.1 6.3	7.7	6.6 4.3	5.8	4.9	8.0	5.8	5.7	6.2	5.7	5.1	4.8	6.0	7.1	6.6	6.0
TC 5018	6.4	5.1	5.8	6.1 6.0	8.0	6.1 3.8	5.5	4.8	8.7	5.8	5.4	5.8	5.6	6.1	4.9	6.1	6.9	6.1	5.9
DALZ 8512	6.4	5.0	6.2	6.2 8.0	7.3	6.9 4.7	5.5	5.2	8.7	5.4	5.5	6.0	4.7	4.4	5.0	5.6	6.3	5.5	5.9
DALZ 8514	6.4	5.0	6.0	6.2 7.3	6.3	6.8 5.2	5.2	4.4	8.3	6.4	5.7	6.0	4.8	4.2	5.0	6.8	6.3	5.8	5.9
*El Toro	6.5	4.9	6.1	6.3 7.3	7.0	6.6 4.3	4.7	5.1	8.7	5.6	5.5	5.9	5.0	4.6	5.1	6.4	6.0	5.9	5.9
*Emerald	6.0	7.6	6.4	6.6 6.3	6.3	5.4 3.1	7.2	4.6	8.0	4.8	5.4	7.3	5.1	2.8	5.2	6.0	6.9	6.3	5.9
QT 2004	6.3	7.0	5.6	6.6 6.0	7.0	5.7 4.2	6.8	4.1	8.0	3.7	5.9	6.6	5.5	3.0	4.6	5.7	6.9	6.9	5.8
DALZ 9006	6.0	7.1	6.0	6.5 6.0	5.3	5.9 3.2	7.2	3.9	8.0	3.4	5.9	7.3	4.1	2.3	4.8	7.1	7.7	7.4	5.8
CD 2013	6.3	6.3	5.5	6.2 6.0	7.0	6.2 3.2	6.3	4.2	8.7	3.9	5.8	6.8	4.7	3.4	4.5	5.3	7.0	6.5	5.7
DALZ 8508	6.1	7.1	5.9	6.6 6.0	5.7	6.9 3.2	7.0	3.9	8.0	3.3	5.7	7.5	3.4	2.0	4.5	6.7	7.7	6.9	5.7
QT 2047	6.0	5.1	5.2	5.9 5.3	7.7	5.8 3.2	4.5	4.7	7.3	5.6	5.3	6.3	4.7	4.7	4.8	5.4	6.6	5.8	5.5
CD 259-13	6.0	4.8	5.2	6.0 4.7	4.3	6.9 2.4	4.3	5.2	7.7	5.7	5.3	6.0	5.4	3.9	4.9	6.1	6.9	6.8	5.4
*Meyer	6.0	5.7	5.3	6.2 4.0	5.0	4.9 3.3	7.0	4.0	8.0	3.3	5.9	6.5	6.2	3.7	4.7	6.1	6.6	5.7	5.4
(S)TGS-B10	6.1	3.9	5.3	6.1 6.3	5.3	5.8 2.9	4.5	4.4	7.0	5.7	5.3	5.0	5.0	3.8	4.8	5.1	5.8	5.7	5.2
*Belair	5.5	4.6	5.0	5.4 4.3	3.3	5.8 3.9	4.3	4.1	8.0	4.8	5.4	5.2	5.8	4.4	4.3	5.9	6.7	5.7	5.1
(S)TGS-W10	5.8	3.9	5.3	5.7 5.3	4.7	5.7 3.6	4.3	4.2	7.3	4.8	5.5	5.1	5.0	3.8	3.9	6.1	6.5	5.9	5.1
DALZ 8501	5.6	7.7	6.2	5.8 7.0	7.3	5.2 2.7	6.3	2.3	7.0	1.9	4.3	6.9	1.0	1.0	4.0	5.7	5.5	5.4	4.9
DALZ 8516	5.6	6.1	5.1	5.6 5.0	3.3	4.9 3.3	8.2	2.7	8.0	3.1	5.2	5.8	3.2	1.5	4.2	6.2	5.3	4.5	4.8
*(S)Korean Common	5.6	4.1	4.9	5.0 5.7	4.0	5.2 3.6	2.8	4.1	6.3	4.3	5.3	4.7	4.3	3.2	4.4	5.4	5.6	5.1	4.7
(S)JZ-1	5.8	4.4	4.9	5.0 4.7	3.3	5.2 3.3	3.7	3.7	6.0	4.8	5.1	4.9	4.3	3.8	4.6	5.3	5.4	4.8	4.7
DALZ 8502	6.0	7.7	6.1	6.3 5.0	3.0	4.8 2.8	6.0	1.1	7.0	1.0	4.0	6.8	1.0	1.0	4.3	6.2	5.1	3.9	4.4
DALZ 8701	6.1	6.8	6.7	6.5 6.7	5.3	5.1 2.7	4.3	1.3	7.3	1.1	1.9	5.3	1.0	1.0	3.6	5.4	3.9	3.5	4.3
LSD Value	0.4	0.7	0.5	0.4 1.6	2.0	0.8 1.5	1.3	0.9	1.0	1.3	0.5	0.4	1.0	1.1	0.7	0.9	0.4	0.7	0.2

AL1 - Auburn University, sandy loam, 4.6-5.5, 2.1-3.0, N/A, N.A. AZ1 — Tucson, sandy loam, 7.6-8.5, 2.1-3.0, 1.1-1.5, to

prevent stress.
CA1 — Santa Clara, loam, 6.6-7.0, 2.1-3.0, 1.6-2.0, to

CA2 — Santa Ana, silty clay loam, 6.6-7.0, 4.1-5.0, 0.6-CA2 — Santa Ana, siny cray roam, 6.6-7.0, 4.1-5.0, 0.6-1.0, to prevent stress.

CA3 — Riverside, sandy loam, 6.6-7.0, 4.1-5.0, 0.6-1.0, to

FL1 — Bradenton, N/A. FL2 — Apopka, sand, 6.1-6.5, 4.1-5.0, 1.6-2.0, to prevent

GA1 - Griffin (high soil pH), sandy loam, 4.6-5.5, 0.0-

1.0, 1.1-1.5, to prevent dormancy. GA2 — Griffin (low soil pH), sandy loam, 3.6-4.5, 0.0-1.0, 1.1-1.5, no irrigation. ID2 — Post Falls, silt loam and silt, 6.1-6.5, 2.1-3.0, 1.1-1.5,

- Urbana, N/A, N/A, N/A, 1.67-2.0, only during

IL2 — Carbondale, silty clay loam, 6.1-6.5, 2.1-3.0, 1.1-1.5, no irrigation. KS2 — Wichita, sandy loam, 6.6-7.0, 3.1-4.0, 1.1-1.5, to

KY1 — Lexington, silt loam and silt, 6.1-6.5, 2.1-3.0, 0.6-1.0,

no irrigation.
MD1 — Silver Spring, sandy loam, 5.6-6.0, 2.1-3.0, 0.6-1.0, only during severe stress.

MO1 — Columbia, silty clay loam, 6.1-6.5, 2.1-3.0, 1.1-1.5,

to prevent stress.

MS1 — Mississippi State, sandy clay loam, 7.1-7.5, 3.1-4.0, 2.1-2.5, to prevent dormancy.

NE1 — Lincoln, silty clay loam, 6.6-7.0, 1.1-2.0, 1.6-2.0, to prevent dormancy.

OH2 — Marysville, silty clay loam, N/A, 3.1-4.0, 1.6-2.0, no irrigation.

OK1 — Stillwater, silty clay loam, 7.1-7.5, 0.0-1.0, 2.1-2.5,

to prevent stress.

TX1 — Dallas, silty clay and clay, 7.6-8.5, 1.1-2.0, 1.6-2.0,

to prevent stress. TX3 — Cleveland, silt loam and silt, 4.6-5.5, 3.1-4.0, 1.1-

1.5, to prevent stress.

UB1 — Beltsville, Md. (high maintenance), sandy loam,
4.6-5.5, 2.1-3.0, 1.1-1.5, to prevent dormancy.

UB2 — Beltsville, Md. (low maintenance), loam, 4.6-5.5, 0.0-1.0, 1.6-2.0, no irrigation

'Keep it lean' to keep it happy Lean ain't mean in the care and

management of buffalograss and zoysiagrass.

That's one of the discoveries of turf scientists studying maintenance of the two grasses.

"Not enough research has been done on how to manage these grasses. Now we're starting to put attention in that area and we're having a greater success with them," said Dr. Milt Engelke of Texas A&M University.

The major factor to remember with buffalograsses, Engelke said, is "don't touch them. Mow once or twice a year. Fertilize - maybe - depending on what kind of soils they're in. A lot of soils will have enough mineralization to produce enough nitrogen for the buffalograss."

Zoysias, he said, require the same low fertilization requirements.

"The misapplication of fertilizer on zoysia is very devastating," Engelke said. "You're going to get a tremendous amount of thatch buildup, and when you can't get irrigation into it, the grass grows on itself. Also, if Bermudagrass is around, you'll promote the Bermuda."

Engelke said superintendents should "keep it lean." Buffalograss requires perhaps two pounds of nitrogen a year, while zoysia needs only two to three pounds

While Bermudagrass requires around 48 inches of water annually, or four to six inches a month "to survive and persist," buffalograss needs 18 to 22 inches and zoysia 15 to 22.

The right mix

Tests at the University of California at Riverside and at the U.S. Department of Agriculture's Beltsville, Md., station indicate excellent results by mixing zoysiagrass with other species.

Steve Cockerham, superintendent of agricultural operations at UCal-Riverside, said he has overseeded zoysia with tall fescue and it "looks like a good combination" that shows green year-

Zoysia, he said, goes dormant early in his area - around Thanksgiving and starts greening around April or May. Tall fescue fills the gap nicely, he said.

Meanwhile, in Maryland, Kevin Morris of the National Turfgrass Evaluation Program reported good ability to establish cool-season grasses with zoysia.

"We've mixed zoysia with ryes, bluegrass and tall fescue for 10 or 12 years. Tall fescue seems to be the best," he said. "We used that combination in the mall in Washington, D.C., and it is tolerating heavy wear."

Morris said the mix has been mowed to one inch for several years, and he is going to try it at 5/8 inch. "We may have to use a lower-growing tall fescue," he

When mixed, zoysia tends to green up four to six weeks earlier then when standing by itself and it holds the color longer in the fall, he said. The tall fescue greens up in the spring.

"Here in Maryland, we have a turf that's green almost year-round," Morris

said.

Tour of Duty

DAN PIERSON
Cherry Hills Country Club
Denver, Colo.
U.S. Senior Open
July 5-11, ABC

Dan Pierson, 44, grew up in South Hadley, Mass., and matriculated to the agronomy program at the nearby University of Massachusetts in Stockbridge. From there he

landed his first assistant's job at venerable Canterbury Golf Club in Cleveland. In 1978, Pierson was named head superintendent at Crooked Stick in Carmel, Ind., before moving to Cherry Hills in 1985, just after it hosted that year's PGA Championship. While at Stockbridge, Pierson met architect Geoffrey Cornish.



They would later collaborate on restorations of both Canterbury and Cherry Hills.

Things to look for: "We started our restoration project back in 1986," said Pierson, a self-described fan of old designs like Cherry Hills. "We've been trying to bring the bunkers back to their original Willie Flynn design (1922). Over the years there's been a migration of the bunker edges. Before we addressed the problem, they used to run right into the greens, which was a real maintenance problem. You couldn't even turn mowers around."

Pierson explained the original bunker boundaries have been restored, under the direction of he and Cornish. "Mr. Cornish and I really see things the same way. I basically oversaw the whole thing and had more than a small hand in the design aspect. But from a political standpoint, you always want the membership to feel the architect is really

Continued on next page

CHRIS HAGUE
Crooked Stick Golf Club
Carmel, Ind.
U.S. Women's Open

July 22-25, ABC

When the 1993 U.S. Women's Open is finished, Chris Hague will be the only superintendent to have hosted all three USGA Open events. Hague, 41, grew up in Pittsboro, Ind., about 40 miles west of Crooked Stick. He attended the Purdue University Extension, where he earned a degree in turf management. He held his first head superintendent's job at Eagle Creek in Indianapolis, where he supervised the 1973 grow-in. After hosting the 1982 U.S. Publinx (another USGA event), Hague moved on to Hazeltine National in Chaska, Minn., site of the 1983 U.S. Senior Open and the 1991 U.S. Men's Open. He returned to Indiana in March, 1992.

Things to look for: Like Eagle Creek, Crooked Stick — site of the 1991 PGA Championship — is a Pete Dye design. "Pete and the previous superintendent made a lot of changes to the course in 1989 and '90, prior to the PGA," Hague explained. "For the women this year, we extended the tee on no. 8 about 10 yards. We also extended tee areas on no. 10 and no. 14. The course will play about 6,300



yards for the women. It played about 7,300 for the men." For those who remember John Daly's romp through Crooked Stick in '91, there are some changes. "We now have close to 60 acres of natural rough, tall fescues and bluegrass, that we let go natural," said Hague. "It'll be

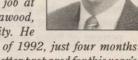
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JERRY DUCKER TPC at Southwind Memphis, Tenn.

Federal Express St. Jude Classic July 29 to Aug. 1, CBS

Jerry Ducker, 40, is Michigan born, bred and educated. After growing up in Fenton, Mich., just north of Detroit, he matriculated to the turfgrass management program at

Michigan State. After leaving Lansing, he accepted the assistant superintendent's job at hallowed Oakland Hills in Birmingham, then took the head super's position at Heather Highlands Golf Club in Holly. Ducker left the state to accept the top job at Hallbrook Country Club in Leawood, Kan., right outside Kansas City. He



arrived at Southwind in April of 1992, just four months before the St. Jude Classic. Is he better prepared for this year's tournament? "A lot better prepared," he said with a laugh.

Things to look for: The TPC at Southwind is a Ron Prichard design, with assistance from PGA course architect Bobby Weed. Fuzzy Zoeller and Hubert Green were the consulting professionals. It opened in 1988, and the stadium course is still maturing, said Ducker. "The roughs and the general landscaping still have a way to go. We're still adding irrigation and hopefully — and I emphasize the word hopefully — we'll be starting a major tree-planting campaign soon.

"The most distinctive thing about our golf course is the low cut around the greens. And the way the bunkers are designed — the fine-cut turf goes right to the edge of the bunkers. There isn't any long, shaggy look around the

Continued on next page



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Tour of Duty

Continued from previous page

Ducker

edges, which is sort of unusual."

Made-for-TV preparations: "We try to view all the holes from the camera settings. We tend not to worry so much about striping so much as improving the areas that don't come into play. For example, the area to the right of the 10th tee is totally out of play. But you can see it from the camera. So we've gone in and irrigated it, sodded it and put in a landscaped bed."

Ducker said he hopes the course will look more manicured this year. "Last year we had eight inches of rain during the tournament. The roughs got real shaggy because we simply couldn't mow them."

Hague

three feet tall by the tournament. On most holes, there will be no more than 20 yards of primary rough before you hit the real tall stuff."

Made-for-TV preparations: Hague has experience with TV and with ABC, which televised the Open at Hazeltine. "I'm very fortunate to be working with ABC again," Hague said. "We know where all the towers are going to be, so we can adjust for striping. But after they set up, I'll go up in each tower and take another look from every angle."

Every superintendent has his own theories on striping and Hague is no exception: "We try to stripe not necessarily with the flow of the hole. I feel it shows up better on TV and it's not as obtrusive to the players—at least, they've told me that. About four to five days before the tournament we'll burn the stripes in place."

Pierson

in charge.'

Made-for-TV preparations: "Back in 1990 [when Cherry Hill hosted the U.S. Amateur], Mr. Boatwright [then USGA president, P.J.] said he wouldn't change a thing for the Senior Open. So we haven't. The nature of a golf course of this caliber is you do all that stuff for the members anyway. We double cut all year long and we get the greens to 10-1/2 for member events."

As part of the ongoing restoration process, Pierson has overseen reconstruction of every bridge on the property — all in rustic brick. Thirteen of the 18 holes at Cherry Hills have water features. However, Little Dry Creek has grown, creating an erosion problem in spots. In response, Pierson has instituted a rock stabilization program using a lined-boulder approach for "a more natural look."

Rutgers opens two-year turf school to applicants

New Brunswick, N.J. — Applications are being accepted for the two-year Rutgers Professional Golf Turf Management School. The course is presented in two 10-week sessions over two years and requires two seasons of supervised field experience where students apply skills developed in the classroom.

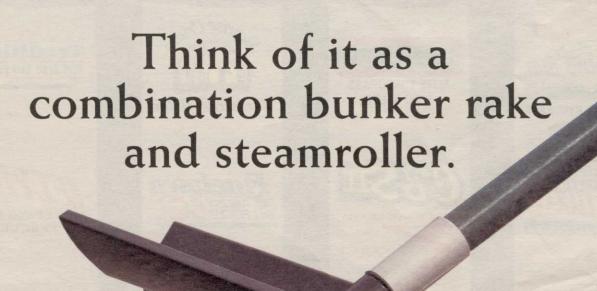
Students learn technical skills required of all superintendents such as turfgrass

establishment, maintenance of greens and tees, plant pathology, entomology, weed identification, as well as management and communication skills all managers should master.

The course is recommended for golf course superintendents, assistant superintendents, greenkeepers, irrigation technicians and mechanics who have a minimum of two years experience working in turf management.

The fall session will be held Oct. 4 to Dec. 10, and the winter session will be held Jan. 3 to March 11, 1994. Applications are due on Aug. 6 and Oct. 29, respectively.

To request a brochure and application or for more information, contact the Office of Continuing Professional Education, Cook College, P.O. Box 231, New Brunswick, N.J. 08903; telephone 908-932-9271.



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SG-180

Terry Buchen becomes world's fifth master greenkeeper

Terry Buchen, superintendent at Double Eagle Club in Galena, Ohio, has become only the third American and fifth in the world to earn the coveted Master Greenkeeper Certificate.

David Golding, education officer for the British and International Golf Greenkeepers Association (BIGGA), has informed Buchen the certificate will be presented Jan. 19 in Harrogate, England, at the BIGGA turf management

"I've been a certificate golf course superintendent since 1978 and this was something to do - another mountain to climb," said Buchen, a Golf Course News contributing editor.

Last January, Prince Andrew presented the certificate to Robert Maibusch of Hinsdale Golf Club in Clarendon Hills, Ill., and William Montague of Oakwood Club in Cleveland Heights, Ohio. Only three other greenkeepers, all from Britain, have qualified for the MGC, which is awarded only after extensive education and examination.



Terry Buchen

Joe Baidy, vice president of the Golf Course Superintendents Association of America, administered the test to Buchen, who termed it "very

hard," entailing six hours of writing essay answers to six questions.

Buchen said "a lot of different approaches to maintaining golf courses are used in the British Isles and Europe, and so I wanted to study them and pass the test. Basically their fairways and roughs are not irrigated. They use a lot of different grasses because of watering practices and the mild climate."

Buchen studied six months

before taking the examination.

Now he will accept the award in January and has been asked to speak on a topic of his choice as

A graduate of Penn State University, Buchen was a member of the United States Golf Association Green Section Greens Committee from 1977 to 1984, was associate agronomist for the PGA Tour in 1979-80, and has worked on construction of several golf courses. He joined BIGGA in 1984.

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CIRCLE #113

John's Island Club gives \$6,000 to research for 5th year

ORLANDO, Fla. - The membership of John's Island Club in Vero Beach contributed \$6,000 to the Florida Turfgrass Research Foundation for future turfgrass research.

"This is the fifth consecutive year that our foundation has received a \$6,000 contribution from John's Island," stated Bob Yount, executive director of the Florida Turfgrass Association.

The money will be used to help the foundation find new environmnetally maintenance techniques, develop new grasses for Florida and protect the future of Florida golf, which is a \$5.2 billion dollar industry in the state. 1.5 billion is direct golfer spending and 20% is non-resident/visitor spending.

"To me and to all of Florida's turf industry, this shows the dedication of John's Island's members to help find ways to protect Florida's turfgrass and the future of our state," said Yount.

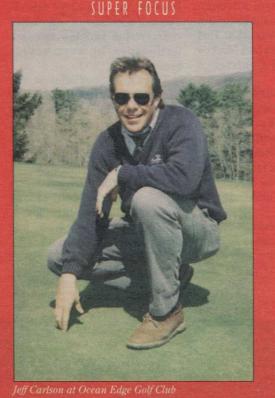
Michigan State adds two faculty to its turf staff

Michigan State University has hired Greg Lyman as its new Education Environmental Specialist for turf and David Gilstrap as coordinator of the twoyear program in lawn care and athletic turf maintenance at the Institute of Agricultural Technology.

Lyman, who the last two years has been involved in MSU's pesticide education programs, has taken over for Dr. Frank Rossi. A landscape horticulture graduate of MSU with a master's degree from Penn State in horticulture, he will focus his attention on the issue of loading, washing and rinsing pads.

Gilstrap was most recently on the faculty at Texas A&M, where he earned his master's degree in agronomy, and worked as a sales representative for a Texas-based turf products distributor.

Jeff Carlson,
a man of
many hats —
and talents —
lands yet
another role
in the world
of golf



On call for any calling

By PETER BLAIS

ot many superintendents can say they haven't had to apply for a job in 22 years. Jeff Carlson can.

Not many superintendents can say they work at four different courses and have four different titles. Jeff Carlson can.

Hopefully, many superintendents can say they love their work. Jeff Carlson can.

"I consider myself really lucky to be doing what I like to do," the roving Massachusetts superintendent/executive said.

Carlson began his turf career in the summer of 1968, cutting grass at Brewster (Mass.) Golf Club while vacationing with his parents at their Cape Cod summer home.

He spent three summers on the grounds crew before accepting the assistant superintendent job in 1971

"I was an English major [Drew University, Madison, N.J., 1971]. I didn't want to teach. And here was an opportunity to work outside. It was just what I wanted," Carlson recalled.

Four years later, he was promoted to head superintendent at the nine-hole layout. In 1980, he attended the University of Massachusetts' winter turf management school. That prepared him, to a minor degree, for what was to come.

The Concoran-Jennison Cos. bought Brewster GC and the surrounding 485 acres in 1983. Incorporating the land but not the routing of the old nine, the new management planned to expand the course to 18 holes and build 800 condos.

The design team of Geoffrey Cornish and Brian Silva were the architects. Carlson was offered a one-year contract as construction superintendent.

"It was the best learning experience I could have had," said the English major. "Brian was on the scene and he gave me a crash course in agronomy. We didn't have an irrigation system and I got to help put that in. I got to see the various subsoils and where the drainage tiles were. It was fun and a lot of hard work."

The course was renamed Ocean Edge Golf Club and re-opened in 1986. Carlson became director of maintenance, title No.1. In addition to accommodating 35,000 rounds a year, Ocean Edge hosted the next six New England PGA Championships. Its extensive practice facility helped draw *Golf Digest's* annual golf school.

Concoran-Jennison decided in 1990 to get into the management of resort and conference centers.

The company signed on to operate the Cranwell Conference Center and Golf Club in Lenox. The facility, located in the western mountains, included a 65-room hotel and 18-hole John Van Kleek/ Wayne Stiles-designed course.

The previous owners had started to fix up the long-neglected layout, but ran into financial difficulties. Carlson was named Director of Golf, title No. 2, and given the responsibility to oversee completion of all capital improvements, golf course maintenance, membership, golf programs, staffing, budgeting and marketing.

"It was good to start as a superintendent and then move into the playing side," Carlson said.

"As a superintendent, you see things just from the expense and not the revenue angle. Golfers are viewed as running down the course. Most superintendents would rather see fewer rounds. It's important to see how the revenue and expense sides need to work together."

Revenues tripled under Carlson's leadership. Lazy maintenance procedures had reduced the greens to small circles. New mowing practices following the contours of the original greens pads eventually returned the putting surfaces to their intricate shapes and larger sizes.

"It's really an undiscovered gem of New England golf," said Carlson, who took his greatest professional pride and enjoyment restoring the greens to Van Kleek's and Stiles' original design.

Concoran-Jennison wasn't finished. In 1991, local banks asked the firm to take over Glen Ellen Golf Club, a family resort in central Massachusetts that had fallen into serious disrepair.

Carlson became the 18-hole course's Director of Golf Maintenance, title No. 3. He embarked on a three-year capital improvement program by installing a new pump station and drainage system while renovating many greens and tees.

Lianne Larsen, one of New England's few female head superintendents, was put in charge of daily operations. The property includes 100 acres of land that will eventually allow the course to expand to 27 holes.

Title No. 4, construction superintendent, looms just ahead. Concoran-Jennison will start construction of Braeburn, an 18-hole course in Hope Valley, R.I., this fall.

"The Mass Pike and 495 have become major parts of my life," Carlson said of the state's two main highways leading to his various outposts. "I've gotten to know the toll-takers very well. When we start construction this fall I'm going to live on those roads."

Does that bother him?

"No," Carlson replied. "I really like the diversity. At first I thought wearing so many hats might be frustrating. But it's really helped me understand the business better.

"My responsibilities just keep getting bigger. The key to making it all work is being able to delegate authority and hire good people."



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West

CALIFORNIA AWARDS ESTABLISHED

California Gov. Pete Wilson has established the Governor's Environmental and Economic



Leadership Awards to recognize leaders in the realm of environmental protection and economically compatible resource conservation.

Annual awards will be presented in the categories of partnerships, environmental management, innovation, and environmental restoration and rehabilitation.

California residents, businesses, non-profit organizations, professional and trade associations, communities, and state and local governments are eligible. Chosen by an independent committee, the 1993 awards will be presented for activities undertaken and/or completed in 1992. Deadline for nominations is Aug. 27.

More information is available from the Governor's Office, Sacramento, Calif. 95814, or by calling the California Resource Agency at 916-653-5656 or the California Environmental Protection Agency at 916-445-3846.

South Central



ALABAMA APPOINTS OMBUDSMAN

MONTGOMERY, Ala. — The Alabama Department of Environmental Management (ADEM) has created an ombudsman's position, designed to help small businessmen comply with environmental rules and to serve as a liaison between the department, local governments and the general public.

Jim Moore, a 14-year veteran of ADEM's Water Division, has taken the ombudsman's post hoping to "enhance environmental compliance and responsibility in the state."

Among Moore's duties will be aiding in the investigation and resolution of complaints; operating a toll-free hotline to provide free, confidential help on specific problems and grievances and to respond to requests for information; and working with other state agencies and organizations on development of programs.

The toll-free number — 800-533-ADEM — will take calls from 8 a.m. to 5 p.m. Mondays through Fridays and record message all other times.

Mountains



TURF TALK '93 LINEUP SET CHANDLER, Ariz. — The latest research and developments on

subjects ranging from fertilization

of warm-season grasses to controlled release nitrogen technology and poa annua control will be presented Aug. 25 at Turf Talk '93 at Sheraton San Marcos Golf Resort and Conference Center here.

Hosted by Garden West Distributors of Phoenix and with participation from Cactus & Pine Golf Course Superintendents Association, the conference will feature talks by Drs. James Beard, David Kopec, Fred Ledeboer, Gary Smith and James Breuninger.

Beard, who has recently retired from Texas A&M and is director

of International Sports Turf Institute, Inc. in College Station, Texas, will speak on water conservation and low nitrogen fertilization of warm-season grasses.

Extension Specialist at the University of Arizona, Kopec will talk on weed control in desert turfgrasses and on UA's turfgrass research facility.

Ledeboer, a plant breeder at Turfgrass Breedi g and Research Station in Aurora, Ore., will speak on improving cool-season turfgrasses through breeding.

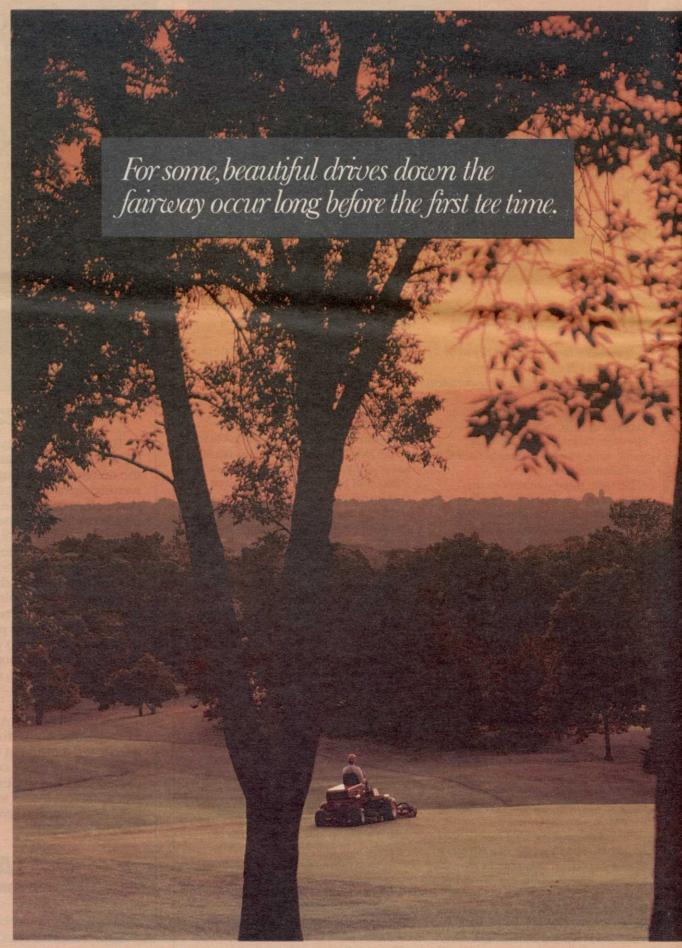
Director of research and development for Vigoro (Par Ex),

Smith will address controlled release nitrogen technology.

Breuninger, technical service and development representative for DowElanco Turf and Ornamental Products, will talk on growth regulators and poa annua control.

The conference will run from 8 a.m. to 5 p.m. Pre-registration is \$30. People may register at the door for \$35.

For further information, people should contact Garden West Distributors. Other sponsors of the event are DowElancio, Par Ex, Turf Merchants Inc. and Ironite



North Central



MISSOURI GRANTS AVAILABLE

JEFFERSON CITY, Mo. - The Missouri Department of Natural Resources has received 25 applications for Land and Water Conservation Fund grant assistance from the state's fiscal year 1993 allocation.

Grant requests totaled just over \$1 million, but there is approximately \$385,000 available for grants this year.

Grant applications will be reviewed by the department's Outdoor Recreation Assistance Program staff and will be awarded using a priority rating system by the State Inter-Agency Council for Outdoor Recreation in late July or early August.

The fund is a federal grant program administered in Missouri by the DNR. Grants are available annually through the U.S. Department of the Interior's National Park Service to help the state's political subdivisions acquire and develop outdoor recreation facilities. The funds come from from outer-continental shelf oil leases, federal surplus property sales, and motorboat fuel

HOLLEN HONORED

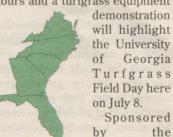
John Hollen, superintendent at Red Oak (Iowa) Country Club, has been given the Distinguished Service Award from the Iowa Golf Superintendents Course Associaiton.

The award is presented annually to the superintendent in Iowa who excels in providing extra time and service to the IGCSA.

Southeast

GEORGIA FIELD DAY READIED

GRIFFIN, Ga. - Two research tours and a turfgrass equipment



university's Agricultural Experiment Stations and Cooperative Extension Service and the Georgia Turfgrass Association, the field day will be held from 8 a.m. to 3:30 p.m. at the Griffin Experiment Station on the north side of town.

Tours will show research on potential pesticide movement from fairways and through golf greens; seeded Bermudagrass's response to moving height, traffic and herbicides; turfgrass wear tolerance; adaptability and stress tolerance and its response to fertility, traffic and drought; control of crabgrass; and integrated management of brown patch in tall fescue.

Updates will also be given on bentgrass disease management. insect and weed control and turfgrass breeding in Georgia.

People may register by contacting county Extension offices or the conference office at 912-681-5189.

Northeast

DESIGN AND BUILD ARE TOPICS

DELHI, N.Y.—The annual Golf Course Design/Construction and Golf Day will be held at State University of New York-Delhi on

Aug. 17. The program which, starts at 9:30 a.m., features Dr. Norm Hummel of Cornell

University, who will discuss components of a sand-based greens mix.

Also on the program is Christine Faulks of Greensmix, Inc., discussing the ABC's of soil blending. Mike Hurdzan of Hurdzan Design Group in Columbus, Ohio, will speak on designing a golf course with integrated pest management in mind. A nine-hole golf tournament is an afternoon option for attendees.

The event is co-sponsored by the New York State Turfgrass Association, Central New York Golf Course Superintendents Association, Finger Lakes AGCS, Hudson Valley GCSA, Metropolitan GCSA, Northeastern GCSA and Long Island GCSA

More program and registration information is available from NYSTA at 800-873-TURF.

SHORT COURSE ON COMPOST

ITHACA, N.Y. - Cornell University will conduct its Municipal Compost Management Short Course for Professionals here, Aug. 4-6, teaching the gamut of compost issues from yard waste to composting technologies.

Several Cornell faculty members will lead the three-day session, joined by other experts from New York City Sanitation Department, New York State Department of Environmental Conservation and the Rodale Institute.

People may register by contacting Lauri Wellin, Cornell Waste Management Institute, 466 Hollister Hall, Ithaca, N.Y. 14853; 607-255-1187.

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From agronomy to aesthetics, tips by which to live

By TERRY BUCHEN

POA ANNUA

Another tool to help control the ever-dreaded poa annua is being ised by superintendents, especially on newly constructed courses. Before guests are allowed to play, their golf spikes are cleaned of all debris to keep poa annua seeds from contaminating the turf.

The locker rook attendant usually performs this task and sometimes also polishes the shoes

before play begins, and then again after the round. The bag-drop attendant asks for the shoes and takes them to the locker room

Supers have said this approach has been great public relations. Besides being effective for controlling unnecessary seedhead encroachment, it has helped them sell the extra expense of chemically keeping out annual bluegrass and to do everything possible to prove to the golfing

public that they have done their homework.

SPRAYER FOAMER

One particular idea to help the spray technician - who is using a foam marking attachment on his boom sprayer - has been showing good results. On sunny, hot and humid days, the foam sometimes will "disappear" while the person is refilling the spray tank, waiting for golfers to pass by, etc. By adding a green turf coloring chemical, or plain green food coloring to the foam mix, you will mark the areas that were previously sprayed. The green "dye" will usually last up to two days at best, depending on how dark and visible you want the

THE TOP ONE INCH

Superintendents who host televised amateur professional golf championships have used a couple of ideas for painting the top one inch of soil, above the hole liner to make "cups" easily identifiable for viewers. A plastic bottle containing a bright white shoe polish has been used for years. It closely resembles the glossy white paint that turf managers use on their hole liners as they are routinely painted throughout the season.

Another old idea is to use a bright white water-based latex paint and a half-inch-wide brush to paint the soil. For even better results, some supers grind up white blackboard chalk into a powder and add it to the shoe polish or latex paint.

This creates the brightest, most visible hole for television, or a touch of class for any member/ guest tournament. When using a shoe-polish, with built-in applicator, or paint brush, apply the liquid at least 45 to 60 minutes beforethe first group of golfers.

A piece of plywood with a 4-1/4inch hole cut out serves as a great template to help keep the paint off of the turf surface. Another trick is to put the can of paint inside a bucket so it will not spill on the putting surface if bumped.

The new way of marking the top one inch is to use an aerosol can of white paint that is turned upside down and inserted into a pre-fabricated tool that fits inside the 4-1/4-inch hole. A twist of the wrist can paint the soil in a matter of seconds. This new way of painting is convenient and fast but is not as visible as the other two ways.

TOURNAMENT CONTESTS

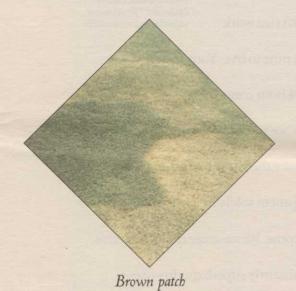
During many important functions, white circles are desired on one or more greens for players to win a contest of who can get "inside" one or more circles. One of the best materials for use is white baby powder, without baking soda added, that is applied to moist turf just after mowing.

A string is tied around the flagstick and the top of the baby powder bottle to any diameter size circle that is desired. The baby powder can easily be hosed off the next day and no one will ever notice that it was there.

This idea is also helpful if you are having a multi-day tournament where the hole and circles will change locations each day.

Baby powder containing baking soda will burn the turf, so be cautious.

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And when you use Daconil 2787, you get effective, broad spectrum control of 17 other disease-causing organisms. That includes those that cause Dollar spot and Leaf spot (Melting out). It's even registered for effective control of algal scum. Plus, use Daconil 2787 as recommended on your ornamental plantings and plant beds to control disease.

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Daconil 2787 WDG

Few firms manufacture rodenticides

Following are names, addresses, telephone numbers and contact people (when available) at rodenticide manufacturers and distributors appearing in the 1992 Golf Course News Buyer's Guide and elsewhere:

The Andersons

1200 Dussel Dr. Maumee, OH 43537 419-891-6320 Circle No. 201

Bell Laboratories

3699 Kinsman Rd. Madison, WI 53704 608-241-0202 Joe Laurin Circle No. 202

Brewer Environmental Industries

311 Pacific St. Honolulu, HI 96810 808-532-7400 Carolyn Ambrose Circle No. 203

ICI Americas Inc.

Righter Pkwy. Delaware Corp. Ctr II Wilmington, DE 19897 302-886-1000 Jim Petta, Charles Nash Circle No. 204

Lesco Inc. 20005 Lake Rd. Rocky River, OH 44116 216-333-9250 Allen Crowder Circle No. 205

Motomco Ltd. 3699 Kinsman Blvd. Madison, WI 53704 608-244-2904 Bill Pohlson Circle No. 206

Regal Chemical Co.

P.O. Box 900 Alpharetta, GA 30239 404-475-4837 Circle No. 207

Southeastern Turf Grass SupplyInc.

6942 Phillips Pkwy. N. Jacksonville, FL 32256 904-260-8565 Bob Wicker, Jeff Mobley

Circle No. 208

Van Waters & Rogers Chemical

P.O. Box 4579 Houston, TX 77210 713-644-1601 Tony Smith Circle No. 209

Wilco Distributors Inc.

P.O. Box 291 Lompoc, CA 93438 805-735-2476 Donald W. Willis Circle No. 210

Rodenticides: A pesty PR problem for supers

he public may not like fungicides or insecticides, but no one mourns the passing of fungi or bugs.

Not so prairie dogs, ground squirrels, voles and even mice. Thus the use of rodenticides can be a more ticklish

"I've found that people complain a lot less if I contract with a company to remove animals than if we do it ourselves," said Dennis Lyon, the city of Aurora (Colo.) manager of golf.

Public relations is a problem. Yet so are rodents, both to playing conditions and golfers themselves. Prairie dogs, for instance, may appear cute and cuddly. But their holes have caused broken legs and sprained ankles. And they are carriers of the virus that causes bubonic plague, Lyon noted.

Club members have little patience with a superintendent who allows voles to leave burrows running through the center of a green without taking action.

And cash-strapped cities would soon bid sayonara to the super who allowed mice and rats to merrily eat their way through stored supplies of grass seed.

So, whether they choose to treat the problem themselves or contract out, dealing with rodenticides is part of a superintendent's job.

Rodenticides come in several forms, according to Allen Crowder, LESCO's product manager for pest control.

T've found that people complain a lot less if I contract with a company to remove animals than if we do it ourselves.'

- Dennis Lyon

Generally they take the form of meal, pelleted bait, loose pills or individual place packs.

Some are effective with a single feeding while others require the rodent to return to the serving table several times. Single-feed products are generally more expensive, but also more effective, Crowder noted.

Different active ingredients have different effects, Crowder explained. Rodenticides containing bromadiolone are anticoagulants that cause the animal to eventually bleed to death. Zinc phosphide-based products create an internal gas build-up that is deadly to the pest. And vitamin D-3 causes bodily functions to accelerate until the rodent's body simply quits.

Some products are effective against a few animals, while others can be used against a broad spectrum. Bromadiolone is used in rodent baits for mice and rats, according to the Farm Chemicals Handbook. Zinc phosphide, meanwhile, takes on rats, mice, ground squirrels, prairie dogs, voles, moles and gophers.

Moles are the primary four-legged pest bedeviling golf course

superintendents, according to Robert Corrigan, a vertebrate pest specialist at Purdue University.

"They are a significant problem in most parts of the U.S.," Corrigan said. "They push up mounds and tunnels, sometimes right up onto greens."

Moles are technically insectivores, not rodents. Rodenticides are sometimes effective against them, but not always. Traps sometimes work better and are available at any hardware store, Corrigan

Traps and glue boards are also frequently used in seed storage areas to control mice and rats, Crowder added.

"I can't imagine a place that stores seed that doesn't have a potential mouse problem," Crowder said.

Lyon deals with this by storing little if

"We try to buy only what we plan to use right away," he said.

If that isn't possible, there are precautions superintendents can take. Lyon stores what little extra seed he has in 55-gallon metal drums. Corrigan recommended making seed inaccessible by keeping it elevated 12 inches off the floor on a metal rack located away from

If rodenticides are used, then store them separately from other chemicals.

"If a rodenticide picks up the odor of another chemical, the rodents may not like it and make the rodenticide ineffective," Crowder explained.

Relocation expert: 'Golf courses are a fair market for us'

By PETER BLAIS

WESTMINSTER, Colo. - Roger Helgeson was a full-time fur trapper working Colorado's Front Range 13 years ago.

"I noticed a lot of people were having pest [small animal] problems. They'd try everything until finally they'd end up calling somebody like me," said the operator of Animal Relocators.

Foxes, raccoons, muskrats, prairie dogs, skunks, squirrels, bees. You name it, Helgeson was being called on to remove it. In between checking his fur traps, that is.

Being an entrepreneur at heart, he soon realized catching and relocating small animals was a potential business by itself. He started on a part-time basis. "But within four to five months, I was at it full time," he

Over the past baker's-dozen years, Helgeson has added two full-time and three part-time employees.

Working primarily from Castle Rock north to Longmont, Helgeson has been contracted by Highland Hills Municipal Golf Course in Greelev (skunks), Rolling Hills Country Club in Golden (muskrat), Columbine Country Club in Littleton (bees, fox, raccoon) and Castle Pines Golf Club in Castle Rock (bees).

"Golf courses have been a pretty fair market for us," the former trapper said. "There just aren't that many people who do what we do."

What Helgeson tries to do is take animals out alive. That isn't always possible, especially in the case of bees and musk-

"We generally use kill traps for muskrats," he explained. "They are hard enough to catch. And there's no one who wants them relocated onto their property."

Relocating animals, rather than killing them, is good public relations. In fact, the thought of even catching the poor creatures is so distasteful to some, that many superintendents prefer to turn the job over to an outside contractor rather than do it themselves and face the wrath of members, neighbors and the public.

"One sure thing in this business is that

no matter what you do or how you do it, someone won't approve when it comes to moving animals," Helgeson said.

The other predictable thing is that animals are always unpredictable.

"We've had some very difficult times removing foxes," Helgeson said. "And if you corner a skunk in the wrong place. . ."

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> > CIRCLE #132

Desert turf issues being tackled by new Univ. of Arizona lab

Continued from page 1

Kopec and Dr. Charles Mancino will oversee the facility, which has benefited from donations of money and equipment from scores of companies and the Cactus & Pine Golf Course Superintendents Association, among others.

"This is a budding example of how the industry can support the universities and stay close to their programs. And the cost-benefit ratio is tremendous for everyone involved," said Kopec.

The number-one benefit will be

the laboratory's work aimed at decreasing water application to sports turfs by having better techniques in irrigation scheduling, he said. "Second, we need to develop new grass varieties that would use less water than Bermudagrass and that would be suitable as a grass cover. We're not looking to replace a 2-1/2 acre ballfield of highly trafficked Bermudagrass with another grass. We're looking to develop new grasses, perhaps domesticate some naturally occurring desert species into a turf

setting where it would retain 95 to 100 percent grass cover and take five or six irrigations during the summertime at most."

Research on effluent water and secondary reclaimed water for turf will be "a strong part of the program because there's quite a populace being established in the Southwest and the research we do here is applicable to Tucson, Phoenix, Las Vegas and deserts of Southern California," Kopec said.

"There are 500-plus golf courses in this area and a lot of their turfs need this special management."

Weed control is a problem at desert courses in the Southwest, he said, because Bermudagrass is grown in the summertime and courses overseed with ryegrasses and other cool-season grasses from October to May.

Mancino is looking in to curly mesquitegrass, a low-main-tenance

grass native in Arizona at 2,800 feet and above.

"For lower elevations, we're looking at buffalograss, salt grass, paspalums and potential domestication of some other range species. Some would be applicable to golf courses," Kopec said.

The eight-acre facility includes 6-1/2 acres of turf. The laboratory structure contains a wet laboratory, office space, equipment garage and storage space.

Crucial to research efforts are the world's two largest lysimeters — 12-foot-deep, seven-foot-indiameter tanks containing 50 tons of soil on scales sensitive enough to measure 250 grams (the weight of the morning dew) in weight change.

Kopec and Mancino are looking forward to initiation of a new funding mechanism being worked out by the Arizona Golf Association and turfgrass industry along with Dr. Merle Jensen, UA's associate dean for sponsored projects.

Called the Turfgrass Futures Investment (TFI) program, it would infuse revenue from golf played in the state into research, education and extension programs at the university.

This will provide long-term support for graduate students, technical assistants, research operations, and educational activities. TFI has been discussed for two years, but Kopec reported "a lot of activity" in the last three months.

"The industry has been fabulous with donating equipment. To complete the army, I just need some soldiers," Kopec said. "The game of golf is an important part of the American economy and just 10 cents per round can kick back a 10,000-times-over return on a project."



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EPA document

Continued from page 13

study, or may warrant additional regulatory actions to prevent ground water contamination.

EPA is developing new rules to address threats to ground water by restricting the use of some pesticides to trained applicators, and requiring State Management Plans for the most serious contaminants. On the state and local level, EPA's data base may be useful in targeting resources for monitoring and assessing effectiveness of pesticide management practices.

Copies of the National Summary and the 10 separate regional volumes are available in paper copy or microfiche from the National Technical Information Service (703-487-4650 or 800-557-NTIS). The paper copy of the summary is \$36.50 and microfiche is \$17.50; others vary from \$19.50 to \$112.00.

Gorrection Because of a reporting error, a referring to another in the 1070 arbital i

piece of misinformation appeared in last month's product feature on combating dandelions and clover (page 20). Bill Spence, grounds superintendent at The Country Club in Brookline, Mass., was not referring to Gallery when he

described a bad experience with a herbicide application. Spence was referring to another chemical used in the 1970s while he was at Pebble Beach Corp. "I am very excited about Gallery," he said. "In fact, we've used it without any problems for three seasons and intend to continue to expand its use in our programs."

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Artist, Audubon to produce course paintings

WASHINGTON, D.C. -Adriano Manocchia, an internationally acclaimed artist of sporting scenes and wildlife, has been selected by the Audubon Society of New York State to create a series of prints to benefit the Audubon Cooperative Sanctuary Program for Golf (ACSP). Courses Manocchia, in association with Somerset House Publishing, will donate a portion of the proceeds from the sale of the prints of famous golf courses to further the work of the ACSP.

Upon the release of Adriano Manocchia's print, "TPC at Sawgrass, The 16th and 17th Holes," golfer Ben Crenshaw said: "I'm pleased that the ACSP is taking such an active role in showing how golf courses can enhance and protect wildlife habitat. Golf courses over the years have provided valuable open spaces, greenbelts, and natural sanctuaries for wildlife. I am hopeful that the efforts of the ACSP will increase public awareness about the positive effects a golf course can offer to the environment."

The five prints in the series published by Somerset House Publishing feature Pinehurst Resort and Country Club in North Carolina; TPC at Sawgass near Jacksonville, Fla.; Barton Creek Country Club near Austin, Texas; Harbour Town Golf Links at Sea Pines in Hilton Head, S.C.; and TPC at Scottsdale in Arizona.

BRIEFS



VON HAGGE NAMES PRINCIPALS

SPRING, Texas — Robert von Hagge has announced that Michael J. Smelek, Richard A. Baril and Kelly Blake Moran have been admitted as principals and shareholders in his company, von Hagge Design Associates, Inc. Von Hagge is headquartered here but designs golf courses throughout the world.

PIPESTONE GIVEN AWARDS AT OPENING

MIAMISBURG, Ohio—Pipestone Golf Course, an 18-hole public championshiplength golf facility and residential community, has opened. Designed by Arthur Hills and Associates of Toledo, the course was built by Irvin Construction Co. of Louisville, Ky. During the grand opening ceremony, Irvin's president, James R. Irvin Sr., and project superintendent, Jim Irvin Jr., received awards of appreciation from the city of Miamisburg.

96-TEE FACILITY OPENS

WESTMINSTER, Calif. — The 96-tee USA Golf Centers Inc.'s Westminster practice facility opened here in June, becoming Orange County's largest golf range. The center boasts natural grass a mat tees, night lighting, a target green with lakes and sand bunkers, a putting green, three chipping areas with bunkers and a pro shop.

SURF GOLF & BEACH CLUB REOPENS

NORTH MYRTLE BEACH, S.C. -Surf Golf and Beach Club has opened its "new" course - a renovation of its George Cobb design. Architect John LaFoy, who worked with Cobb, enlarged bunkers and greens and added contours to the greens. The \$1 million renovation was built by Landscapes Unlimited of Lincoln, Neb.

BEAN IS JENSEN PLANNING DIRECTOR

DENVER-After 20 years of service in the public sector, Brent Bean has joined David Jensen Associates, Inc., a Denver-



based land planning and design firm, as planning director. Previously, he was planning director for the cities of Black Hawk, Lafayette and Rifle, and planner for the

cities of Boulder and Longmont. He was assistant planning director for Benton County in Oregon. His responsibilities will include project processing and rezoning, preparation of submittal documents, and working with the DJA design team to develop successful processing strategies.

Gulf of Mexico developers weighing impact of treatise

By ANDREW WHEELER

BAY ST. LOUIS, Miss. - Golf course developers in the five states bordering the Gulf of Mexico are still assessing the potential impact of a federal and state initiative to protect coastal areas.

At a December 1992 conference, government officials from all five states, environmentalists, business people and the Environmental Protection Agency signed on to the Gulf of Mexico Program (GMP). According to this treatise, its goal is "to protect, restore, and enhance the coastal and marine waters of the Gulf of Mexico and its coastal natural habits, to sustain living resources, to protect human health and the food supply, and to ensure the recreational use of Gulf shores, beaches and waters... in ways consistent with the economic well being of the region."

The agreement sets forth a series of nine

environmental challenges to be accomplished from 1993 to 1997. While their impact on existing and future golf course projects remains unclear, the GMP goals bear a striking resemblance to restrictive conditions protecting other coastal areas: reduction of at least 10 percent the amount of trash on beaches; an increase in Gulf Coast seagrass beds and in Gulf shellfish beds available for safe harvesting by 10 percent; the reduction of the rate of loss of coastal wetlands; and the enhancement of Gulf commercial and recreational fisheries.

"I think golf courses can accommodate environmental concerns," said Jeff Brauer, an architect at Golf Scapes in Arlington, Texas, who does not think these measures will affect development significantly. "Golf architects are committed to being

Continued on page 29

Commentary

Reality check: Computers do their stuff

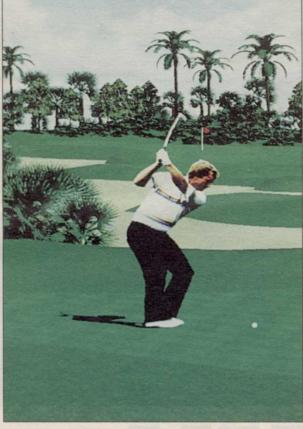
By CARL MISTRETTA

In all phases of daily life, the power, speed and reliability of the modern computer has touched everyone in some way. The design business is no different. Computers help manage all forms of personal and business information.

As a computer-aided designer for Nicklaus Design, it is my responsibility to remain aware of the technological future of our industry. Computers have dramatically improved the profession of golf course design, will continue to do so well into the 21st Cen-

The Nicklaus Design team collaborated with Inter-graph, a leader in computer technology, to de-

Carl Mistretta is a computeraided designer with Nicklaus Design, N. Palm Beach, Fla.



An example what Intergraph technology can do.

velop a comprehensive golf course design package. To serve the needs of Jack Nicklaus and Jack Nicklaus II, and the entire design

team, the system was required to graphically program proposed golf holes, calculate cut and fill, and

Continued on page 30

First certified builders approved

CHAPEL HILL, N.C. — The first group of certified golf course builders has been announced by the Golf Course Builders Association of America.

Executive Vice President Phil Arnold announced certification has been earned by Paul Clute & Associates of Hartland, Mich. (Paul Clute, president); Golf Development Construction of Louisville, Ky. (Clarke Fenimore, vice president); Irvin Construction of Fisherville, Ky. (Terry Lloyd, project manager); Moore Golf of Culpeper, Va. (David Canavan, president); Pierman Golf Co. of North Palm Beach, Fla. (Jerry Pierman, president); and Wadsworth Golf Construction Co. of Plainfield, Ill. (Paul Eldredge, president).

"A lot of work has gone into the certification program over the last year, and I'm pleased that I can announce this group of six firms who have successfully completed all aspects of the certification process," Arnold said. "I believe it's very important that the association identify competent and experienced golf course construction firms. Over time, I believe this certification program will be the standard by which all golf course builders will be judged."

Nineteen other companies are involved in the certification process. The process includes completing an application covering the company's history and past

Continued on page 31

Rees — A Jones for all seasons

Rees Jones, 51, is the youngest of the famous Jones golf course design family. His father is Robert Trent Jones Sr. and his brother Robert Trent Jones Jr. But Rees has gained his own renown, redesigning golf courses for recent U.S.

Opens and winning Golf Digest's choice for Best New Private Course of 1992 with his Atlantic Club Bridgehampton, N.Y. We caught up with him between golfing



Rees Jones

rounds at Pine Valley and Merion — an indication that this golf architecture business ain't no bad shakes.

Golf Course News: The Joneses are the most well-known of the golf course designing families. Is there something in the genes?

Rees Jones: There may be something because my dad can draw and I can draw. It might be partly environment and it might be some sort of innate talent you have. I think the reason you find so many father-son situations is that when you grow up in the golf design business you get into golf and enjoy it. It's not just a profession, it's your avocation, also. So it's a natural tendency to go into the business. You liked the game of golf as a kid, and you traveled with your dad where he built golf courses. It's a pretty

GCN: One person who grew up in such a family told me golf was all his dad knew. He couldn't discuss anything else because other things did not interest him and he didn't pay much attention to them. Isn't that a drawback as far as the big picture of life is concerned?

RJ: It could be. But [for instance] if you live in the Northeast you'll inherit some interests for the winter.

GCN: What's your interest outside

RJ: I'm a big ACC [Atlantic Coast Conference] basketball fan. I go to a lot of basketball games in the winter. One thing about golf, too, is that you can go to different spots. We went out to Arizona to a friend's to spend time. My wife likes Native American culture, so we go to Tucson and Santa Fe. She enjoys museums and takes me with

I think you might be right. In this business, you might become too focused. But I think you have to be in order to be good at it. Every site is different, every environment is different. The soils are different... Everywhere you go, it's a new challenge, technically.

GCN: So you have to be well read in

RJ: Or know where to ask the questions.

GCN: You're doing a lot of highprofile renovation jobs. It seems that

Continued on page 28

Turkington named new associate at Sandy & Babcock

SAN FRANCISCO — Sandy & Babcock Inc. Architecture Planning & Interior Design has announced a new appointment in its office here.

The firm has promoted Thomas K. Turkington to the position of associate. Turkington has been very involved in expanding the firm's capabilities in the master planning of resorts and golf communities, including significant projects such as Black Mountain Ranch in San Diego and Kaupulehu on the Big Island of Hawaii.

Sandy & Babcock Inc, based in San Francisco and Miami, Fla., has built an international reputation for the planning and design of large-scale residential, resort and mixeduse projects. The firm works extensively with Potomac Investment Associates, exclusive developers for the PGA Tour, and in the last several years has successfully expanded its range of golfrelated work to include projects around the world, in growing markets such as Japan and Mexico. Now in its thirty-third year of practice, Sandy & Babcock Inchas received more than 175 awards for planning and design excellence.

Gilliland advising Indonesia project

NEWPORT BEACH, Calif.

— Rod Gilliland has been appointed senior adviser and project manager for Royal Jakarta, a 2,200-hectare planned residential and golf community located just south of Jakarta in the Republic of Indonesia.

The project will be the first of its kind in Indonesia.

Previously, Gilliland was vice president of sales and marketing for Coto de Caza, a 4,000-acre private master-planned community in Orange County, California. Gilliland has worked with Ponderosa Homes, The Desert Princess Country Club and Resort in Palm Springs, Broadmoor Homes and Eagle Development.

Construction for Royal Jakarta began this spring. The project will feature infrastructure, security, planned landscaping and recreation amenities including a Gary Player-designed 18-hole golf course, three-hole practice course, driving range, golf training academy and sports complex.

Royal Jakarta's phase I will create 2,950 homes in neighborhoods of about 120 units.

Environmental Golf cited as Ariz. Contractor of the Year

PHOENIX, Ariz.—The Arizona Chapter of the American Public Works Association has named Valley Crest Landscape Inc./Environmental Golf, Inc. its Contractor of the Year for installing the irrigation system on the Ken McDonald Golf Course.

Judging for this award, in the category of projects under \$2 million, was based on an evaluation of the company's construction management, safety performance, environmental considerations, community

relations, quality, innovation and unusual accomplishments under adverse conditions.

Under the direction of Thomas E. Yerkey, manager of the Phoenix branch of Valley Crest and Environmental Golf, the existing irrigation system had to be kept working, and play had to be maintained on nine holes, throughout the construction process. The job was completed two weeks ahead of schedule, with an unblemished safety record and careful attention to minimizing



Thomas Yerkey

noise and o t h e r potential environmental impact.

Jim Jones, p u b l i c w o r k s director of the city of

Tempe, said: "We were dealing with a highly professional, well-managed and extremely dedicated organi-zation.

"From the expertise and

management skill at the top, to the enthusiasm and 'can do' attitude of their work crews, professionalism was evident in the final quality of this sensitive and very visible project."

Valley Crest Landscape, a subsidiary of Environmental Industries, Inc. of of Calabasas, Calif., has been providing full-scale landscape and irrigation contracting services since 1949. Environmental Golf specializes in golf course construction and renovation.



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Ryan Greensaire® 24—Developed for greens and other fine turf areas, it delivers 110,000 more holes on 10,000 square feet than the competition, making it the ultimate in greens aeration.

USGA issues grant for handicap course in Ohio

AKRON, Ohio -Edwin Shaw Hospital's Challenge Golf Program has been awarded an \$8,000 grant from the United States Golf Association Foundation in Far Hills, N.J.

Funds from the grant will be used to buy adaptive equipment and develop instructional materials used in the Challenge Golf Program. The equipment includes: one four-wheel scooter that enables a player to play golf and access the course from one vehicle; one modified golf cart with a swivel seat for non-ambulatory players and one Lifestand wheelchair that allows a standing position to be attained for stationary hitting for a student who is wheelchair-bound.

Since 1988, individuals with physical disabilities have received golf instruction through the hospital's program. The Challenge Golf Course and Driving Range at Edwin Shaw Hospital was designed to accommodate physically disabled players. One of the first of its kind in the country, the course is an extension of the hospital's physical rehabilitation

The Challenge Golf Course and Driving Range officially opened in April 1992. A program of the Edwin Shaw Hospital Development Foundation, it was created entirely from donated time, money, products and labor. No hospital or tax dollars are



Enhancements to Middle Creek, part of Furry Creek's bio-engineered community

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Green Update

Waterways, fish benefit from proactive environmental outlook of BC development

BRITTANIA BEACH, British Columbia - From the earliest planning stages through to construction, operation and maintenance, Furry Creek Golf & Country Club here has been geared toward environmental responsi-

Designed by Robert Muir Graves of Walnut Creek, Calif., this development outside Vancouver has a goal to have the least impact on the natural environment.

"As part of the overall design, consultants conducted a biophysical inventory of the entire site, including an extensive classification study of local habitat, to calculate the development's projected environmental impact," said Furry Creek Vice President Ben-Meyer Aaron.

"In many cases, the environment has been significantly enhanced."

More than 1,700 trees have been planted and a portion of the course is a reclaimed gravel

Of the area's three main creeks, Middle Creek supports coho salmon, cut-throat trout and Dolly Varden char. Yet the waterways were enhanced to increase their fish population.

New natural fishways now permit fish to travel up the creek to spawn. Before, they could not. Channels were deepened, banks stabilized, and native vegetation planted as part of the improve-

On the fairway, a revolutionary system is in place using a local irrigation pond and natural organic nutrients to enrich the soil, eliminate unwanted odors and reduce the need for chemical fertilizers.

Furry Creek was also the first area course to sod all 18 fairways. Furry Creek's course will open July 31.

with Ken Burns, the Open

chairman, to restore it to its original

glory. I think that was a wonderful

approach and it was not hard to sell.

At Hazeltine, they wanted to

showcase it in the best light because

it was maligned by Dave Hill — not

necessarily because Dave Hill

disliked the course that much; he

Q&A: Rees Jones airs it out

Continued from page 25

every U.S. Open is held at a Hazeltine [National Golf Course in Chaska, Minn.] or Baltusrol [Golf Club in Springfield, N.J.] - a Rees Jonesrenovated course. You've also redesigned a couple of your dad's courses. Is there more pressure on you when you redo a Trent Jones course than some other course?

RJ: There's pressure on every job because there are a lot of members who really don't want you to do a thing. It's usually the board that votes the go-ahead to make changes, but it's not always a consensus. And you have to be sure

However, at Brookline they had the bad weather in 1963 and they knew they had an opportunity to showcase it. So we decided, along

that when you start a new job you don't have preconceived ideas that what you create is universally accepted. When you make changes -especially dramatic changes like were made at [The Country Club of] Brookline [in Brookline, Mass.] and Hazeltine - sometimes it's hard to convince all the board members that that's the right thing

disliked it because it was such a young golf course. At Baltusrol we had a harder time gaining the consensus of the board. I think the Brooklines and Baltusrols bring even more pressure because they've been there for so long, they've had so many major tournaments on them, that some people think it's heresy to even change the lip of a bunker. The great thing at all three of them

GCN: When you're remodeling one of your dad's courses, do you call him and get input?

is that the members are ecstatic

with the results.

RJ: I can't answer that fully. But I think basically the reason I'm hired to redo some of my dad's courses is that they [clients] want to keep the Jones style. That's what Hazeltine wanted.

GCN: Obviously, your father had a big impact on you. Do you have his style, or is there a unique Rees Jones style?

RJ: There's a unique style of every architect. But I really believe in his ability to contour greens well and preserve par as a standard of excellence on the green surface, and in the theory that green contour is a form of hazard, too. Most people think if you hit the green, you're supposed to automatically two-putt. That's obviously not true, especially if you watch what happens at Augusta National. I learned a lot from my dad on contouring greens. That's the hardest part, because if you get too radical like we were getting in the '60s and '70s and part of the '80s, it's no fun for the average golfer. You can't build a church for Easter Sunday. You can't build a golf course that works for the tournament but not for the other 51 weeks of the year.

I learn a lot as I'm doing these courses. I learned more about [A.W.] Tillinghast as I worked on Baltusrol. I even learn more about my dad's philosophies as I go in and analyze his courses. So, it makes me better for the next remodeling job. I just redid the [Walter] Travis course at The Equinox Golf Links Manchester, Vt. - see photo on page 1], the Plantation nine [by H.S. Colt and C.H. Alison at Sea Island Golf Club in St. Simons Island, Ga.] and the [William S.] Flynn James River Course at Country Club of Virginia. These were good designs by good designers. And I studied what they had done, emulated their style and tried to enhance it and bring it into the modern game because of the way the implements of the game have changed the flight of the ball.

GCN: Your early successes in renovation have led to more opportunities in that realm. Has the success of the Atlantic Cluban original Rees Jones course opened doors for new work for you?

RJ: I don't want more than a half dozen jobs a year. Places like Atlantic give me an opportunity to build more high-end courses. I still build a high-end golf course within a reasonable budget.

GCN: Are you going to do any more municipal courses?

RJ: Sure. I'm doing the Daytona Beach LPGA course. I'm adding nine holes at Otter Creek for the city of Columbus, Ind. Actually, I really enjoy building the pay-forplay golf courses because so many people can enjoy them.

GCN: What do you do differently between public and high-end private courses?

RJ: Every job is different. At Daytona Beach we've got to build a tournament golf course for the LPGA as well as a course that can be enjoyable for every caliber player, as long as they can get the ball airborne. I think our style of architecture almost fits any type of course now. We're getting away from the target concept. We have shot options, ramps into the greens, open entrances, greens on a diagonal, greens that are halfprotected, half-open that give golfers an opportunity to play it safe or flirt with danger. There's not as much frontal water in the designs today.

I think we're getting better land because the environmental laws are keeping us on the high ground, which gives us a better opportunity to build old-style golf courses. Now the ball can bump and run. It's on harder ground. Twenty years ago we were relegated to low ground and there were a lot more lakes and we couldn't get the ball to run much.

GCN: Do you design municipal and county courses with an eye toward knowing who the golfers are going to be and how many rounds will be played? For instance, is speed of play a factor to you?

RJ: I have a theory: Just as in the first grade you can only go as fast as your slowest student, a golf course pace can only move as fast as your slowest golfer. And there are some real slow golfers out there. To some degree it doesn't matter how we design it if that guy's going to stand over his putt and plumb-bob it and waggle 15 times. I think this USGA-Golf Magazine push to speed up play in every aspect is going to benefit us. It's going to make it a lot more fun. You have to design a course so golfers have shot options, so they can club down. I wouldn't build your public courses with as much trouble over the greens as I would a private club. You have to give them a chance to recover. I've been building grass pockets and hollows behind my greens so the ball doesn't roll into the next county. But I even did that at Congressional [Country Club in Bethesda, Md.]. On the 11th hole the ball used to go over the green and down into the woods and it would take 10 minutes to retrieve it. So we put a grass pocket there. It's made it more fun and I don't think the course is any easier; but at least the golfer has a shot.

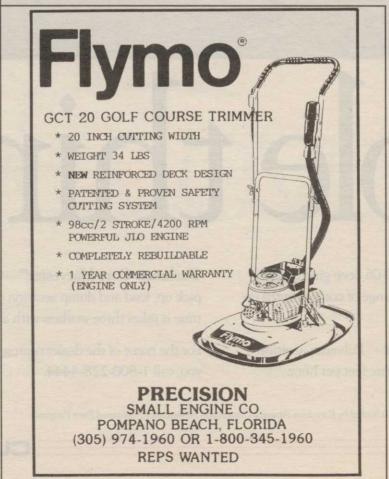
GCN: What do you see as hot spots in golf development in the country?

RJ: Obviously, it's still the Southeast. The Southwest is going to be strong as long as there is adequate water. The Midwest is very strong right now. Even in the Northeast, which can be very slow. I think golf is on the upswing and it's going to hold that way

GCN: You don't think this year. when we peak at maybe 250 courses, that that marks the end of the boom period?

RJ: We may not have as many because a lot of developers can't get a loan. But it's amazing that we opened Greenbrier Golf Continued on next page





Q&A: Rees Jones

Continued from previous page Course in New Bern, N.C., and they filled the place. We opened Sea Trail [Golf Links in Sunset Beach, N.C.], Southbridge [Golf Course] in Savannah, Ga. It's incredible. We don't know where the golfers are coming from, but when we build a better mouse trap, people come to play.

GCN: We hear that we've come to the end of the financial pipeline of three or four years ago before the recession hit. The 351 and 354 courses that opened in 1991 and 1992 mark the end of that money pipeline, and fewer are in planning. That means fewer jobs for architects. Certain architects will get their half dozen jobs. But there are 250 architects. Will some go out of business?

RJ: I don't think so. There are a lot of single practitioners. There are a lot who are hands-on designers, who work close to home and don't have a big office. I have a small office - three designers, three support staff and 10 construction people. And I think I've stayed the right size to go through this slower period. I think the smaller guys will do just as well as the bigger ones because they don't have as much overhead. Firms like the Nicklaus company and Perry Dye's - guys who got into the volume - are the ones who have had to cut back.

GCN: So, what lies ahead doesn't threaten you?

RJ: It may make you change your approach. I think everyone is going to have to get into bonafide, good low-cost public courses. You can still build a darn good course that doesn't have to have all the mounds and hillocks. You can pick a site that is suitable, not unsuitable. Maybe the game will change a little.

GCN: Your dad is going to retire sometime. What's going to happen to the Robert Trent Jones name?

RJ: That's up to him. My brother is Robert Trent Jones Jr., so the Robert Trent Jones name will

GCN: Yes, but there's only one Robert Trent Jones Sr. Is there a mantle that will be passed on?

RJ: I don't know. I don't deal with my dad in his business. Dad is an optimist. I don't believe he thinks in terms of retirement.

GCN: How about you? Will you ever retire?

RJ: Someday. I'll slow down. I don't think at 86 I'd want to be doing a dozen golf courses a year [like Jones Sr. does].

GCN: Or 18 in Alabama [like Jones Sr. in 1992-93] for that matter,

RJ: That's right. I think I'll always enjoy doing a few good ones. I'm into quality, not quantity.

GCN: How old are you now? RJ: 51.

GCN: So you're going to retire...

RJ: I can't see what's down the road. I love what I do. Basically, I don't work. I can take three days off and play Pine Valley, Merion and Aronimink and not worry about having to ask somebody if I can do it. So this is a pretty good business. GOLF COURSE NEWS

Bottom line along Gulf: Will developers pay the price?

Continued from page 25 environmentally friendly."

However, Brauer indicated a developer might not be willing to pay the financial burden of meeting environmental statutes. The resolution of this dilemma, he said, often decides whether or not a course is built.

According to William Whitson, chief of operations for the GMP, the EPA will implement specific programs to meet the environmental goals. "The GMP is an intragency effort under the leadership of the EPA to put together a comprehensive plan for the Gulf of Mexico," Whitson explained.

The idea of the GMP was actually conceived

Will a developer pay to meet the new environmental statutes? The resolution of this dilemma often decides if a course is built, says architect Jeff Brauer.

in late 1988. Five citizens from each state representing business, tourism, agricultural, environmental and fisheries interests formed the Citizens' Advisory Committee. The committee met three times a year to identify environmental issues and to discuss strategies in communicating with the public about the importance of these problems.

"I don't think anyone looking at the goals would find it detrimental to business interests," said Fred Bedsore, Alabama's business representative.

When told of the GMP's goals, Jack Mathis, head of the Florida Golf Council, said the effect on development in his state won't be felt for some time. "There will probably be a trickle-down effect," he remarked.

According to Ron Garl, an architect in Lakeland Fla., "It hasn't affected us yet, but it sounds like the sort of thing that will.



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Intergraph, Nicklaus Design collaborate

Continued from page 25

create plan drawings. Through the programming of specific user commands and the bundling of certain hardware and software products, the "golfstation" system was developed.

I begin the computer design process with survey data provided by the project owner in the form of three-dimensional existing contours.

Using the engineering software "Insite," an existing ground terrain model is built and stored in memory. Terrain models consist of a series of connecting triangles that reflect the elevation of contours to forms a mesh that the computer can render and smooth.

In the next step, a design associate receives strategy from Jack or Jack II and completes a detailed 1" -100' scale contour plan. After scanning the plan into the computer, I digitize the features and contours accordingly.

From these design contours, a proposed terrain model is created with all the elements of a golfhole—tees, fairway, bunkers, water and a green.

I now have the capability to view the hole from any angle or position. Jack is always concerned about visibility of hazards. These models provide the opportunity to stand on any tee or fairway and examine the playability of the hole. If changes are needed, I lower or raise contour elevations and build another model for design review.

The strength of the Intergraph system lies in the speed available to review a proposed hole design. I can transform a paper contour plan to a reviewable scale computer model in less than one hour. Once the model is created, Jack or Jack II can move around in it from any vantage point instantaneously.

Once the designer is satisfied with the model, I use the system to accomplish many tasks. By comparing the proposed design terrain model to existing site model, cut and fill quantities are calculated.

The computer can also quickly generate cross sections and other useful engineering data.

At this stage, I am only limited by my imagination to communicate design ideas.

For example, in ideal situations a dramatic existing natural feature affects the strategy of a hole. By merging a photograph of the feature with the proposed design model, I create photo realistic images to convey golf course design working in harmony with

Another important feature of Golfstation concerns the manipulation of photographs of existing golf courses. The experience and knowledge of Nicklaus design is also available in the renovation and restoration of golf courses. By taking pictures of problem areas, we can alter the photo to demonstrate proposed bunker or

green design ideas. Possessing this capability is essential when attempting to communicate with a concerned Greens committee.

As expected, our clients are ecstatic about the marketing implications of this technology.

Our hardcopy printouts represent realism suitable for any brochure or advertisement. In many cases, various projects have used the computer visualization to attain permitting or help secure financing.

Nicklaus Design currently holds

an exclusive association with the Champion's Group, a clubhouse design-build company based in Chattanooga, Tenn. This relationship affords the opportunity to provide real-time animation of golf hole fly-overs or walk-throughs to Nicklaus Design clients.

Instead of the customary two- to three-month time frame in most cases, we are dealing with only a few weeks.

In my opinion, the secret to perfect animation lies in ensuring the golf course designer creates and refines the model. I do not want an animation company building terrain models of a Nicklaus Design project. Our Intergraph equipment and our association with the Champion's Group represents the ideal scenario.

The golf course architect builds and approves the final model. A company specializing in the golf industry then prepares the animation.

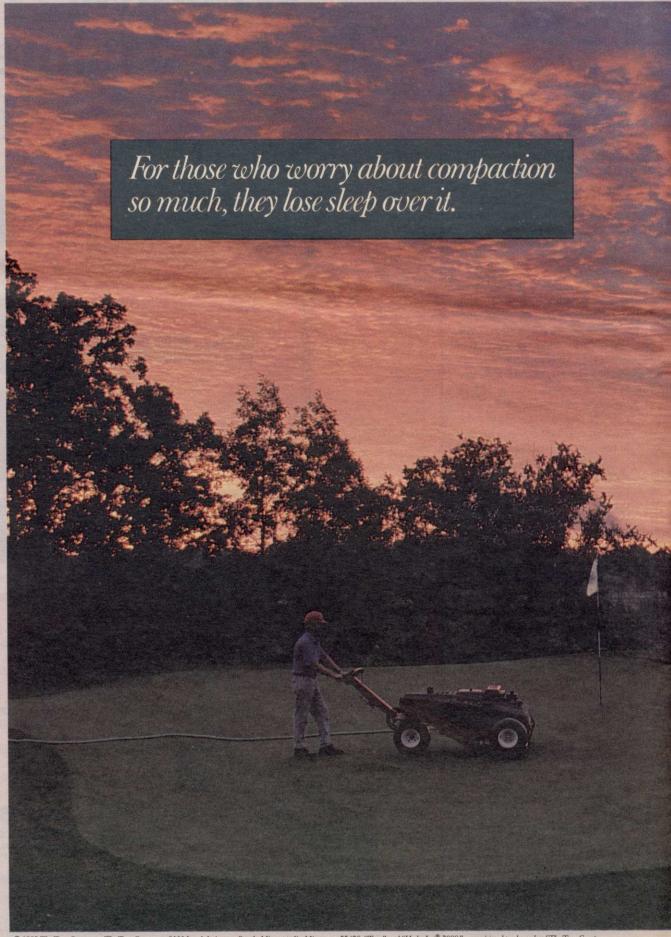
The capability exists to model the 18th hole and then place a computer-modeled clubhouse in its appropriate location. The resulting animation is a powerful marketing tool

In addition to three-dimensional

design review, computers are also changing the format of information exchange.

The use of blueprints and paper will soon become obsolete. Once the golf course is constructed, the system now serves the superintendent. Contractors provide the asbuilt information in the form of computer data.

As the golf course matures, a data base has been created and updated, storing any changes to drainage, irrigation, landscape, etc. If a superintendent retires or moves on, his years of knowledge and experience on the golf course remain at the club for his successor.



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Foster courses progressing from Utah to Texas

NORTH SALT LAKE CITY, Great Salt Lake. Utah — Eaglewood Country Club is nearing completion. The weather has broken and the construction crews have staffed up and are under way.

Eaglewood is an 18-hole public course designed by Keith Foster and Associates, and is slated for a fall opening. All reports indicate the views from atop the mountain course are stunning, looking down over the

Meanwhile, The Quarry in San Antonio, Texas — another Foster project - has a completed front nine holes. The dramatic back nine is under construction and is set within 150-foot deep quarry walls. The Quarry will be an 18-hole, par-71, 6,800-yard golf course that will open in December.

Construction has resumed on the Foster-designed Remington course.

course in Kent, Wash. Fore, Inc. is building the 18-hole, 7,200yard public track and grassing is expected this summer. Play is anticipated in the spring of 1994. Meanwhile, Hirosha Tanaka has retained Foster to design a target golf course in eastern Washington. The 7,100yard Horn Rapids is part of a master-planned community. Fore is also the builder of this



The team designing Sand Creek's new nine holes focuses its attention on creating the new 14th green. Left to right are consultants Charles Howard and Jerry Mobley and Sand Creek superintendent Phil Lau.

Sand Creek's new nine taking shape

CHESTERTON, Ind. - Sand Creek Country Club has begun work on nine new holes on the southeast quadrant of the more than 500-acre property. Designed by consultant Jerry Mobley, and Austin, Texas, golf course architect Charles Howard, the new holes incorporate varied landscape while remaining consistent with Sand Creek's original 18, designed by Ken Killian and Dick Nugent.

Howard said, "You have more terrain to work with. This land has 35 feet of elevation difference. It's a very interesting part of the design. It will be the main difference in the perspective of the golf holes."

Irwin's Panther Creek opens

SPRINGFIELD, Ill. — Panther Creek Country Club, a Hale Irwin-Designed Course, opened May 24, with Irwin attending the ceremonies. Panther Creek is a 414acre, 18-hole private golf club and residential community.

The course challenges golfers with a series of strategically placed hazards.

"Our focus on the greens complex, with subtle contouring of the greens and strategic placement of the hazards, will give golfers a fair challenge when judging their approach," said Irwin, who designed the track with Richard Phelps.

The golf course was developed by Panther Creek Development and retained Helmkamp Construction as the general contractor.

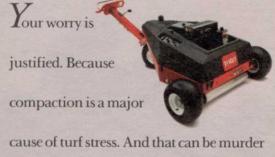
Builders certified

Continued from page 25

projects, and obtaining letters of reference from a variety of people such as course superintendents, irrigation designers, architects, engineers, owner/developers, and financial institutions.

When all paperwork has been submitted, a company representative is allowed to take the certification examination.

This exam is offered twice a year, at the GCBAA annual and summer meetings.



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tions of superintend-

ents. To provide you

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And to help you sleep better.



Helping You Put Quality Into Play."

New water supply opens faucet on Scottsdale area development

Continued from page 1

and as more development occurs, more effluent will come on line and less CAP water will be used, said Virgil Robinson Jr., director of agronomy for Desert Mountain Golf Course.

"We will be able to move into the next century in water use," said Scott Nair, superintendent at The Boulders in Carefree.

"It makes the availability of water much more predictable for all those courses that have been planned for a number of years but were not built," said Tim Bray, president of Southwest Community Resources of Scottsdale, who helped ramrod the project through the bureaucratic process.

The pipeline is designed to deliver 20 million gallons of water a day. This has developers negotiating for water rights so they can get stalled projects off the ground. According to aptly named Scottsdale Mayor Herb Drinkwater, the city is receiving a call a day from interested developers.

That may be an overstatement, said Bray, who represents prospective golf courses wanting to join into the system. But indeed, he said: "We've sold initial capacity for 11.5 million gallons. We have 8-1/2 million left. Another 2 million will be gone in the next two months. And we will fill out the capacity in the next 24 months. As we get closer, people will buy capacity to be assured they will have the water when they are ready to build."

To buy 1 million gallons of

capacity, a developer will pay about \$850,000, according to Bray, whose role was to organize golf course developers to participate in a partnership with the city and get the project designed and built. Buyers then pay a water resource development fee to buy water to put into the pipeline.

"On this line up Pima Road there will be 20 golf courses eventually," Robinson said.

"Until now, would-be developers have had to prove they had

a 100-year supply of water," said Robinson. "The aquifers were slowly being shut down. This [RWDS] was one way they could be assured a 100-year water supply and still build the golf courses and other developments."

Bray said when the effluent plant goes on line in 1995 the Colorado River water will be used as the city's drinking water.

"By the year 2000 we [courses] should be switched totally onto effluent," he said.

"It's a real boost to the clubs in the area and the city to get this system on line," said Cal Roth, director of golf course maintenance operations for the PGA Tour's Tournament Players Clubs. "Our superintendent there, Tighue Shields, has worked for quite some time with other superintendents and city to help make this happen.

"One of the major concerns of the city was to get golf courses off ground water. We're glad to be able to finally do that."

"I'm excited," said Nair, "because right now every day I wonder where I'm going to get my water. I have rates that vary fivefold and I don't get to pick and choose. It depends on what source is available.

"But things may be carefree again in Carefree."

Existing courses like The Boulders have relied on such varying sources of water as effluent from their own housing developments, ground water purchased through municipalities, Scottsdale potable water, and CAP-treated water through communities.

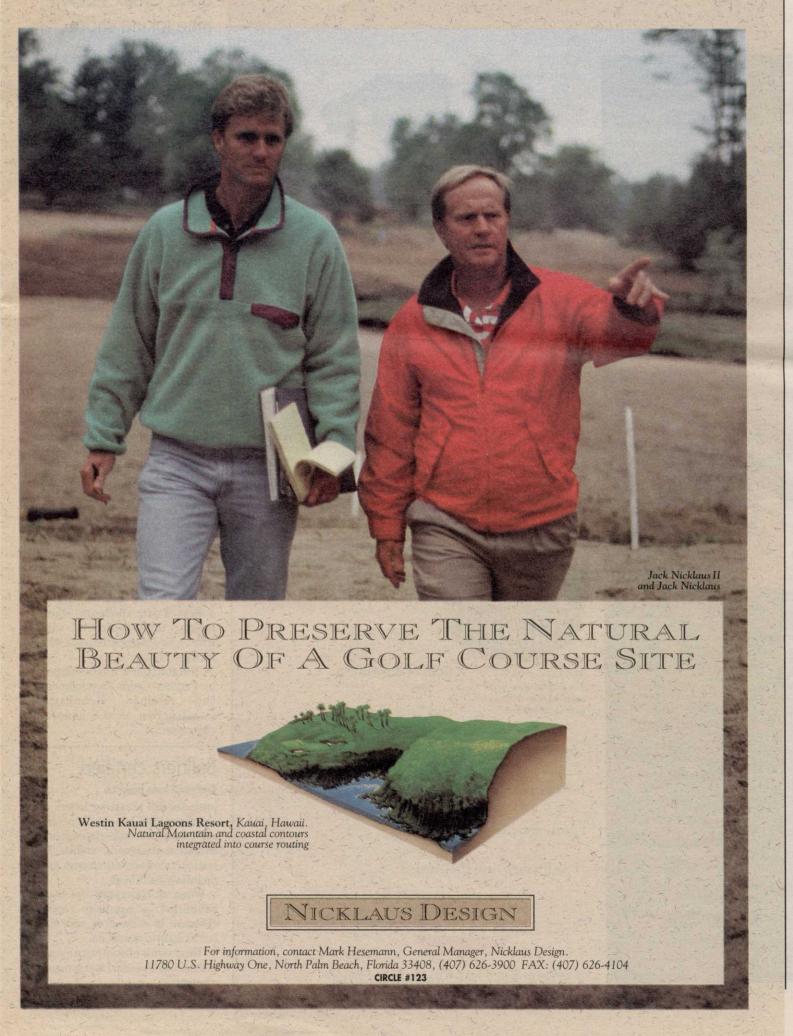
The Boulders is laying two miles of pipe to tie into the main pipeline. Itwon't be operational until October, but Nair said: "I can't wait until I'm on line. It's going to make my life and my job a lot easier."

Robinson, too, is happy the pipeline is running, despite some computer problems and clogged water filters from heavy sediment, freshwater clams and snails.

Even the agronomy problems that will come with salts and heavy metals from effluent pale when compared to the longtime problem of finding available water, period.

"I have more problems just getting water on a day-to-day basis then I'll ever have worrying about what quality of water I get," Nair said.

"We're all going to have to face the fact that drinking water is not going to be an acceptable alternative for recreational use," he added. "We are willing to take the compromise and challenge to better use the source that we will have. If we have a high sodium or chlorine level, we'll just have to manage around that problem. People have been doing that for years. There are a lot of courses on effluent in Southern California, Tucson and Texas."



BRIEFS

DEBOARD NAMED PEACHTREE VP

PEACHTREE CITY, Ga. - Peachtree City Development Corp. (PCDC), the primary developer of Peachtree City, has named David G. DeBoard vice president of sales and marketing. In his 20year career, DeBoard has been involved with the development of planned communities in Florida and Georgia, including PGA National, home of the Professional Golfers' Association of America, in Palm Beach Gardens, Fla., and Polo Golf and County Club and Brookfield West Country Club in metropolitan Atlanta. He has sold more than \$500 million in residential real estate. DeBoard attended the University of Southern Mississippi and Eckerd College. He is a licensed real estate broker in Florida and Georgia. For 14 years, PCDC has been the primary developer of Peachtree City under a contract with The Equitable Life Assurance Society of the United States.

...... NEW MEMBERSHIP PROGRAM IN ARIZ.

PHOENIX — Ahwautkee Country Club has added two new programs to increase membership. New and current members are eligible for a grand prize drawing of an all-expense paid trip to the 1994 U.S. Open at Oakmont (Pa.) Country Club. Other prizes are also available. The second program allows potential full members to test drive the club for \$175 per month (\$125 per month at sister club The Lakes at Ahwautkee). That fee entitles participants to unlimited golf, member cart rates and other benefits.

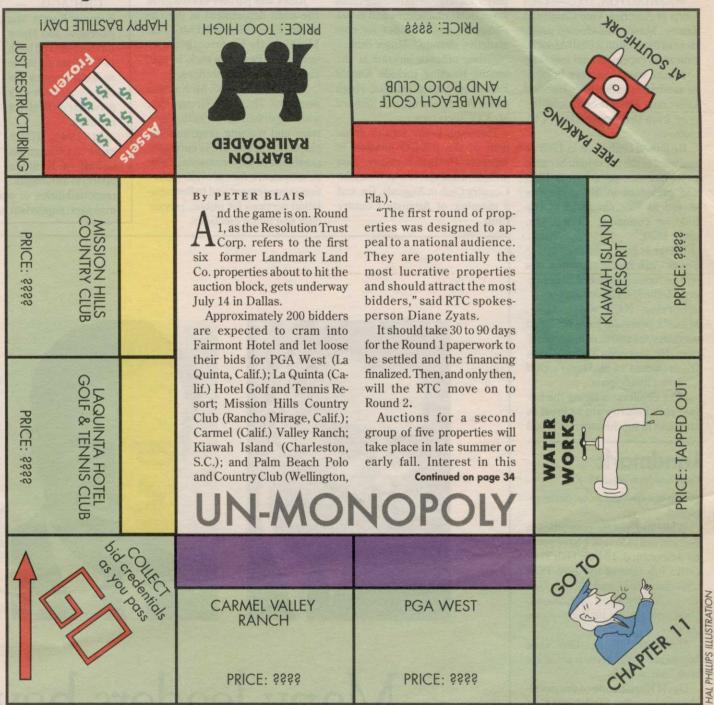
PALMER MAKES APPOINTMENTS

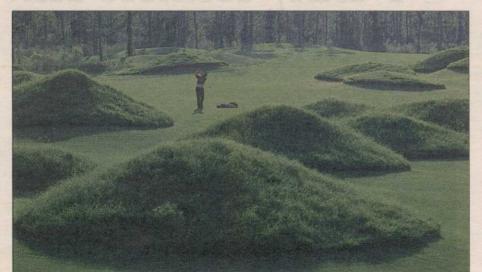
ORLANDO, Fla. - Arnold Palmer Golf Management Co. recently made several key appointments. These include Daryl Jones, accountant/management systems coordinator for corporate staff; Sheila Posser, general manager of Dakota Dunes Country Club in South Dakota; Charles Dyke, general manager at Deering Bay Yacht and Country Club in Miami; Jody Shaw, general manager of Ballymeade Country Club on Cape Cod, Mass.; Bill Whitmore, clubhouse manager, and Pamela Rush, controller at Bay Hill Club in Orlando.

CCA SIGNS ON AT IPSWICH CC

Club Corp of America has signed on to manage Ipswich Country Club. Boston-based financier Spencer Alpert headed an investment group that bought the Robert Trent Jones-designed course in 1992. Since then, the new owners have spent \$500,000 on course and clubhouse renovations.

All eyes on Dallas for Landmark auction





Crowfield Golf Club outside Charleston is one of the courses participating in the coupon promotion.

Destination Wild Dunes acquires Signature Links Course

CHARLESTON, S.C. - Destination Wild Dunes has bought the world-ranked Wild Dunes Links golf course, reuniting all recreational amenities at the Isle of Palms resort under one ownership for the first time in four years.

Announcement of the acquisition came from Earl D. Hewlette, managing partner of Destination Wild Dunes, an affiliate of Destination Hotels and Resorts.

Inc. The Links course, the recreational keystone for the 1,600-acre resort, was purchased from Charleston real-estate executive Joseph Griffith.

According to Hewlette, Destination . Financing for the transaction was provided through Textron Finance Corp.

Destination Wild Dunes bought all recreational amenities at Wild Dunes,

Continued on page 35

Marketing Idea of the Month

Coupon book funds start-up of owner group

CHARLESTON, S.C. - Course operators in the Charleston area thought forming a regional chapter of the National Golf Course Owners Association was a great

But how to fund it? That was the question

Charleston Tee Times, a golf coupon book, was the answer.

The coupon book, which offers a total of 28 rounds of golf at 12 member courses for \$65, raised \$65,000 in just 2-1/2 weeks. That's what the fledgling association, the state's fifth regional chapter, needed to become more than a pipe dream.

"Course owners felt there were many reasons to get together," said Terry Sedalik, director of the NGCOA's Charleston chapter. "They had a lot of ideas on how to promote the area, but little money. Without money, something like this gets put on the back burner."

Continued on page 35

ClubCorp's Maser elected new NCA president

WASHINGTON, D.C. — Club Corp of America Vice Chairman James Maser was elected president of the National Club Association at its recent annual meeting.

Maser has a masters in business administration from Harvard University and a Juris Doctor degree from the University of Chicago.

He joined Club Corp in 1965 as assistant to the president, became executive vice president in 1968 and president in 1976. He has served as vice chairman of the holding company, Club Corp, since 1989.

Maser is past president of the Texas Club Association and sits on the Associate Board of Southern Methodist University.

Serving NCA since 1981, Maser's positions have included secretary, treasurer and vice president. He succeeds Victor Mauck Jr., president of St. David's Golf Club in Philadelphia.

"The challenges facing the private club industry are as great as any time in our history. NCA will

Landmark

Continued from page 33

group is expected to be more regional.

While the specific properties to be included in Round 2 have yet to be determined, 18-hole Oak Tree Golf Club (site of the 1988 PGA Championship) and 36-hole Oak Tree Country Club in Edmond, Okla., are sure to be there, Zyats said.

"I'm sure [all the] Oak Tree [properties] will have a lot of appeal," she added.

David Hardin, one of the developers of nearby Silverhorn Golf Club, said whether his group makes a bid on any Oak Tree property "is contingent on a number of things."

One is whether the two courses and about 300 acres of undeveloped land are auctioned together or separately. That hasn't been determined, he said.

The price is also likely to go much higher than originally expected, Hardin predicted, with potential bidders like Toyota and an investment group headed by Ross Perot Jr. rumored to be interested.

"I think the RTC made a good move auctioning off the most prestigious properties first," Hardin said. "That's likely to build up interest and the eventual prices of the other Landmark properties."

Oak Tree's situation is a little unusual in that the 1,000-odd members have the right to match the highest offer. The membership is considered one of the property's major assets, meaning the facility will more than likely remain private.

"They [members] have three days to match the top bid," Hardin said. "They are ready and very well organized. But those three days could be a real gut check time for them."

play a leading role in helping clubs meet these challenges and developing the opportunities for constructive change," Maser said.

Other officers elected at the annual meeting include Ronald Patterson, vice president; Hugh Jones Jr., treasurer; and Richard McKay, secretary.

Patterson is the former president of the E-Z-GO division of Textron. He is a member, past president and director of Westlake Country Club in Augusta, Ga. and a member of Augusta Country Club.

Jones was partner-in-charge of the audit department in the Orlando, Fla., office of KPMG Peat Marwick. He is currently a consultant to Peat Marwick in specialized industry practices.

From 1960 to 1985, McKay was owner of Thornber Group Inc., which specializes in election systems and training programs for election officials. He is currently president of Governmental Business Systems, Inc., providing election management and ballot tabulation services for public, private club and union elections.

Hahn takes over Chicago munis

Jim Hahn

CHICAGO, — Veteran Kemper Sports Management

executive Jim Hahn
has transferred back
to Chicago to serve
as golf director for
the recently
privatized District
facilities.

In 1984, Hahn came to Chicago on behalf of Kemper Sports to assume the

responsibilities of operations manager, supervisor and head professional at the Rob Roy Golf Course in suburban Propect Heights.

Hahn, 35 whose most recent executive assignment for Kemper Sports was at Patriot's Point Golf Course in Charleston, S.C., began his golf management career by assisting in the construction of

the Rattle Run Golf Course in his native St. Clair, Mich.



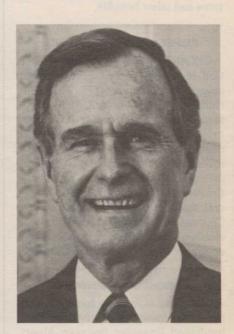




Many leaders have come and gone since 1964.







Wild Dunes

Continued from page 33

with the exception of the Links, from Wild Dunes Associates in 1992 and is beginning its fourth year as operator of the rental management business within the resort.

"We have worked for 3 1/2 years to acquire all of Wild Dunes Resort. The Links acquisition is the final piece," Hewlette said.

Under the management team put in place by Destination Hotels and Resorts at the time of the original purchase, Wild Dunes Resort has taken strides toward returning to the position of prominence within the hospitality industry that it enjoyed prior to the storm. "When we took over operation of the resort in 1990, we thought it would

take five years to get back to pre-storm levels of business, which meant we were looking at the end of 1995," Hewlette said.

"But now, we're on track to be back to pre-storm levels before 1994. For all intents and purposes, we're there now."

Wild Dunes Links, a par-72 Tom Fazio creation stretching 6,722 yards from its back tees, opened on Labor Day, 1980. It has been a fixture in the "Top 100" polls of both GOLF Magazine and Golf

The Links course is part of Wild Dunes' 36-hole golf operation, which includes the Wild Dunes Harbor Course. Like the Links, the Harbor Course was designed by Fazio. The par-70 layout featured several holes directly along the Intracostal Waterway and three finishing holes bordered by miles of windswept saltwater marshes.

Coupon book

The chapter made some early mistakes. Formed in the fall of 1991, the group rushed to the printer with a coupon book that would be available in time for the Christmas buying season.

"That initial effort wasn't very successful because of all the restrictions," Sedalik recalled. "Golfers could only play during certain months. Tee times were restricted to specific times of the day or week. Some of the courses were never available weekends.'

Golfers passed. Sedalik wasn't surprised. In his second role as NGCOA's deputy director, he has helped other chapters market coupon books. Books with many restrictions inevitably failed.

"If you want to make money with something like this, you have to keep it simple," the chapter executive said.

To their credit, Charleston owners learned their lesson. They returned in the fall of 1992 with a second book. This one could be used any day, week or month of the year. The only restriction was that tee times be reserved no more than 48 hours in advance.

Marketing costs were nil. A reporter was convinced to write a story about the book in the local newspaper. The chapter also gave several books to a local radio station, which touted the product on the air while giving them away to listeners.

"Marketing didn't cost a thing and printing costs were minimal," Sedalik said.

Within 2-1/2 weeks, pros at the 12 courses sold all 1,000 books. Most went to local golfers, although Sedalik said he received inquiries from throughout the country.

"One day the chapter had \$400 in the treasury. Two-and-a-half weeks later it had \$65,000. We're using the money to apply for a matching grant from the state that can be used to promote golf with tourists planning to visit the area," Sedalik said

Each of the 12 courses offered at least one round. Wild Dunes, perhaps the best known, contributed two rounds. Dunes West Golf Club provided four and The Links at Stono Ferry five.

The other facilities included Kings Grant Country Club, Crowfield Golf & Country Club, Patriots Point Links, Pine Forest Country Club, Shadowmoss Plantation Golf Club, Oak Point Golf Club and Charleston National Country Club.

Sedalik estimated the total value of all 28 rounds at \$840.

The Charleston chapter is gearing up for another coupon book this fall. The price is expected to go up. So too is the number of courses providing rounds.

Kiawah Island Resort is interested in getting involved in the next book, Sedalik said. The chapter has been working with Kiawah's marketing director and expects the fourcourse complex to make a commitment after this month's auction of Landmark Land Co. properties.

The only drawback course operators have noted, Sedalik said, is the occasional golfer who abuses the 48-hour advance reservation requirement.

An occasional golfer has made his reservation a week or more in advance. The course owner, by rights, could deny the coupon holder that tee time.

"But then you are stuck with an open slot," Sedalik said. "Few golfers have abused the policy."

The extra cart rentals, pro shop and food and beverage sales the book generates have helped offset the free rounds, he added.



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International Golf Management a step behind the times, founder says

By MARK LESLIE

Great idea — wrong time.

That was the story with International Golf Management, Inc. and its Partners Clubs concept, according to former IGM senior vice president John T. Killip.

"We missed the window by about a year," Killip said of IGM's plan to build a network of a dozen "ultra-prestige" facilities containing conference centers and golf courses at major U.S. cities.

"We went out with our first major financing exactly two weeks before [Saddam] Hussein went into Kuwait [July 1991]. The financial markets just weren't right.

"For something of that magnitude, there was no way we were going to get it financed."

Yet, Killip said the concept "is still a good idea," especially in light of proposed new tax laws.

The exclusive, non-discriminatory Partners Clubs were going to answer the need of business executives, providing

"luxurious and exclusive settings for social, recreational and business events."

"The tax laws coming into place are supporting that concept all the way across the board," he said.

New regulations would make it less rewarding for a not-for-profit club to host outside business groups.

Although Killip said he does not know when or if the Partner Club concept will be resurrected, he added: "It's [opportunity] always been there. But now, with the focus on using not-for-profit clubs for business purposes, businesses are going to have to go to for-profit clubs if they want to entertain. So it's a fundamentally sound concept."

It seemed so sound in the spring of 1990 that golf pro Tom Watson, former NCR Corp. President William S. Anderson and former United States Golf Association President Frank "Sandy" Tatum joined the

board of directors, and IGM founder William S. Deaknye recruited a *Who's Who*-magnitude group of businessmen and other experts to make it work.

The bad timing, however, was best spoken to by one executive Killip approached in January 1992. Killip said the man told him: "If it were a no-cost situation we still wouldn't do it.

"It's just such a high-profile operation that when I'm laying off 9,500 people, my stockholders would kill me."

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fungicide they had used that would control so many diseases at so low a cost.

You owe it to yourself to try ConSystTM fungicide.

Crown Rot



New Standards For Turfgrass Excellence Tax laws

Continued from page 1

money — like outside catering — is going to far exceed what they have to pay in taxes."

Driggs said CMAA membership has traditionally been 60 percent not-for-profit clubs and 40 percent for-profit.

"We're seeing that rapidly change. It will reach the 50-50 mark sometime soon," she said.

Two proposed tax measures in President Bill Clinton's tax plan take aim at private membership clubs, said Jim Rizzo, CMAA's manager of legislative and regulatory resources and manager of club services. One regards club dues; the other, business meals.

"First, no deduction will be allowed for amounts paid or incurred for membership in any club organized for business, pleasure, recreation or other social purpose," Rizzo said. Until now, private club members have been allowed to deduct 50 percent of their dues in their income tax statements.

This would affect city clubs "much, much more than country clubs," Rizzo said.

Second is a deduction in the business meal expense — from 80 percent to 50 percent.

"That affects more than just clubs," Rizzo said.

"It affects every restaurant, every hotel."

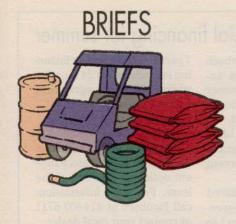
These changes appear imminent, he said, because other legislation is being written that proposes using revenues from these disallowances.

"I don't know about the tax angle, but clubs are looking for different sources of income," Hughes said.

"It's hard to maintain your notfor-profit status when you're doing different activities and opening up your club to other sources of revenue."

The NGCOA, which consists of privately owned public golf facilities, has grown five-fold in the last three years — from 270 to 1,200 member courses.

"The phenomenon that has driven our [NGCOA] expansion is that all golf courses need to be operated more efficiently and managed better to have favorable financial outcomes," Hughes said.



TERRA PROMOTES PFLEIDERER

SIOUX CITY, Iowa — Terra International, Inc. has announced that Larry Pfleiderer of Danville, Ill., has been promoted to manager, Professional Products, Eastern Division. Pfleiderer was owner/operator of Bi-State Turf, a professional products distributor in Danville, for15 years before it was purchased by Terra in October 1992. At that time Pfleiderer joined Terra as turf sales manager. As manager of Professional Products, he will be responsible for product sales and the sales forces in Michigan, Ohio, Pennsylvania, Illinois, Indiana, New York.

SCHUPP JOINS SEED RESEARCH

Michael Schupp has joined Seed Research of Oregon, Inc. as an area man-

ager. Schupp will head up the company's Dallas, Texas, operation. He received a B.S. in agronomy from Ohio State University and was most recently sales representative for Van



Michael Schupt Waters & Rogers. He formerly held the

...... SOFTWARE ANALYZES POND PROBLEMS

same position for Lesco, Inc.

A new computer program is available free from Toro. The software analyzes data entered about ponds and determines the appropriate solution to waterquality problems. It is simple and requires no special training to use. It works on most IBM or IBM clone computers. AquaScape, a Toro partner, is offering this program free. AquaScape manufactures a full line of Toro aquatic management products and provides the technical expertise to evaluate pond water-quality issues. For additional information, contact: AquaScape, AToro Partner, 2611 North Second St., Minneapolis, Minn. 55411; or call 1-800-569-1345.

..... HANCOCK JOINS PENNINGTON

MADISON, Ga. — Pennington Seed, Inc. has announced the appointment of Andy Hancock as western region

turfgrass specialist. He comes to Pennington from Cactus Seed Company, where he accrued many years of experience in the western turf market.Pennington also announced the hire of Kevin



Kevin Gaskins

Gaskins as marketing director. Gaskins will work out of Pennington headquar-

Rutgers researchers closing in on herbicide to eradicate poa trivialis

By PETER BLAIS

MARTINSVILLE, N.J. One superintendent's wonder turf is another's weed. That's the case with poa trivialis, commonly referred to as rough stalk bluegrass.

While poa triv is fast overtaking ryegrass as the seed of choice for winter overseeding in the South and West, Northern superintendents are looking for a way to eradicate it from their cool-season turf courses.

A solution may be at hand, according to Dr. Richard Hurley, Loft Seed Inc.'s director

Rutgers University researchers are closing in on a herbicide that could eradicate poa trivialis and leave other cool-season grasses standing, Hurley said during the company's recent 17th Annual Field Day at its research

"Poa trivialis can be a problem most everywhere," the Lofts executive said. "The seed is

found in the soil, so it is bound to grow.

"The problem is that it has shallow roots. That causes it to turn brown when the weather warms up come summer.

"We don't have it, yet. But someday there will be a herbicide to take out poa trivialis."

Rutgers is one of about 10 universities nationwide with turf breeding programs, Hurley said. Approximately 35 schools are active in turfgrass research.

Development of many of the new tall fescues and perennial rvegrasses began 25 years ago at those schools and private breeding farms, Hurley explained.

Researchers found those grasses during collection trips to old turf stands in parks and cemeteries. The hardiest survivors were cross-bred and blended together to become today's most popular grasses.

Searches have intensified the past five to

Continued on page 40



FROM STUMP TO PULP

Hardly a year goes by without a superintendent being forced to completely remove a tree — then the pesky stump. With the gas-powered, portable Stump Grinder from Partner Industrial Products, this task isn't so tedious. Weighing only 44 pounds, the Stump grinder can take the hardest of woods even live oak — down below ground level. For more information on the Stump Grinder, call 1-800-323-3553. For more new products, see page 42.

Leaving "Big Red" for "Smaller Red"

By HAL PHILLIPS

LOUISVILLE, Ken. - Sometimes security and economies of scale don't measure up to opportunity and chal-

Gary Shampeny, the new vice president of sales & marketing for Bunton, spent eight years at Toro before moving to Louisville early this year. Not everyone would forsake the imposing industry position of Big Red to scramble up the ladder with a smaller company. But Shampeny clearly relishes the chase.

"I tell the boys back in Minneapolis: If I were still up there, I'd have it made," Shampeny said with a laugh. "I have a lot of respect for Toro. It's a great organization. But I wanted to be involved with every aspect of an organization. Involved

"Let's face it: There are five players in this business, and we're number five. So we have to approach things a little differently. But it's a challenge I enjoy."

Bunton has been around for a long time, specializing in smaller reel products. But the broad-based successes of Shampeny leaves security of Toro for the challenges at Bunton

Jacobsen and Toro have left smaller companies like Bunton searching for ways to compete with an ever-diversifying iron market.

The current course involves marketing agreements with other manufacturers, including a pair of British firms. Bunton doesn't make cultivation equipment, overseeders, aerators or top-dressers, but Charterhouse and Hayter do.

"You can't build everything, you just can't," said Shampeny. "Jake pretty much makes everything, maybe not the greens aerator. But Toro has created these types of relationships for quite some time.

"With Charterhouse, we're just building on their strength, which is big reels; while they build on our strength, which is small reels. We do build all of our own rotary equipment. And as volume permits and funds become

Continued on page 39

Warren teams with Southern Turf Nurseries

ATLANTA, Ga. — Warren's Turf, Inc. headquartered in Crystal Lake, Ill., has acquired most assets of Southern Turf Nurseries, Inc. effective May 1.

Vendors should continue to contact local management for orders and send invoices to that address, according to Herb Hadley, general manager of sod operations. Hadley advised anyone with questions to call Corporate Controller Mark Rundle at 1-800-435-6144.

In a joint announcement from Southern Turf's Atlanta headquarters, Mike Holmes, C.E.O. of Warren's, and Dr. Tim Bowyer, C.E.O. of Southern Turf broadly reviewed the background for the move, and discussed future implications.

"This marriage of turfgrass companies, both sharing the highest standards of product quality and service, creates one of the largest and most geographically diverse full service turf oriented companies in the U.S., and probably the world," noted Bowyer. "Warren's sod production facilities in New York, Indiana, Texas, Northern California and

Continued on page 40

ASPA's Summer Convention set for July 14-16

NASHVILLE, Tenn. - An expanding variety of new and improved turfgrass sod production equipment will be displayed and demonstrated here at the American Sod Producers Association (ASPA) Summer Convention, July 14-16.

Hosted at the Thomas Bros. Grass Co. Nashville farm, the convention will feature two full days on the farm. The static displays, seed test plots and equipment areas will be opened Thursday and Friday, with bus transportation scheduled to meet the needs of members.

In addition to the business of farm operations, other highlights will include an educational session on Wednesday focusing on the issuance of credit; the annual business meeting featuring reports from the leadership; the election of new officers and trustees; and lodgings at the famed Opryland Hotel.

For immediate registration information, contact the ASPA office at 708-705-9898.

Research grants totaling nearly \$20,000 have been awarded to four university research bodies by the ASPA. The projects were selected by the Research Committee from

Continued on page 40

Inman returns as president of golf car trade group



AUGUSTA, Ga. - George Inman, chairman of the board and chief executive officer of Club Car, has been elected president of the National Golf Car Manufacturers Association

The NGCMA serves as a channel of communication between golf industry associations and golf car manufacturers, develops and updates golf cars safety standards, and promotes the golf car industry and game of golf.

This is Inman's fourth term

as president. He served his first term in the early 1980s.

In other Club Car news, the Augusta-based manufacturer has purchased 12.45 acres on Industrial Park Drive in Evans, Ga. The parcel will be the new home of the Used Car Department, according to Club Car President Mont Miller.

The purchase and planned improvements represent an investment of \$1.2 million, said Miller, who added the move will completed this fall.

Jake offers special financing for summer

RACINE, Wis. — Jacobsen Financial Services has announced two special summer lease programs available on new Jacobsen equipment.

Zero percent financing highlights the first special program. Twelve-month, zero percent financing is available.

A second program tailored to longer-term lease agreements features rates from 1 to 7 percent. One percent financing is available for 24 months, while a 60-month agreement features an interest rate of 7 percent.

Each program is limited to purchases made through Aug. 31, 1993, and both feature buyout options at the end of the lease. For more information, call Jacobsen at 414-637-6711 or contact your local dealer.



Ciba program offers research funds, safety kits

GREENSBORO, N.C. - Golf course superintendents can once again earn diagnostic tools and site safety improvement allowances or donate money for turf research through the 1993 Ciba Turf And Ornamental Products Prescriptive Control Program.

By meeting a minimum purchase requirement, participating superintendents can help themselves — or even the industry stay ahead of damaging turf pests.

Another program feature is a "Site Safety Allowance" that partially reimburses participants for structural improvements related to pesticide storage and handling. "Safety is a priority with us," notes Jose Milan, Ciba Turf and Ornamental Products marketing manager. "By including this incentive in the program, we hope to encourage superintendents to increase pesticide safety measures at their courses.'

To qualify for the 1993 program, superintendents must purchase a minimum of \$2,000 worth of Award, Banner, Exhibit, Pennant, Primo, Subdue or Triumph. This initial purchase earns program participants a complimentary copy of Compendium of Turfgrass Diseases.

Each case of Ciba product purchased - including qualifying purchases - earns one point. Each TurfPak unit purchase earns six points. Following are the program choices and number of points needed to obtain them:

- Disease Detection Kit 3 points
- · Superintendent's Spray Program - 4 points
 - Macroscope 25 3 points • Macroscope 45 — 8 points

 - AgriMeter II 10 points
- · Turf & Ornamental Chemicals Reference — 4 points • Site Safety Allowance — \$25
- per point · Cash donations to turf re-
- search \$25 per point • GCSAA Golden Tee Club donation — 4-point minimum
- GCSAA seminars from 4 to 24 points, depending on cost of the seminar.

For more information about the Prescriptive Control Program, contact your local Ciba marketing representative.

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38 July 1993

CIRCLE #126

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☐ TURCAM® Insecticide

Envirotech creates Golf Division

ENID, Okla. — Envirotech Services Inc., a comprehensive environmental and civil engineering firm based here, has created a Golf Division devoted exclusively to providing technical resources to the golf course industry.

Under the direction of Dr. Blaine T. Reely, the firm's team of environmental planners, civil and environmental engineers, geologists, hydrologists and aquatic/wildlife habitat specialists aims at providing the golf course indus-

try with solutions to environmental problems at any level.

According to Reely, specific areas of the firm's expertise include the acquisition of adequate water supply sources for irrigation and domestic uses; protection of surface and ground water quality; protection and/or mitigation of wildlife habitat including wetlands and riparian areas; identification and protection of historically and architecturally significant areas.

Best Sand Corp. names a pair of new distributors

Best Sand Corp. of Chardon, Ohio, has named two new distributors for its golf course bunker sand

Greensmix Soil Blenders, a division of Faulks Brothers Construction, Inc., Waupaca, Wis., will market the sand throughout Illinois and Wisconsin. Alvis, Inc., Cleves, Ohio, will serve as a terminal operator and distributor for southeastern Indiana, northern Kentucky and Hamilton County in southwestern Ohio.

Greensmix is a major supplier of bulk maintenance materials such as bunker and topdressing sands to the golf course market and is also heavily involved in golf course and athletic field construction. According to Christine Faulks, Greensmix president, Best bunker sand is a valuable addition to the company's product line.

Alvis, Inc. is also a leading supplier of topdressing sand, sand mixes and gravel for golf course construction and markets topsoil, mulch and other landscape and turf maintenance materials to landscapers and homeowners. Best bunker sand is the only bunker material Alvis offers, according to company co-owner Rita Alvist.

Southern Calif. Turfgrass EXPO Oct. 6 and 7

COSTA MESA, Calif. — The 33nd annual Southern California Turfgrass EXPO will be held Oct. 6 and 7, 1993 here at the Orange County Fair Grounds and will feature more than 200 green industry exhibitors.

The Turfgrass EXPO, which attracts more than 4,000 attendees, is one of the oldest continuing trade shows in the United States devoted to the exhibition of equipment, materials and services for installing and maintaining turfgrass and landscape.

The EXPO is part of the \$12 billion Green Industry in California — one of the state's largest industries. More than 18,000 environmental beautification businesses comprise the Green Industry. The EXPO is an educational exhibit sponsored by the Southern California Turfgrass Council. EXPO hours are 8 a.m. to 4 p.m. on Oct. 6 and from 8 a.m. to 3 p.m. on Oct. 7.

Shampeny

Continued from page 37

available, we'll build more stuff ourselves — we have the land to expand our manufacturing plant.

"But if you're not big like the *Big Boys* and you want to grow, this is how you do it."

Shampeny brings a great deal of practical experience to his position at Bunton. In addition to his extensive working knowledge of Toro, he spent seven years as head superintendent at Valley View Golf Club in Bozeman, Mont.

He hopes this background helps his new company make profitable strides in the golf course industry's highly competitive iron-side.

"It's tough when you walk across that line and change that color. I'll tell ya': It makes you more aggressive. When you see that red and orange, it's tough to compete. They've been around so long.

"But as I tell the boys back in Minneapolis: I just want a little bit of your business, just a little bit."

GOLF COURSE NEWS



Nine earn promotions at Scotts

MARYSVILLE, Ohio — The Scotts Company Professional Business Group (PBG) recently announced the promotions of nine technical representatives.

Among those promoted to executive technical representatives were Jim Diley, Columbus, Ohio; Wayne Horman, McFarland, Wis.; and Mark Jones, Mead, Wash. Diley joined PBG in 1969, and Horman and Jones both joined in 1986.

Those promoted to Senior Technical Representatives were

Fred R. Anderson, Grand Rapids, Mich.; Jim Boesch, Maitland, Fla.; Dave Loutitt, Crown Point, Ind.; Mike Peterson, Roanoke, Va.; and Rick Styer, Kent, Wash., Anderson, Boesch, Loutitt and Peterson have been with PBG since 1989. Styer was named Technical Representative in 1990.

Jeff Cain of Powell, Ohio, was named manager of The Scotts Company's new Professional Service Centers in the Washington, D.C., area.

EcoScience Corp. rounds out board

WORCESTER, Mass. — EcoScience Corp. has announced the addition of the Honorable Claudine Schneider and Heinz K. Wehner to its board of directors. These appointments increase the size of EcoScience's board to nine. In addition, Larry M. Nouvel was appointed to fill an existing opening on the board.

Schneider, a former U.S. Congresswoman from Rhode Island, is currently Director of the Artemis Project, an initiative designed to assess the economic and scientific value of biodiversity in the U.S. Wehner is a former Executive VP of Miles Inc. Nouvel is Executive Vice President of Speer Products, Incorporated.

EcoScience is engaged in the discovery, development and commercialization of natural pest control productss.

TOCA awards two turf-related scholarships

OVERLAND PAKK, Kan.-Two \$1,000 scholarship awards were recently announced by the Turf and Ornamental Communicators Association (TOCA) at the group's annual meeting in Overland Park. The recipients are Scott Hoffman, Colorado State University, and Jay Warnick, Utah State University. Both are horticulture majors with interests in green industry communications.

This is the second year that TOCA, an association of editors, writers, public relations practitioners and others involved in green industry communications, has awarded scholarships. Funding for the program was made possible through donations by GIE Publishing, Advanstar Communications, Adams Publishing Corp., and Johnson Hill Press.

TOCA officers for coming year include Smith, president; Jose Milan, Ciba Turf And Ornamental Products, vice president; Bruce Shank, Adams Publishing Corp.; secretary/treasurer; Julie DeYoung, Fleishman-Hillard, and Lisa Osborne, Greenhouse Product News, directors; and Bob Tracinski, past president.

For more information about TOCA, contact Den Gardner, executive director, at 612-832-5000.

ASPA research

Continued from page 37

among 11 projects submitted by 11 researchers at nine researchers, requesting a total of \$60,525 for the 1992-93 fiscal year.

Projects receiving support this year include:

- "Water Use of Turfgrasses, Ground Covers and Shrubs in Conventional and Xeriscape Conditions," Drs. G.L. Horst and D. Steinegger, University of Nebraska.
- "Soil Depletion from Turf Nurseries," Dr. L.C. Miller, Clemson University.
- "Short and Long-term Irrigation Water Needs of Turf Established by Sodding, Seeding and Hydroseeding," Drs. R.H. White and C.H. Peacock, North Carolina State University.
- "Evaluation of Genetically Changed Bluegrass for Resistance to Summer Patch Caused by Magnaporthe Poae," Dr. H.T. Wilkinson, University of Illinois.

LANDCADD RELOCATES

LANDCADD International, the design software company, has moved to new offices. Its current address is as follows: LANDCADD International, 7388 South Revere Pky., Building 900, Suite 901 and 902, Englewood, Colo., 80112-3942. The firm can be reached by phone at 303-799-3600; or fax at 303-799-3696.

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Asian shows

Continued from page 1

late June. Sources indicated officials from GCSAA and Connex were scheduled to meet in Kansas City to formalize the agreement around June 24. Sources also indicated International Management Group — the Cleveland-based sports representation and real estate colossus — played a major role in bringing the two sides together. The U.S. Government also played a role.

"We obviously encouraged the merger of the shows," said Paul Bucher, manager of Trade Fair Certification at the Department of Commerce. "This [the mega show] is what every exhibitor wanted. If everything works out, it should be an incredible boon to the industry."

Golf Asia, staged annually by Connex since 1991, was the only

Poa Trivialis

Continued from page 37

10 years as demand has grown for grasses that use less water, grow more slowly, tolerate various stresses and require less pesticide. The result has been researchers scouring Africa in search of Bermudagrass, the Midwest in the questfor buffalograss and the North for bentgrass.

Of all the material collected, 90 to 95 percent is eventually thrown away, Hurley said. Those possessing the most favorable characteristics are kept and bred.

The result in recent years has been grasses that stand upright, are more attractive and are more resistant to fungi like dollar spot.

Research on specific seed types, Hurley said, has led to some positive results in recent years, such as:

• Attractive bluegrasses with high seed yields, an unusual combination for this turf type;

• Perennial ryegrasses with improved cold tolerance, brown patch resistance, color and seed yield. Despite these advances, ryegrass seed prices have remained roughly the same as they were in the early 1970s. Little progress has been made in the battle against crown rust, red thread and pink patch.

• Tall fescues have been developed that can thrive even in such hot, humid climates as that found in Tokyo. They are requiring less irrigation and are increasingly tolerant of shade. Hard, chewing and sheep fescues are particularly low-maintenance turfs. Brown patch and pythium remain a problem, although new chewings fescues are proving resistant to take-all patch.

Turf acquisition

Continued from page 37

Southern California mesh perfectly with Southern Turf's sod and sprig production units in Georgia, Virginia and Hawaii."

Holmes added: "Discussions with Southern Turf management and partners have been ongoing for quite some time, with most of our focus on the geographic synergy of the two companies."

GOLF COURSE NEWS

game in town until GCSAA launched its Pacific Rim show in March of 1993. Though reports out of GCSAA headquarters indicated the show was a success, suppliers to the golf industry voiced their displeasure with the 1993 arrangement: Two shows, one week apart, forcing companies to choose shows or pay for attending both.

The combination of Golf Asia and Pacific Rim now means a onestop shopping venue for the Asia-Pacific market. Golf Asia has tailored much of its show to the consumer (clubs, shoes, etc.), with a very strong development component (architects and builders) and a smattering of golf course maintenance exhibitors.

The 1993 GCSAA Pacific Rim Show was designed exclusively for the golf course management industry, with a few architects on hand.

"I think any merger or joint action that strengthens the overall industry in Asia is good," said Owen Towne, manager of International Turfand Ornamental for Ciba. "The decision of the two to merge just makes it an easy decision for us as to which show to attend."

Until now, that decision was not so easy for some suppliers, especially irrigation firms, who didn't know which show had properly pegged their market. Most observers agree the Asian market is far more development oriented, whereby new course construction plays a larger role than maintenance. Further, superintendents don't appear to have the buying responsibilities enjoyed by their North American counterparts.

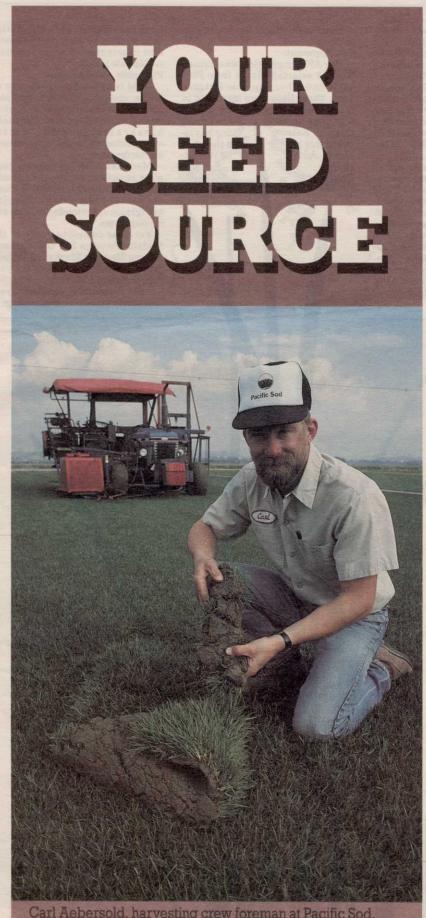
Added Brenda Dossey, manager of special projects for Farmer's Marketing Corp.: "While the golf course market in Asia is experiencing healthy growth, I don't believe the market is mature enough to support two major shows. I feel this agreement will

help all of us living outside the region to better focus and direct our resources."

Along with most everyone else, the U.S. Department of Commerce — which granted Golf Asia its official Trade Fair Certification in 1992 and 1993 — was taken completely off guard by the agreement.

"In fact," said Bucher, "we have already sent the letter certifying Golf Asia for 1994. We were convinced, as were most observers, that both shows would run separately next year.

"However, I would see no problem in certifying the whole kit and kaboodle for 1994."



Carl Aebersold, harvesting crew foreman at Pacific Sod, Camarillo, CA, is pleased with the above-, and below-surface performance of dwarfer Monarch turf-type tall fescue.

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turf-type	BrightStar
perennial	Charger
ryegrass	Citation II
	Manhattan II
	Omega II Remington
	Saturn
	Alliance blend
	CBS II blend
	246/Sunrye
Improved hard fescue	Aurora
Improved Chewings fescue	Shadow
Improved Sheeps fescue	Bighorn
Improved	Fortress
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Improved	Apache
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The Model 395 Greens Roller hydraulically transforms from the rolling mode to the transporting mode. The roller is powered by an 8 hp Honda engine with a 6 m.p.h. transport speed. The machine is equipped with three (3) stainless

rollers to ensure proper weight distribution and to keep them rust free. Two (2) of the rollers are 6-1/2" in diam. and 39" in length. The third roller is 5-1/2" in diam. and also 39" in length. The machine has an approximate PSI reading of 4.9 lbs./sq. in. without an operator. It is operated by a single directional foot pedal. For more information contact: Olathe at 201 Leawood Dr., P.O. Box 4, Industrial Airport, Ks. 66031; or call 913-782-4396.

CIRCLE#302

Hydraulic pump drive from Broyhill

The Broyhill Company has developed the "Hydramaster" - a totally new hydraulic pump drive for sprayers mounted on turf trucksters. Designed for less vehicle PTO wear and less noise, this new system can be easily mounted on existing units with hydraulic outlets or purchased with Broyhill's Terramaster sprayer package.

The Hydramaster utilizes a powered hydraulic oil cooler with automatic hydraulic oil temperature sensing switch with pilot light. The cooler keeps the hydraulic oil (automatic "on" at 120 degrees ambient) with vehicle hydraulic reservoir capacities from 5 quarts to 21/2 gallon or above. The vehicle sprayer with complete hydraulic drive is one unit. For more information contact The Broyhill Company, North Market Square-Box 475, Dakota City NE 68731-0475.

CIRCLE #301

ADVERTISEMENT

APM Perennial Ryegrass National Overseeding Victories

Results of the 1990-91 Overseeding trials in Florida and Mississippi have just been released, and Medalist America's APM perennial ryegrass has claimed number one finishes in two national test sites!

Medalist's newly released APM took the number-one spot in the University of Florida's trials for overseeding a Tifgreen bermudagrass putting green at the Gainsville, Florida location. APM scored ahead of 37 cultivars and mixes tested for turf quality based on winter overseeding. APM averaged a 7.12 rating, out of a possible 9 points for a seasonal mean on turf quality. APM's highest scores were

for the biweekly ratings between November 1st and February 15th.

APM's performance in the Mississippi overseeding trials reinforced the Florida trial results with another first-place rating for APM's winter turf quality. Seeded on dormant Tifgreen bermudagrass putting greens in November through the following May, APM's seasonal mean was 6.29, almost a full point ahead of the group's mean rating.

APM is one of Medalist America's newest perennial ryegrass selections. APM's low growth, heat/ drought tolerance, and excellent disease resistance make it an outstanding candidate for winter overseeding. APM has high density, moderatelyfine leaf texture, and superior quality to many of the top performing perennial ryegrass varieties currently on the market. In addition, APM shows good resistance to summer

diseases including brown patch and

Development:
The APM population was formed from 23 selected plants from Pinnacle and other superior Rutgers lines. These lines were increased to from approximate 8,000 plants that were space of din Albany, Oregon. Extens duced this numbal plants. Additional s than 6,00 ing is conttinuing.

form the original base population field roguing for stem rust tolerance also eliminated many of the more susceptible plants.
Probable Applications:

APM is recommended for use on lawns, sports fields, parks and play areas. It should perform well when mixed with a blend of Kentucky bluegrasses and for winter overseeding of dormant warm-season turfgras

Medalist America offers a comolete variety of improved Kentucky bluegrasses, turf-type tall fescues, perennial ryegrasses, creeping bentgrasses, bermudagrasses, and zoysiagrasses

For your complete guide to the Medalist America line of turfgrasses call the Medalist Marketing Department at 800-568-TURF, or fax your

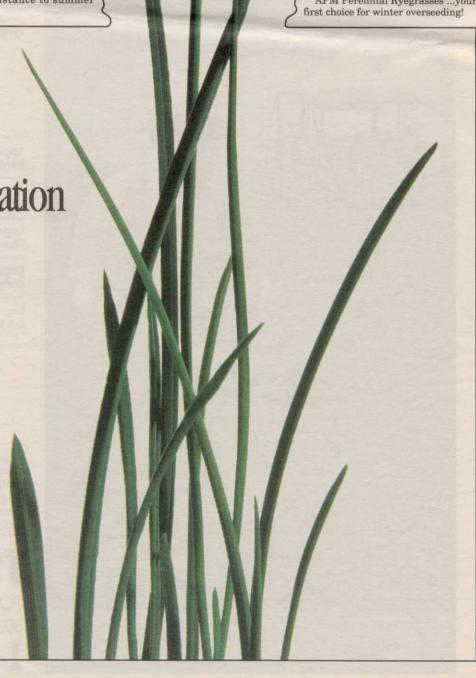
request to 503-926-0665.
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The Ultra-Shed chemical containment building is available with various permanent pad designs and an optional Ultra-Absorb closed-loop recycling system, which allows you to bring your current maintenance equipment wash down and mix/load facilities up to environmental par, while avoiding possible penalties, fines or soil remediation costs.

To inquire about Ultra-Shed, contact: RGF Environmental Systems Turf Division, 3875 Fiscal Ct., West Palm Beach, Fla.33404; or call 1-800-842-7771.

CIRCLE #303

The GF1800E, new from Kubota

TORRANCE, Calif. - Kubota Tractor Corporation has introduced the compact but powerful GF1800E front mower is equipped with a hefty 18-horsepower, liquid-cooled diesel engine and a variety of other performance and safety features, the GF1800E is designed for versatility.

The GF1800E offers a choice of three shaft-driven, off-set mowers: a 48-inch mulching rear discharge mower, 54-inch side discharge mower or 60-inch side discharge mower. All three mower decks feature a cutting height ranging from 1 to 4 inches and a hydraulic brake, clutch and lift system. For more information about Kubota products, contact Kubota Tractor Corporation at 3401 Del Amo Blvd., Torrance, Calif., 90503.

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The price is \$7.99 plus \$2.50 shipping and handling. (CA residents add 7.74% sales tax). Send orders to New Solutions, 644 Terra Dr., Corona, CA. 91719; or call 909-278-4455.

CIRCLE #305

Golf Course Marketplace

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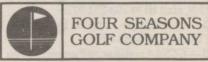
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8 — Univ. of Ga. Turfgrass Field Day in Griffin. Contact 404-975-4123.

14-16 — American Sod Producers Ass'n Summer Convention & Field Day in Nashville. Contact 703-836-4606.

15-16 — GCSAA seminar on Golf Course Restoration, Renovation and Construction Projects in Oahu, Hawaii.*

18-24 — International Turfgrass Society's 7th International Turfgrass Research Conference in Palm Beach, Fla. Contact George Snyder at 407-996-3062.

24-29 — American Society for Horticultural Science's Annual Meeting in Nashville, Tenn. Contact Christine Radiske at 703-836-4606.

25-27—International Lawn, Garden and Power Equipment Expo in Louisville, Ky. Contact 800-558-8767.

August

3-5 — Turfgrass Field Diagnostic Course for Golf Course Managers in Ithaca, N.Y. Contact Joann Gruttadaurio at 607-255-1792.

4-6 — Cornell Municipal Compost Management Short Course in Ithaca, N.Y. Contact Lauri Wellin at 607-255-1187.

5 — National Turfgrass Evaluation Program Turfgrass Research Field Day at Beltsville, Md. Contact 301-504-5125.

17 — Wisconsin Turfgrass Field Day Madison. Contact Dr. Frank Rossi at 608-262-1490.

17 — Golf Course Design/Construction and Golf Day in Delhi, N.Y. Contact New York State Turfgrass Ass'n at 800-873-TURF.

18-19 — Pennsylvania Landscape and Nursery Trade Show and Conference in Monroeville, Pa. Contact 717-238-1673.

19 — Michigan Turfgrass Field Day in East Lansing. Contact Kay Patrick at 517-321-1660.

25 — Turf Talk '93 Turfgrass Seminar in Chandler, Ariz. Contact Garden West Distributors at 800-477-0098.

September

9 — GCSAA seminar on Irrigation Efficiency in Phoenix.*

12-15 — Golf Inc. Expo in Nashville, Tenn. Contact 800-366-2406.

21-23 — Virginia Tech Turf and Landscape Field Days in Blacksburg, Va. Contact J.R. Hall III at 703-231-9736.

23 — Landscape Expo in Burtonville, Md. Contact 301-948-0810.

23 — GCSAA seminar on Turfgrass Stress Management in Sacramento, Calif. *

23—GCSAA seminar on Maximizing Job Satisfaction in Littleton, Colo. *

26-29 — Florida Turfgrass Association's 41st Annual Conference & Show in Tampa. Contact 800-882-6721.

October

4-Dec. 10 — Rutgers Professional Golf Turf Management School in New Brunswick, N.J. Contact Cook College at 908-932-9271.

14 — GCSAA seminar on The Microbiology of Turfgrass Soils in East Lansing, Mich. *

18-19 — GCSAA seminar on Golf Course Restoration, Renovation and Construction Projects in Guelph, Ontario, Canada.*

21-22 — GCSAA seminar on Business Communication and Assertiveness Techniques in Melville, N.Y.*

25—GCSAA seminar on Turfgrass Stress Management in Little Rock, Ark. *

26—GCSAA seminar on Irrigation Scheduling Techniques in Little Rock, Ark.*

26-28 — 48th Annual Okla. Turfgrass

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Golf Course Marketplace

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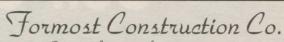


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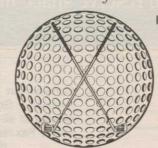


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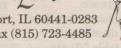


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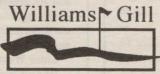
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Continued from previous page

Conference & Trade Show in Tulsa. Contact Tonya Murray at 918-251-4868.

November

1-2 — GCSAA seminar on Environmental Considerations in Golf Course Management in Bellevue, Wash."

5 — GCSAA seminar on Maximizing Turfgrass Disease Control in Rhinelander, Wis.

8-9 — GCSAA seminar on Golf Course Construction Techniques and Management in Fargo, N.D. 3

9 — GCSAA seminar on Irrigation Efficiency in Rochester, N.Y.*

9-12 - Turf & Grounds Exposition in Rochester, N.Y. Contact New York State Turfgrass Ass'n at 800-873-TURF

10 — GCSAA seminar on Personnel Functions of the Golf Course Superintendent in West Palm Beach, Fla. *

11-12 — GCSAA seminar on Disease Identification and Control in Hudson, Ohio.*

14-16 - Golf Course News Public Golf '93 Conference in Charleston, S.C. Contact Rebecca Quinlan at 207-846-0600.

15 — GCSAA seminar on Maximizing Turfgrass Disease Control in Myrtle Beach,

15-16 — GCSAA seminar on Golf Course Restoration, Renovation and Construction Projects in St. George, Utah. *

17 — GCSAA seminar on Turfgrass Stress Management in Oklahoma City.'

19 - GCSAA seminar on The Microbiology of Turfgrass Soils in Tehachapi, Calif. * 29-30 - GCSAA seminar on Environ-

mental Considerations in Golf Course Management in Omaha, Neb. *

December

1-2- GCSAA seminar on Golf Course Restoration, Renovation and Construction Projects in Fond du Lac, Wis.'

7-8 — GCSAA seminar on Golf Course Restoration, Renovation and Construction Projects in Birmingham, Ala.*

8-9 — GCSAA seminar on Basic Turfgrass Botany and Physiology in San Diego,

10-11 — GCSAA seminar on Protection of Water Resources in San Antonio, Texas. *

13-14 - GCSAA seminar on Environmental Considerations in Golf Course Management in Baltimore.*

15-16 — GCSAA seminar on Disease Identification and Control in Pleasanton, Ca-

1994

January

3-5 — Wisconsin Turfgrass & Green Industry EXPO in Madison. Contact Frank Rossi at 608-262-1490.

5 — GCSAA seminar on Golf Course Safety, Security and Risk Management in Winston-Salem, N.C.*

6-7 - GCSAA seminar on Plant Nutrition and Fertilizers in Atlanta. *

10 - GCSAA seminar on Maximizing Turfgrass Weed Control in Cromwell, Conn.

10-13 - 34th Virginia Turf and Landscape Conference and Trade Show in Richmond. Contact Bruce Tharp at 804-340-

11 - GCSAA seminar on Wildlife Management and Habitat Conservation in Cromwell, Conn. *

11-13 — Eastern Regional Nurserymen's Ass'n Trade Show in Kiamesha Lake, N.Y. Contact 203-872-2095.

* For more information on GCSAA sem inars, contact the Education Office at 1-800-472-7878 or 913-841-2240.

Wall-to-wall not a bad idea at all, in world of sod & golf

Reebok's Fireman, Willowbend's Tusts make a costly but worthwhile decision

By HAL PHILLIPS

ASHPEE, Mass. — When athletic footwear magnate Paul Fireman decided three holes at his Willowbend Golf Club didn't measure up to PGA tournament standards, he had them rebuilt. When the redesign took longer than expected — perhaps endangering the annual Reebok Pro-Am in June — Fireman had all three holes sodded: Tees, greens, fairways, rough... everything.

"Mr. Fireman decided he wanted to have it done by the tournament, so we had to sod it," explained head superintendent Chris Tusts. "We had a \$150,000 budget for buying and laying the sod, but money wasn't really the issue."

It rarely is for Fireman, chairman of Reebok and owner of Willowbend. Dr. Michael Hurdzan designed the course and redesigned holes 13, 14 and 15 last year. But the creative process spilled over into the winter months, making a growin impractical in light of the tournament date.

The first roll of sod — 60-feet long and four-feet wide — was laid down April 12, by Kingston Turf Farms of West Kingston, R.I. The job was finished April 23, and "they had one and half inches of root growth after 10 days," explained Peter Butson





At their sod farm in West Kingston, R.I., , Kingston Turf Farms employees (left) start rolling sod. They don't even have to stop the machine. At right, Dave Wallace of Tee and Green Sod (right) watches as a crew lays four-foot-wide sod on a green at Willowbend Golf Club in Mashpee, Mass.

of Kingston Turf. "They had mowed the greens four or five times in the first 10 days."

According to Butson, Kingston is one of the few companies capable of laying four-foot-wide swaths of turf. "We can lay down 240 square feet of sod with each roll," he explained. "With a seam every four feet, it's not going to move when you top-dress it."

To the superintendent, the width of the sod rolls made all the difference.

"It was phenomenal — seams only every four feet," raved Tusts. "When the first two greens had been in a month, you'd never know they had been sodded. They looked great."

Sodding fairways is no big deal. In fact, Kingston Turf had sodded fairways at one of Willowbend's neighboring courses — The Country Club at New Seabury — following Hurricane Andrew last year.

But sodding greens is more

When the first two greens had been in a month, you'd never know they had been sodded. They looked great.'

- Chris Tusts

revolutionary, though it's becoming more commonplace. Cordillera, a 3,100-acre private resort and residential community in Vail Valley, Colo., will spend \$560,000 this summer sodding fairway and greens. There's no particular rush. The Hale Irwin course isn't scheduled to open until the spring of 1994.

Further west in Palm Desert, Calif., West Coast Turf is sodding all 36 greens at Indian Ridge Country Club's two Arnold Palmer designs. According to Jeff Cole of West Coast, the 172,000 square feet of washed Penncross roots quicker and drains better than the unwashed bentgrass sod.

The Pennlinks bentgrass used at Willowbend— provided by

Tee 'n Green of West Kingston
— was also washed, which
made a big difference,
according to all parties involved.

"It all has to do with your existing water table," Tusts explained. "Normally, water stops when it reaches a different soil surface, fills up, then releases into the next soil level. If you lay sod with attached soil, the water holds there and you can't get on it very quickly. Too mushy. You need good drainage and the attached soil holds up the process."

The sandy soil on Cape Cod only reinforced the decision to use the washed sod.

"The more sand content in the soil, the easier it is for us," said Butson, who endorses washed sod from a supplier's point of view.

"We feel the shelf life is increased and you don't have the humus creating heat. It has the tendency to dry faster and, because you have nothing but root, there's no thatch."

Tusts, for one, doesn't believe the washed sod take any quicker than the soiled alternative. "They claim it roots much better, but I haven't found that."

Not everyone has \$150,000 of disposable income, but Butson believes sodding is a coming trend. It's expensive, but there are distinct advantages over the grow-in, he said.

For a new course, it's a breakeven proposition," said Butson.
"Depending on the cost of the sodding, you can't make it back with greens fees the first year, but you've got no erosion problems; you get on the maintenance program right away; and the whole operation is settled in, on-line much faster.

"In the long run, it's worth it."

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New chapter is added to the international world of 'air freight'

MEXICO CITY, Mexico—A strange cargo is being flown in the friendly skies between here and Southern California: sod.

West Coast Turf of Palm Desert, Calif., is air-freighting 130,000 to 140,000 square feet of washed bentgrass sod to replace all 18 greens and a practice putting area at Club Campestre de la Ciudad de Mexico.

When the exclusive country club lost its greens to a turf problem, the club's agronomy consultant, California superintendent Michael Hathaway, suggested sod.

Enter West Coast Turf.

"We air-freight stolons everywhere, but I've never heard of anyone ever airfreighting sod," said Jeff Cole, director of marketing for West Coast Turf. "It's kind of pricey. It adds about 50 percent to the cost [of about \$1 per square foot]. But our alternatives worried me."

The alternative was to drive the sod to Mexico in refrigerated vans — a four-day trip. "Because of the time and

the rough roads, which are nasty in some places, we decided against it," Cole said.

Mexico only allows washed sod over its border. So West Coast Turf was a logical choice.

"We wash ours," Cole said. "You get a clean product and immediate rooting, with no interfacing problems. But in this case it also helped, because washing eliminates weight."

He estimated the average green weighs 15,000 to 20,000 pounds.

By mid-June West Coast Turf had shipped 90,000 square feet of the sod. Cole expects to complete delivery around Aug. 1.

Awaiting each shipment is Texaseducated turfgrass specialist Marcelino Marino, who is overseeing greens construction.

Hathaway, Cole and Marino are banking on bentgrass thriving in this city, which lies more than 7,000 feet above sea level, perhaps an ideal climate for growing the turfgrass.

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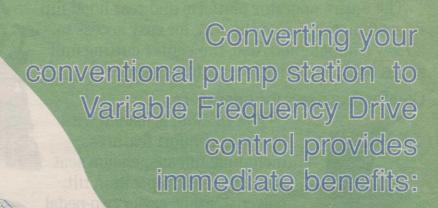
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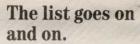


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