Changing of the guard

Lyon ushers out successful term with GCSAA

BY PETER BLAIS
This month's 61st annual Golf Course Superintendents Association of America International Golf Course Conference and Show will be the highlight of outgoing president Dennis Lyon's term.

"The Orlando conference (Feb. 19-26) will be the largest and best yet," said the head of the Golf Course Superintendents' Association of America. "We're both trying to get the same thing. We're working together with the EPA (Environmental Protection Agency) to gain knowledge so we can have an environment that's healthy for everyone."

Superintendents and environmentalists are coming to blows rather than confrontation is necessary.

"The environment is the biggest threat to the game itself," said Faulb. "The growth of the game could be stopped quicker by environmental issues than anything else, even quicker than a change in the tax laws. Right now the tax law is very beneficial to golf course development because of the tax deduction for environmental consultants." Faulb added. "The growth of the game could be stopped quicker by environmental issues than anything else, even quicker than a change in the tax laws. Right now the tax law is very beneficial to golf course development because of the tax deduction for environmental consultants."

Faubel eyes 1990 with aggressiveness, optimism

BY PETER BLAIS
Superintendents' good. Government regulators bad.

Gerald Faubel would likely appreciate the humor if a George Bush imitation uttered those words. But he wouldn't agree.

"There's no reason for us to be adversaries," said the incoming president of the Golf Course Superintendents' Association of America. "We're both trying to get the same thing. We're working together with the EPA (Environmental Protection Agency) to gain knowledge so we can have an environment that's healthy for everyone."

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Japanese investors have paid $7.6 million for 140 acres in New Hempstead village in New York for a proposed golf course attracting Japanese and Korean travelers.

Japanese pay $7.6 million for course site

Havinc bought the land through U.S. Bankruptcy Court in White Plains, Three Little Willows Corp. has already embarked on plans to sell memberships in the course to business travelers.

The court trustee conducting the sale said Three Little Willows plans to sell memberships through Kiyos Bank's corporate clients in Japan and Korea.

New Hempstead Mayor Stanley Telich, for one, relishes the idea of the land being a rest-and-relaxation stop, saying it "will provide a reputation for the village on a worldwide basis."

Herschel Greenbaum, attorney for losing bidder Horita Associates of Japan, said a soft real estate market and high interest rates made the land more attractive for a course.

He explained: "Recreational facilities do not fluctuate the same way as houses. If there's demand for a golf course, there's a demand for a golf course."

He added that higher profits that might come from home sales would be offset by the amount of time it would take to win approval of such a development. New Hempstead officials had earlier proposals for housing developments on the land.

Holes relocated for airport expansion

Livermore, Calif.'s Los Positas Golf Course is relocating several holes to make way for an expansion of the city's airport. The 36-hole course is being moved west to make room for the enlarging of the airport's main runway from 4,000 to 5,250 feet.

The expansion takes in an area that included six holes.

Five new lakes, more undulations, 500 more trees and enlarged greens will make the course more challenging. The relocated course should open in June. Temporary trees have been built allowing play to continue during construction.

Hawaii taps Horita to build Kapolei

The state has selected Horita Corp. to develop Kapolei Golf Course in Honolulu, Hawaii.

Horita will pay the state a $25 million lease premium and 10 percent of the annual gross sales. No memberships will be sold and most rounds reserved for Hawaii residents. Horita's proposal beat out those of Watt Corp, Zane Development Inc. and the Odakyu Group.

Forest district to move holes

Illinois' DuPage County Forest Preserve District has purchased two parcels of land south of the Wood Dale Golf Course, leaving just a half-dozen of the original 22 lots it hoped to buy.

Once the remaining parcels are purchased, the district plans to move several holes to allow for better flood control along Salt Creek.

Connor moves Golforms office

Golforms, the golf course architectural firm headed by Edward H. Connor III, has moved from Casselberry, Fla.

Its new headquarters is 4601 So. Atlantic Ave., Suite 108, Ponce Inlet, Fla. 32127.
**Florida town, Public Golf agree on pact**

Public Golf Corp. and Palm Beach Gardens, Fla., officials have agreed on a contract for the firm to build and operate an 18-hole golf course.

Richard Orman of Public Golf said construction on the 140-acre site would begin by April and the course could open in about one year, becoming only the second municipal course in the county.

A $7 million bond issue to build the daily-fee facility will be paid off by golf course revenues. Greens fees for summer golfers are projected at $13; in the winter they will be about $21, Orman said.

The City Council, voting unanimously on the agreement, decided to provide golf as part of the city's recreation programs, according to Mayor Mike Martino.

Martino said Public Golf was selected as a partner in the project because it had the property and the ability to do the job.

**Nelson joins with Nichimen in Ariz. project**

Nichimen Trading Co. of Japan and Jerry Nelson have formed a 50-50 partnership to develop Troon North at Pinnacle Peak, an 1,800-acre project that will eventually include two Tom Weiskopf/Jay Moorish courses near Phoenix, Ariz.

The partnership includes financing for Troon North Golf Course, a clubhouse, sales center and on-site improvements for the first subdivisions. The first course was scheduled to open in January and clubhouse construction to start immediately.

Nelson entered into an earlier joint venture with IDG Development Corp. of Irvine, Calif., to develop a 250-room, $87 million Four Seasons Resort on a 65-acre portion of the development. That partnership has bought 620 acres of state land that will feature another resort and the second course.

The second course has had several names, St. Andrews and Estancia among them, before taking its present designation, Estancia.

Nelson and Nichimen, believed to be the first Japanese firm to invest in Arizona real estate, teamed in 1972 to purchase land in unincorporated Maricopa County that eventually became the site of Pinnacle Peak Village and Pinnacle Peak Country Club.

**Oregon attracts Japanese firm**

The first Japanese investment in the central Oregon resort industry will be a $7 million development encompassing a golf course, 107 home sites and 103 condominiums.

Golf Village, which will be built at the Inn of the Seventh Mountain, west of Bend, is being developed by partners Sho Dozono, president of Azumano Travel Service; Don Schollander, a Lake Oswego real-estate developer; Warren Klug, general manager of the inn; and the Yamazoe family of Tokyo, which bought two Portland office buildings for $3.6 million last year.

Construction has begun on the golf course, and the first nine holes are expected to be ready for play in the summer of 1991.

**Illinois park district OKs bonds for course**

Mundelein, Ill., Park and Recreation District officials expect to be operating a $5 million 18-hole golf course by 1992.

The Park District in December approved purchase of $5 million in general obligation bonds to be financed over 20 years.

The Park District is buying 179 acres from a developer for $3.1 million and will use $1.9 million to build the course.

The land is located in unincorporated Lake County, whose Forest Preserve District land acquisition committee has approved the project. The district had intended to buy a 330-acre tract to protect two lakes and expand Countryside Golf Course, which it owns and operates, but forest commissioners suspended that plan when Mundelein expressed interest in a part of that land.

Mundelein Park Director Alex Marx said the course will pay for itself despite the $5 million cost.

Meanwhile, developer Towne received approval from the forest commissioners to build 58 homes around the course. Towne assured officials that future covenants would protect the golf course as open space.

**Japan's Okachu plans Aussie course**

Japanese golf course developer Okachu Co. plans to proceed with a golf course resort and residential development in Queensland, Australia.

Okachu has established a wholly owned subsidiary, Rodart Nominees Pty Ltd., on the Gold Coast to manage the development.

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Sportsman’s renovation bid accepted

The Northbrook (Ill.) Park District Commission has accepted a $1.3-million bid to renovate the east nine holes of the Sportman’s Golf Course.

The district plans to install a new irrigation and drainage system and reseed the east nine holes of the 27-hole layout.

Ryan Excavating Co.’s winning bid, which was similar to earlier bids the council originally rejected as too high, was accepted by a 5-1 margin. Work was scheduled to start in January and the holes to be re-opened for play in December.

USGA awaits targets for research

Saying, “We think we’re the environmentalists,” USGA Green Section National Director William Bengayfield says the section in the 1990s is stressing research on the environmental impact of golf courses.

Bengayfield, claiming many environmental organizations hire “recruits who are emotionally motivated,” said in an interview that the Green Section will rely on facts documented by research when evaluating the impact of golf courses.

A research effort is under way to find the results of pesticide applications.

Spectrum Research, Inc. has been hired for $20,000 to do background research. Bengayfield said that in late March, Spectrum officials will present their recommendations to the Green Section, outlining the areas that have not been, and ought to be, thoroughly researched in regard to the environment.

He said the Green Section will then seek “very specific” proposals from universities regarding biodegradation and breakdown of pesticides and other topics.

After reviewing those proposals, the section will present a financial request to the USGA Executive Committee in late summer at the U.S. Amateur Open.

“The Executive Committee will decide if and how much to support this effort then,” Bengayfield said.

Bengayfield said he hopes to work closely with the Environmental Protection Agency.

SUNY campus honors Smalley with building

The State University of New York at Cobleskill has dedicated its new Turfgrass Building in honor of plant science Professor Emeritus Ralph Smalley.

Dr. Smalley started SUNY Cobleskill’s turfgrass curriculum in 1962 and received the State University Chancellor’s Award for Excellence in Teaching in 1981.

A plaque honoring Smalley was unveiled at the dedication ceremony, and a second plaque acknowledges the New York State Turfgrass Association for its financial support.

The 24-by-80-foot building contains classroom space for courses in turfgrass management, recreation and sports-area management and an equipment storage area.

Students under Professor Meredith McNeil began construction on the building in the fall of 1984 and her students each year have continued the carpentry work. The campus’s physical plant staff worked overtime to complete the project.

The NYS Turfgrass Association contributed $26,000 to the total $35,000 cost of the project and donated an IBM Model 30 computer, printer and monitor to the turfgrass foundation.

A matching funds grant of $5,500 was given by SUNY Research Foundation, while ChemLawn Corp. donated $2,500 toward construction materials and Stanford Seed Co. gave $700.

N.J. counties enjoy success, draw scrutiny

Having learned that other New Jersey counties are making money on county-run golf courses, officials in Burlington County are investigating the idea.

The Burlington County Freeholders’ interest was sparked by a survey of other New Jersey counties that showed at least three operate public courses at a profit. Morris County has three courses, Mercer two and Ocean one with a second under construction, the survey found.

The Red Lion Golf Association, a group of some 200 Leisure Town residents, believes the county needs more public courses and has pushed for years for a county course.

Until now, county officials have balked at the move, citing limited revenue and escalating land costs.

Freeholder Bradford Smith is asking for a feasibility study and for the county to look into securing state and federal Green Acres funding to buy open space and turn it into a golf course.

For free information circle #103
A greater mix of new municipal and public-fee courses will be built in the 1990s, says American Society of Golf Course Architects President Robert Trent Jones Jr.

Although the trend of the last five years has been to integrate new courses into real-estate developments and resorts, Jones said, "Upscale public golf definitely is on the rise, and municipalities and entrepreneurs will be working to fill the demand gap in the next 10 years."

Jones said that although the demand for residential and resort courses is being met in many regions, "we must in the next decade develop more innovative ways to finance the very strong demand for municipal and public-fee courses."

Some communities, such as Brooklyn Park, Minn., have combined efforts with local builders, who have developed housing around new municipal courses, and that trend is expected to continue.

Other public bodies are considering sites — from landfills to retired military posts — that are undesirable for commercial or real-estate development.

Jones feels the public-fee and municipal courses of the 1990s will be higher quality than in the past.

"We'll be seeing better-designed courses that will feature aesthetics, playability and easy maintenance which will generate revenue for their cities' parks departments," he said. "Golfers see so many great courses on television and play many more while on vacation or attending business meetings, and they want to play comparable courses near their homes. And, they are willing to pay a premium for quality golf."

Jones pointed to the profitability of new, quality golf courses throughout the country, including areas like the Northeast and Midwest that once were considered "mature" markets.

"With sound management, these new facilities will become solid profit centers for municipalities and private owners. Public golf is one of the great opportunities today in the entire recreational spectrum," he said.

Major project will take 15-20 years to finish

A golf course along Limestone Creek is part of the largest proposed development in the 101-year history of Orange, Calif.

After nearly four years of negotiations with the Irvine Co., the City Council in December unanimously approved a plan that calls for construction of 12,350 new homes on the east side of town.

Plans also call for a commercial/retail center that will create 27,000 jobs, a recreational complex along Lake Irvine and the golf course. The entire project will take 15 to 20 years to complete.

The proposal could be stalled, however, by the Serrano Irrigation District which is concerned the project could pollute Irvine Lake.

The district, which provides drinking water for some residents of Villa Park and Orange, is considering using the city for approving the plan without what it considers, adequate safeguards against polluting the lake.

GCA reports 'ballooning' roll of members

Total Golf Course Association membership ballooned to 306 during 1989, a year of growth for the association for privately owned public golf courses.

That growth was reflected in GCA's management newsletters, ranging in topics from marketing to internal controls, which are now being published 10 times a year.

A record-breaking attendance was also expected at January's annual GCA conference in Palm Springs, Calif.

The GCA has participated on national task forces dealing with tax equalization for golf courses and the environment. Panelists representing GCA have appeared at both National Golf Foundation summits and the GCA has a lead role in developing a uniform system of accounting practice for public golf courses.

The association has also benefited from its membership on the National Golf Foundation board, appearances at the Professional Golf Association annual meeting, and past GCA president Peter Trenchard's nomination to the Executive Committee of the United States Golf Association. It also planned exhibits for January's PGA buying show and February's Golf Course Superintendents Association of America annual conference and show.
A new player has entered the market selling insurance to golf courses.

Zurich-American Insurance Group of Schaumburg, Ill., has introduced "foreGOLF," which it says is "designed specifically by golf people, for golf people.

Highlights of the property program are comprehensive coverage for the golf course's buildings and contents, specialized coverage for greens and tee boxes, loss of income or extra expense coverage and crime coverage.

Liability features include common area coverage, loss of use, protection for equipment, herbicide and pesticide liability, broad-form property damage and golf car liability.

Optional extensions are inland marine, an extensive excess liability umbrella to provide higher limits, workers compensation, commercial auto, and boiler and machinery.

Zurich-American's policy provides risk management services including safety and engineering programs, plus specialized claims processing.

Z-A is assigning a representative to each account "to identify common golf course hazards and those unique to each course, evaluate individual operations to determine improvement management systems and to conduct safety training seminars."

Chase Golf Course Consultants President David Stefan and Golf Properties Association International officials worked with Z-A to develop "foreGOLF."

The program is being offered in all states except Hawaii and Alaska through the Chase Insurance Agency in Ocean City, N.J., and Exton, Pa.

To qualify, courses must have at least 16 holes, be at least 5,000 yards long and cover at least 100 acres, among other criteria.

More information is available from Robert R. Retew at Chase Insurance (800-4-GOLF-44), or Thomas Wagner at Zurich-American (609-596-2090).

VMS Realty agrees with Xerox on project

Xerox Corp. has found a partner to help it complete the Landsdowne mixed-use project in Leesburg, Va., that includes a golf course.

Xerox announced last June it was abandoning its property development business to concentrate on financial services and office equipment.

That failure worried Loudoun County officials who feared the project—a golf course, two 300-room hotels, waterfront park and 1,830 residential units—would not be built.

A deal struck between Xerox and VMS Realty of Chicago apparently means the plans will come to fruition.

Resurrection of course hinges on vote

The Los Alamitos Country Club and golf course may awake from a five-year hibernation if Cypress, Calif., voters approve a new hotel and business complex.

The 18-hole course was closed in 1986 by Hollywood Park Realty, which wanted to put office buildings on the 58 acres as part of an overall 2.7-million-square-foot commercial and office park development. Cypress voters rejected that proposal by a 2-to-1 margin last year.

Lloyd Arnold bought the land from Hollywood Park and has drafted a new proposal that includes renovating and reopening both the golf course and nearby Los Alamitos Race Course as well as building 1.8 million square feet of office and commercial space.

Reopening the golf course and building a new clubhouse is Arnold's first order of business, according to Jack Swank, an opponent of the Hollywood Park proposal but a strong advocate of Arnold's plan.

Traffic and environmental studies for the proposed Cypress Business Park must first be conducted and could be submitted to the city council as early as March.

The plan calls for a change in the annexation ordinance, a move that must be approved by voters. If the council approves the proposal, it could come before voters in June.

Developers offer donation in lieu of fees

Developers of a proposed golf course community in Upper Makefield, Pa., have offered a $1-million donation to the town as an alternative to paying park, recreation and road improvement fees.

The township supervisors have voted to allocate $825,000 to the Park and Recreation Board, $75,000 to the Fire Department and $100,000 to the township if the developers' offer is accepted.

George Michael and Thomas Scannapieco want to build their community on 604 acres in the village. The township has approved the course, although plans for much of the rest of the project had not been submitted as of this winter.

Zurich-American unveils course insurance plan

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Palatine faces five-year remodeling

Approximately $82 million in improvements appear in the Palatine, Ill., master plan for the Palatine Hills Golf Course.

The 18-hole, Edward Lawrence Packard-designed course is in line for a dozen cosmetic improvements over the next five years. Some have already been completed or are underway.

A fourth irrigation well was added last summer. Sewer and water hook-up to the village is taking place. Two rain-shade shelters have been approved and should be ready when the course opens in April. The Killian Design Group has designed a layout for a 20 tee-off box driving range.

Another $1 million has been proposed for a computerized irrigation system and improved landscaping. Additional trees and shrubs have also been mentioned.

A recommendation for a timetable for improvements was scheduled to be submitted to the park board in January.

$s6.8 million in changes ahead at Schaumburg

The Schaumburg, Ill., Park District is planning $6.8 million in renovations to a course it bought last year.

The Park District agreed to pay $15.5 million for the former Golden Acres golf course a year ago. It is now considering a three-phase facelift to the renamed Schaumburg Country Club that will make the 27-hole facility more playable.

The first phase calls for creation of a driving range, doubling the parking lot from 180 to 350 spaces and constructing a new maintenance building. The combined cost is estimated at $3.4 million.

Subsequent improvements include green and tee expansions of the second nine holes, a new clubhouse and more second nine holes.

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Introducing the new Cushman Core Harvester attachment.

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FEBRUARY 1990

Golf Course News

McCumber Japan-bound

Mark McCumber & Associates has been commissioned by Japanese golf course projects in Hiroshima and Usunomiya.

Construction at Hiroshima is expected to begin this year. Negotiations for the purchase of additional land is underway at Usunomiya, where preliminary plans should be completed by this fall.

Robbie Robinson

C.E. "Robbie" Robinson, credited with designing some of the most outstanding golf courses in Canada, died Dec. 29 at the age of 82.


He had become interested in course design during his undergraduate years when he updated and renovated the Fenelon Falls, Ontario, course of Canadian statesman and magnate Sir Joseph Flavelle.

After graduating in 1929 from University of Toronto's Agricultural College in Guelph, Ontario, he served an apprenticeship with famed Canadian golf architect Stanley Thompson, who arranged a position for Robinson as course manager and superintendent at Sunningdale Country Club in London, Ontario.

Robinson returned to Thompson's firm in 1936, then served with the Royal Canadian Air Force during World War II before moving on to a job in site selection and housing development with the Canadian government and later opening his business.

He further studied soil science and agronomy at Cornell University and turf management at the University of Massachusetts, and became recognized as an expert on turfgrass culture.

Robinson served several years as director of the Royal Canadian Golf Association's Green Section.

He designed Upper Canada Village Golf Club in Morrisburg, Ontario; Brudenell Golf Club on Prince Edward Island; John Blumberg Winnipeg Municipal Course in Winnipeg; Cape Breton Golf Club in Nova Scotia; Hamilton Golf & Country Club in Ancaster, Ontario, and other courses in the United States, Mexico, the Caribbean and South America.

He remodelled St. George's Golf and Country Club near Toronto and Cherry Hill Golf and Country Club in Ridgeway, Ontario, for the 1968 and 1972 Canadian Opens, respectively.

Survivors include his wife, Thelma, of Paris, Ontario; one brother and three sisters.

Donations may be made to the Canadian Cancer Society.
First golf outplacement firm formed

Five ex-CMMA presidents join forces, talents in new venture

BY MARK LESLIE
Outplacement, an industry in its infancy, has reached the world of golf.

Six former presidents of the Club Managers Association of America, led by Immediate Past President Edward L. Hoffman, have formed Club Professional Outplacement, Inc., and this month opened six offices across the United States. Outplacement is a process by which a company helps employees find new jobs.

"We formed this company initially with the thought of performing a service that was needed and to improve the lot of all club professionals, be they club managers, grounds superintendents, or golf professionals," said Hoffman from his Chicago, Ill., headquarters. "Outplacement is fairly new to industry in general but has been unheard of in our field. There is no one in the (280) existing outplacement companies who really understands the industry and golf professionals." 

Hoffman points to his own experience along with the 40 years each accumulated by his partners in the company:

• W.R. "Red" Steger, a former grounds superintendent and golf pro as well as club manager, is vice president and regional manager working out of Houston, Texas.
• James Goslin, who has an accounting background, is secretary-treasurer and manager for the Northeast working from his Warwick, R.I., offices.
• Josef Auerbach, who is retiring within the next year, is a regional vice president and manager for the region around his Wichita, Kansas, office.
• Robert Mayes, who is retired, is regional vice president and regional manager working out of a Sacramento, Calif., office.
• Horace Duncan, a former executive director of CMAA, is regional vice president and Southeast region manager from Highlands, N.C., headquarters. He has been retired for four years and has been conducting retirement seminars, so will be the company’s(resi)dent retirement expert.

"We have a very diversified group," Hoffman said. "We have all been in the field 40 years and have all managed or been general managers of clubs, so we are intimately familiar with golf professionals as well as grounds superintendents and tennis professionals."

Over and above the normal outplacement service, the new firm will offer "professional staff retention," helping long-time professional employees deal with and implement new club policies in response to changing ideas and demographics.

"We feel that we can help by being engaged by the club to work with that individual because we’ve been there and we speak their language and can convey that what club really wants," Hoffman said. "We will stay very high on ethics, will work with these people, will take displaced or terminated people and evaluate them with scientific evaluations and help them with their career paths; how to interview; practice interviews with video cameras; help them rewrite their resumes; network and tell them where the jobs are and where they ought to apply; and then we’ll help them determine which job they shouldn’t accept, maybe even influence their contract negotiations if they want us to.

"We’re going to do spousal counseling for the displaced individual if they want. We’ll also provide retirement counseling."

"(Partners) all want to be a service," Hoffman said. "It’s been a great profession. We’ve made our living out of it for a long time. We love the industry so we thought we’d give something back and maybe make a little money. And right now it looks as though this really could balloon into something."

Pointing out that his wife, son and brother are all club managers and that Goslin and Auerbach have sons who are club managers, Hoffman said: "It is a labor of love for us. We’re excited about it, enthusiastic... It is an exciting concept."

Club Professional Outplacement Inc. has asked for an endorsement from the CMAA and will approach other groups. CMAA has endorsed the concept for several years but "there never was a firm that they could endorse," Hoffman said.

Explaining why not one of the 280 outplacement companies has targeted clubs, Hoffman said:

"There’s no one really capable. They don’t understand the nuances of the industry. But we as general managers have had dealings with and have hired golf professionals and grounds and tennis professionals. We understand them and we understand where the club boards are coming from as well. So that makes us, I believe, certainly the only qualified firm to do it."

"We’re young enough to work at it and old enough to have the necessary experience."

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For a fact-filled brochure on TURFtech research and application, call Steve Nichols at (800) 221-7645.

Visit Us at Booth 3235 at the GCSAA Show in Orlando, February 23-26, 1990
Fulfilling a promise, with thanks to all

It was just a year ago that I first had the opportunity to write this column. At that time I outlined what Golf Course News would offer during the coming months. Included with these plans was a promise to deliver a news publication with an easy-reading format and stories related to the golf course industry that would help you do your job better.

In my opinion, our managing editor, Mark Leslie, and staff have accomplished this task as promised. In doing so, Golf Course News has established a strong following. In my opinion, our managing editor, Mark Leslie, and staff have accomplished this task as promised. The GCSAA has been most cooperative in supplying Golf Course News with exhibit information so that we can help you enjoy the show weekend. In the middle of this issue (pages 35-38) we've printed a "pull-out" section which we suggest you pull out and take with you as a guide around the exhibit hall. Golf Course News advertising clients are highlighted in the listing and on the floor plan for your convenience. We're in booth 5801, and if you'd like to see us and hear your comments on Golf Course News, please stop by to say hello.

Golf Course News has had a most successful first year thanks to the support of our readers and advertisers. We look forward to serving the industry for many years to come.

See you in Orlando.

Sincerely,
Charles E. von Brecht
Publisher

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COMMENT

For Sale-Prime land-includes wetlands

BY BOB LOHMANN

In the not-too-distant past, many golf course architects looked on wetlands as a nuisance — mosquito-breeding, swampy, low-lying areas that would be scheduled for dirt fill.

Today, wetlands and golf course construction have established a much different relationship. First, the land available for new courses is many times unsuited for farming or housing, and a major reason is that the site is partially wetlands.

Second, architects now realize the environmental importance of wetlands. They help control flooding and reduce erosion. Also, a multitude of unique wildlife and vegetation is dependent on this swampy land. In nature's delicate balancing act, wetlands play a very important supportive role.

When you consider the staggering amount of wetland acreage that has been destroyed over the years — in Illinois, for example, more than 95 percent of the wetlands are gone — it is little wonder wetlands and the wetland environment are now protected under the Clean Water Act of 1977.

Golf course architects need to learn to work with wetland acreage, and to create new and better courses that are in harmony with nature.

A new site that includes wetlands not only offers unique design possibilities, but another element from which to create a memorable golf course.

One challenge in building on a wetland site is that wetland acreage cannot be reduced. For every inch of wetland altered or "taken away," an equal area of wetland must be created. This process of wetland recovery is called mitigation.

Defining wetlands can also be a challenge. Any number of definitions are being applied, and some developers simply pick the one that suits their immediate needs.

But since the Army Corps of Engineers is the government agency in charge of verifying and protecting wetlands, architects and developers should follow the Corps' definition of a wetland:

Those areas that are inundated or saturated by surface or ground water at a frequent rate and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.

Therefore, to ensure builders don't destroy wetlands, the key is to make them part of the course's character — to build a solid, fun-to-play golf course, and use the wetlands to enhance the beauty, definition and character of the individual holes.

We've faced this wetlands challenge on a number of golf courses that we've designed and built. The design of one wetland course, however, stands out: Oak Knoll Golf Course in Streamwood, Ill.

Oak Knoll is part of a residential development and borders the perimeter of the complex. The course covers a significant area of land unsuitable for homes and commercial use. Continued on page 58
Effect of root stress on turf vigor

From Maryland, south to Florida and west to Texas, six of the nation's top turfgrass specialists investigate the importance of a root system to golf turf and the effects certain preemergence herbicides can have on its health.

On the surface, rolling fairways and well-manicured greens can appear undamaged by stress conditions, such as the drought that hit portions of our nation in 1989 and again in 1991. But hidden from view, the turf's life-sustaining root system may be suffering, for survival of the roots is oftentimes more sensitive than shoots, turf damage from environmental stresses may be present even when above-ground effects are not evident.

Dr. James Beard, Professor of Turfgrass Science at Texas A&M University, says that because roots are oftentimes more sensitive than shoots, turf damage from environmental stresses may be present even when above-ground effects are not evident.

Over 1,000 miles away at Virginia Polytechnic Institute and State University, Dr. David Chalmers, Associate Professor of Agronomy, concurs. "Too often, turf management is geared exclusively towards producing a green top. The root system lends support to the production of this green top and, if functioning improperly, can inhibit the formation of a healthy, agronomically sound turf and/or turf that provides optimum playability for golf and other sports."

The root system is vital in water and nutrient uptake. For example, 80-90% of the root system can reduce the quantity and frequency of water applications needed for survival. On the other hand, a root system large enough to support the turf plant's overall vigor, which according to Beard, initiates a whole gamut of negative reactions.

"A short root system increases the proneness of the plant to water stress even when there's adequate moisture in the soil," he says. "The plant could die due to water stress because of the root system's inability to take up the water as rapidly as it's being lost by evaporation from the leaves."

The length, health and density of the root system are varied. For turf with minimal root systems, such as newly established or undergo environmental stresses, certain preemergence materials can predispose the root system to injury. For example, in 1987, Dr. Bill Lewis, Professor of Crop Science - Weed Control, was able to link poorly developed roots with the death of certain preemergence herbicides.

Used in the test were some of the most commonly available today, including benazolin (Balan® 2.5G), bendazanil (Bentazon®™G), oxyfluorfen (Surflan® 4AS), oxyflamine (Bentazon® (oxyflamine), pendimethalin (Pre-MR 60DG) and prodiamine (Blockade® 65DG), now labeled as Sentrall®. These materials were applied overtop of newly transplanted sod of four different turfgrasses - common centipedegrass, a KY-31 tall fescue/Kentucky bluegrass polystand, Meyer zoysia-grass and Tifway bermudagrass.

To control the herbicide having the least effect on rooting was oxadiazon, while the most severe was oxyfluorfen, Lewis concede.

The herbicides' mode of action may account for the varying degrees of root pruning in the test. With the cell mitosis and division of oxadiazon and bensulide, the other herbicides are classified as dinitroanilines, a class associated with root seedling growth by inhibiting cell division.

Dr. Wayne Bingham, Professor of Plant Pathology at the University of Georgia, explains further how these herbicides work. "The dinitroanilines interfere with normal cell mitosis and prevent two potentially good cells from forming properly. Instead of dividing, the cell grows larger and becomes rounded, not cylindrical. In bermudagrass, for example, this disorder results in the formation of stubby roots which will not tack down properly, but will pull right up."

"Oxadiazon, on the other hand, is not so mobile in the plant," Bingham continues. "It usually does not go into the root tip, but is taken up by the stem or leaf blade. This material stops the development of the annual grass seedling during germination."

Bob Belsberg, Director of Research and Development, at Estech Corporation in Winter Haven, Florida, has also seen severe root pruning problems with many of the dinitroanilines. "The situation we have in Florida is unique," he says. "Our high rainfall is likely to wash the dinitroanilines out of the turfgrasses. Compounding this problem are our sandy soils, which do not buffer the root system against the effects of herbicides as well as clay soils do."

"When you apply those compounds, you're actually bathing the root system with a root pruning herbicide. The roots cannot grow through the herbicide layer in the soil, so the rhizomes just grow across the surface with abbreviated roots that look like upside-down mushrooms. I haven't seen any of these problems with oxadiazon."

With preemergence herbicides that may weaken the turf root, many factors and conditions affect the degree of root pruning severity. The time between seeding and application can be critical; notes that you see in the fall and apply herbicides in the spring, some preemergence herbicides tend to thin the stand. For example, with tall fescue, all preemergence herbicide labels, except Bensulide® (bensulide), Dacthal® (DCPA) and BonStar® (oxadiazon), do not recommend spring applications following a fall seedling, he says.

A test that measured the effects of five preemergence materials - prodiamine, oxadiazon, pendimethalin and oxfluoren in a mixture of bentazon and trifluralin (Team® 2G) on tall fescue tall fescue verifies his claim.

"Only plots treated with oxadiazon had root strength equivalent to untreated tuffs at both 49 and 149 days after treatment, he says.

Root-pruning herbicides used under less-than-ideal conditions circumstances aren't the sole culprits of poor cover and delayed rooting. Other factors that can increase the potential for root pruning include soil compaction intraffic ed areas, moisture imbalances, excessively close mowing, severe soil conditions, applies, excessive nitrogen fertilization, potassium deficiencies and diseases. These variables can be compounded by the formation of a weak root system, also may interface with one another and intensify their damaging effects on turf.

For example, in a study that measured the effects of preemergence herbicides on cover and turf management, Dr. Peter Dernoeden, Associate Professor in the Department of Agronomy at the University of Maryland, found that the formation of a weak root system was treated with pendimethalin exhibited an unacceptable level of leaf spot infection. Visual evidence was no increased leaf spotting and thinning.

"These results seem to indicate that pendimethalin can predispose turf to leaf spot disease," he says. "However, I have no evidence that other preemergence herbicides enhance the development of this disease."

The factors affecting the health of the root system are varied. For turf with minimal root systems, the most severe was oryzalin, Lewis concede.

"Oxadiazon, on the other hand, is not so mobile in the plant," Bingham continues. "It usually does not go into the root tip, but is taken up by the stem or leaf blade. This material stops the development of the annual grass seedling during germination."
Too much of wrong fertilizers used

To the Editor:

I agree the farmers and the golf courses are using too much of the wrong kind of fertilizers.

I have been general manager for 25 years at Hominy Hill Farms and Hominy Hill Golf Course.

In these years I have made a complete study of the soil at Hominy Hill.

With the technique I found and followed, I raised better alfalfa, kept a good stand for 11 years before reseeding, and grew the best hay in the world.

One year I exhibited seven different hay samples in a show that had over 600 hay samples; I won five first places and two seconds, for Grand Champion and Reserves Champion.

On the golf course the last 10 years I was there, I developed a method of fertilization, etc. that grew the nicest, healthiest grass.

With these methods I save a great deal of money in spending for unwanted fertilizer.

Some of these methods would apply to the farmer and to the golf course superintendent.

Sincerely,

Harvey C. Dreibelbis
Freehold, N.J.

Ed Hoffman healthy and active

To the Editor:

Unfortunately, the press release issued by CMAA (Club Managers Association of America) understandably created the wrong impression as evidenced by the story in your December 1989 issue headlined: "Ill health forces Hoffman to resign."

I am writing to clarify the situation so that you and your readers know I am alive and well as well as to inform them of my future plans, which allow me to continue to serve our industry and all professionals serving clubs.

I was forced to retire from active club management due to arthritis which hampers my mobility to some degree. This caused a change of CMAA membership from active to retired status, which provided my continuance as president of CMAA.

I shall remain as chairman of Conference '90 and will remain active in association activities.

In concert with Joseph Auerbach, Horace Duncan, James Goslin, Richard Maynes and W.R. "Red" Steger, all of whom are former CMAA presidents, we have founded Club Professional Outplacement, Inc. (Editor's note: See story on page 9.)

Our organization will serve club professionals nationwide through offices in California, Illinois, Kansas, North Carolina, Rhode Island and Texas and is the only outplacement service for club professionals exclusively. We sincerely feel this concept will benefit our industry and the dedicated professionals who serve it.

Sincerely,

Edward L. Hoffman, CCM
Club Professional Outplacement
P.O. Box 31135
Chicago, Ill.

Informative, well paced

To the Editor:

I would like to compliment you on a great job servicing the golf course design and construction business with Golf Course News. Your articles are highly informative, well paced and objective.

As the principal of Richard and Associates, I have recently expressed my confidence in Golf Course News by becoming an active commercial advertiser.

Richard and Associates is a full-service golf course project consulting firm.

Sincerely,

Ray Richard
Richard and Associates
Sagamore Beach, Mass.

Moratorium in Illinois town

A moratorium on building permits in an area known as the river bottom has stopped construction of a driving range and a golf course in the Illinois city of Columbia. The city council imposed the ban in December while awaiting a ruling on how the environmentally zoned land should be used. That report is expected in April.

Meanwhile, work on the Jefferson Barracks Golf Tee and Recreation Center as well as a local golf course being built by investors Charles Dodd and Jim Watkins, has ground to a halt.

A stop-work order was issued to the driving range, which had a building permit. The developers have filed a suit in Munroe County Circuit Court to have it lifted.

No stop-work order was necessary for the golf course, which had not been granted a permit. However, some work had been done on the project because, Watkins claims, the building inspector told him there would be no problem getting a permit.
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- HEAVY DUTY corrugated (3 through 24-inch)
- HI-Q™ high capacity smooth interior (12 through 36-inch)

Klausk superlative tutor to supers of the future

BY PETER BLAIS

Unlike many superintendents who claim they rarely play the game, Fred Klausk is a two-handicapper who brings his skills as a golfer to his work.

"I spend as much time as possible trying to teach my assistants how to care for a course from a golfer's point of view, I want them to know why we do the things we do. I've trained several people who are on golf courses of their own right now. I take a lot of pride in that," said the head superintendent at the Tournament Players Course at Sawgrass, Fla., the flagship course of the TPC fleet.

It was Klausk's ability as a teacher that impressed T.P. "Buck" Caldwell, special accounts manager with turf care products manufacturer Lesco, Inc., and led him to recommend Klausk as a candidate for the Super Focus feature.

"Fred has a real gift for nurturing and helping his employees learn the profession, just ask any of his assistants," wrote Caldwell. "They will quickly share that when Fred sends them out on the course, they know what to do, why they are doing it and how. Fred takes time from a very demanding schedule to share knowledge so that his
NEW COURSES

Royal Lakes offers water and forest

Royal Lakes Golf and Country Club, the centerpiece of a 500-acre development 40 minutes north of Atlanta, Ga., will challenge every level of player when it opens this spring, according to architect Arthur Davis.

"I believe in challenging golf for all player levels and Royal Lakes will provide the golfer variety, challenge and excitement on each hole," Davis said. A championship par 72 layout, Royal Lakes covers 6,712 yards over terrain covered with oak and pines and spotted with three lakes. Undulating greens and large tee areas are a feature of the course which is heavily guarded by sand bunkers and water.

Play will be both private and public. It is a joint venture between Royal Lakes Associates, Norton-Mercer Development and The Norton Agency Real Estate.

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For free information circle #196

Improved yardage markers pay big dividends

What's the single most important golf innovation of the century? Dean Beman, Commissioner of the PGA tour, says that measuring the course—and the concomitant benefit to club selection—has done more to improve the overall quality of tournament play than anything else.

If this is so helpful to tournament players with their yardage notes and helpful caddies, think how useful it will be to provide the rest of the golfers with accurate yardages. This can be done by placing our easily seen yardage markers, flush with the fairway, at ten yard intervals, from 220 to 50 yards from the center of the green. Aligning them down the middle or sides of the fairway eliminates the hunt for yardage tags on sprinkler heads or the stepping off of distances from 150 yard markers. These yardage markers do not violate the USGA Rules of Golf.

Once golfers become accustomed to playing by yardage they learn how far they can hit each club and know better when it is safe to approach an occupied green. Women golfers are appreciative yardage markers in the zone where they choose irons. All golfers hit more greens. Since this results in faster play, these markers will pay for themselves in a short time because the course will accommodate more foursomes on busy days.

Our yardage markers are made of toughened, high density, polyethylene containing UV inhibitors to preserve color and enhance durability. They sell for $7.50 each, postpaid in U.S.A. Add sales tax in California. Free sample upon request.

Using a Touch Tone Phone Call:
1-800-824-9029
Wait for tone - press 753

GOLF 2000 CORPORATION, 9842 Hibert Street, San Diego, California 92131

For free information circle #156

Strange, Carrick collaborate

Curtis Strange's first design collaboration project in North America — King Valley Golf and Country Club in King City, Ontario — is nearing completion.

Strange was involved as a design advisor with the architectural firm of Robinson & Carrick Associates, Ltd. of Willowdale, Ont.

The firm's Douglas Carrick is the architect of the 18-hole, private course which is scheduled to open in July.

King Valley will measure 6,891 yards from the championship tees. It is styled in the tradition of the classic courses of the 1920s and 1930s.

Greens range from 5,500 to 6,000 square feet. Bunkers are relatively deep and hallowed in most cases. Water comes into play on seven holes.

Strange may collaborate again with Robinson & Carrick on a project at Qualicum Beach on Vancouver Island, British Columbia.

Another Carrick-designed course, Grey Stones Golf & C.C. in Milton, Ont., should open in July.

Schmidt emphasizing shot values

Landmark Club Management has signed an agreement with Davidson Communities of San Diego, Calif. to design and build an 18-hole public golf facility in Ramona, Calif.

The 12th hole displays part of a magnificent piece of land Curtis Strange and Douglas Carrick worked with to create King Valley Golf and Country Club in King City, Ontario.

For free information circle #112

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A truly versatile 3 gang for the money—$6,510 list. Exclusive lightweight "hollow roller" design is excellent for fairways and commercial use. Unique rear wheel drive design eliminates housing and allows for easier servicing.

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For free information circle #113
Courses newly planned in U.S.

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* — Type: P (Private); D (Daily Fee); Semi-P (Semi-Private)

From Golf Course News sources

Hills works on PGA Tour

Arthur Hills and Associates has added nine holes to a pair of courses that will be featured on this year's PGA Senior Tour.

The Hermitage, home of the Crestar Classic each fall in Richmond, Va., will open its new nine this spring, bringing the club to a full 36 holes.

Pelican Bay in Naples, Fla., site of February's Aetna Challenge, will expand to 27 holes with the new nine opening this fall. There will also be a large, new practice area.

Nine holes have already been added and another nine are planned at Alocia Properties of South Carolina's Morgan River Facility at Dataw Island, which will bring that facility to 36.

Three new courses are nearing completion in Florida. Ironhorse in West Palm Beach is being developed by Alan Sher in association with Joshua Muss and Associates. Old Trail at Jonathan's Landing in Jupiter will add a second course to that Alocia Properties complex. And Windsor Park, developed by Group IV Properties, is a daily-fee facility on the south side of Jacksonville.

The first of two courses awarded by Fuji Development at Windward Hills in Alpharetta, Ga. (just north of Atlanta) is well into the construction phase. The second 18 is on the drawing board.

Hills is also designing 18-hole Palmetto Headlands on Hilton Head Island, S.C., for Greenwood Development Corp.

Two other South Carolina projects on the drawing board are Dunes West in Charleston and Cedar Creek in Aiken.

Please let us know

Each month Golf Course News publishes news stories on new courses being built across the country.

In cooperation with the American Society of Golf Course Architects, we are asking people who are planning or have begun construction on courses, or are remodeling or expanding existing ones, to write to:

Golf Course News, P.O. Box 997, Yam- mouth, Mass. 02673. Please include architect, course builder, project developer, type of course, number of holes and other pertinent or unique information.

Johnston's Hope Plantation course opens

Construction has been completed and the Hope Plantation Golf and Country Club course on John's Island, 20 miles south of Charleston, S.C., is open for play.

Architect Clyde Johnston, formerly with Willard Byrd and Associates, designed the 6,843-yard, par 72 layout.

The Charleston area's newest golf course is the focal point of 360-acre Hope Plantation, a private residential community located within two miles of the Kiawah and Seabrook Island resorts.

Reports are that although the last plant was in charge of course construction. Machen Construction of Little Rock, Ark., was in charge of course construction.

Single-family homesites feature views of the golf course, number of holes and other pertinent or unique information.

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GOVERNMENT UPDATE

Moratorium ends, but future in doubt

A number of developers eagerly bailed in the New Year since Honolulu’s moratorium on golf course development expired on New Year’s Eve. But an extension of the moratorium is being considered as the City Council tries to determine the best method for reviewing golf course development applications.

Having been put on hold since the moratorium was enacted last March, 12 to 15 golf course developers reportedly had applications pending and another 40 had made preliminary inquiries.

A bill was sent back to the Zoning Committee which will study it further before sending it back for a council vote. The Zoning Committee Chairwoman Donna Kim and refined by Councilman John DeSoto, would allow golf courses in several zones, subject to the city’s Plan Review process, a relatively speedy method applied to universities, convention centers, hospitals and prisons. The Department of Land Utilization, various agencies and neighborhood boards comment on proposals, then the City Council holds one public hearing and votes in the form of a resolution.

The council was to vote on the bill in mid-December. But because of numerous objections, the bill was sent back to the Zoning Committee which will study it further and make its recommendations before sending it back for a council vote. The Zoning Committee was scheduled to meet again Jan. 23.

The Zoning Committee will take into consideration the opinions of groups like Hands Around Oahu, which wants golf courses approved by ordinance, not resolution, in order to widen the spectrum of agencies and public opinion to be consulted. A major sticking point for opponents of the bill is that the Plan Review process cannot be challenged by initiative because it is an administrative act.

Hands Around Oahu has submitted a bill that would analyze the cumulative effect of new courses rather than judge each on its own merits. It would include criteria to evaluate projects in regard to fresh and coastal water and competing land uses. It also would broaden access to the courses by residents who, Hands says, are being squeezed out of the courses by high fees. A companion bill would add a special tax on golf-course revenues.

NCA warns: ‘Stay vigilant’

Legislation that poses both great concern and opportunity to country clubs is being debated in state legislatures across the nation, according to the National Club Association’s director of government relations. Attorney Thomas M. Walsh, reporting in the organization’s magazine, “Club Director,” said that among the areas being discussed are privacy, the environment, property taxes, limits on liability, employer-employee relations, alcohol control, taxes and health insurance.

NCA is lobbying basically only in Congress but “can mesh its national overview with the local expertise of clubs and their members,” according to Walsh.

He gave as an example the NCA’s Texas chapter. The group was formed primarily to fight against legislation that would have made many private clubs public. NCA Director Bob Meyer was called to document the clubs’ position that the legislation was unconstitutional, and that position won in that case.

Walsh said vigilance — keeping abreast of exactly what laws are being authored — is a must for clubs across the country.

“Chances are great that many problems will occur, and many opportunities will arise in state legislatures,” he said. “The area fraught with greatest danger is the threatened intrusion of governments into membership decisions of clubs. Legislatures continue to entertain proposals to declare private clubs to be public accommodations, which, if passed, would subject clubs to unwarranted public scrutiny...”

“Regardless of their own membership policies, how homogenized their membership profile is, clubs should be concerned with such proposals. “They have the potential for much mischief because they would involve state governments in a private club’s single most important function, selecting its members.”

FEBRUARY 1990

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The long-lasting protection of CHIPCO® brand 26019 fungicide makes it the perfect foundation for a season-long disease management program. Just one application protects turf for up to four full weeks.

And, because CHIPCO® 26019 is registered for use on a wide variety of high-value ornamental grasses, including Helminthosporium Leaf Spot and Melting Out, Dollar Spot, Brown Patch, Fusarium Blight, and Red Thread. It even protects against Pink and Gray Snow Mold and Fusarium Patch.

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mental, you can depend on it to keep all the grounds you care for healthy and disease-free. Add the fact that CHIPCO® brand 26019 fungicide is available in two convenient formulations—wettable powder and smooth-pouring flowable—and it's easy to see why it has become the disease control of choice for quality-conscious superintendents across the country.

This year, invest in the best: CHIPCO® brand 26019 fungicide. For turf that thrives under pressure.

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Oregon

Continued from page 1

The state legislature last summer voted down a measure that would have reduced the amount of burning and increased the fee. But Gov. Neil Goldschmidt has joined with one state senator and one representative to write an initiative that, if passed, would by 1995 cut the acreage to 50,000.

The Environmental Quality Commission, which oversees the program, would be allowed to further reduce the maximum acreage or ban burning entirely if it "certifies that an economically feasible, environmentally acceptable alternative exists."

The proposed law would also change the fee structure to include a $1-to-$2-per-acre registration fee, and charges of $2 per acre for prepane-damaged burning, $6 per acre for field burning and $3 per ton for burning stacks or bales of hay.

Nelson said the initiative would also make stack burning illegal in September 1997, "which would really cripple us."

Opponents of the burning say it poses health and safety dangers and harms the tourism industry.

Nelson said the per-acre fee that farmers pay is used to help fund the Environmental Quality Commission which is supposed to finance research to find new ways to purge the fields.

"But they have spent all the money on the administrative process, so that for two years in a row there has been no money for research, which is boldering the growers a lot," she said. "We fund somewhere in the neighborhood of $800,000 a year and they're spending $750,000 on administration which we all feel is a bit extravagant."

Despite the delay in the courts, the Seed Council is assuming the Oregonians Against Field Burning will get the necessary signatures on its petition.

Yet, the council discovered in a poll that if the petition muster enough votes by July 8, the industry would win in the November voting if it can effectively show voters how critical it is to the state.

The seed industry employs 10,000 and contributes $750 million a year to the state.

"If people find out that that money and those jobs will be affected by them voting for the initiative, we have found (in the poll) that they will not support it," Nelson said.

The council has mounted a drive to raise the $1.5 million to $2 million it feels it needs for such a campaign.

It is raising funds among the growers, seed dealers, implement dealers, chemical dealers, banking associations, and others who have a relationship with the seed industry.

"We are holding the funds until we find out if the initiative will get on the ballot," Nelson said. "If we wait until July, it's too late to put a campaign together. If they don't get the signatures, we will refund the money we raised from the growers."

Meanwhile, an initiative that would mean an out-and-out ban to field burning is still being circulated. But supporters have gotten only about 21,000 signatures in about one year.

People who wish to contribute to the seed industry campaign can make checks payable to Oregonians for Agriculture at 866 Lancaster SE, Salem, OR 97301.

Tax board checking for discrimination

The California tax board is surveying private clubs across the state, reviewing articles of incorporation, bylaws, club regulations and other documents to determine if any are using discriminatory practices.

Club members lose their ability to deduct club-related business expenses on their state tax returns if their club is found to be restricting any service or facility.

The tax board has ruled that separate tee times for men and women is discriminatory. Men's-only grills and card rooms might also be ruled discriminatory.
Project's future lies with Supreme Court

BY BOB SPIWAK
Okanogan County, in north central Washington, is the largest county in the state. It's bigger than Connecticut and within its mix of desert, plains and alpine terrain five nine-hole courses serve its golfers.

Now, a 18-hole layout is being designed by Robert Muir Graves in the northwest corner of the county. It is questionable whether it, and a proposed 18 to follow, will get beyond the drawing board.

The course is a portion of a proposed $250-million resort called Early Winters, whose centerpiece for almost two decades has been a destination ski resort. Located just east of North Cascades National Park in the Methow (MET-how) Valley, the resort has been a major controversy since 1972, when the Aspen Corp. planned the original ski hill.

If golf were considered at that time, it was barely mentioned. Aspen is now out of the picture and a new development group, Methow Recreation, Inc., has taken up the cause. Its president, Doug Devin, is a local rancher and ski devotee and with other locals as well as out-of-towners, continues to fight for what has evolved into a four-seasons resort.

But local opposition to Early Winters was joined by several environmental groups including the Sierra Club. Each move by MRI has been countered by its opponents, and the conflict reached the U.S. Supreme Court late in 1988. Little was resolved.

At the core of the dispute is the question of major development in an ecologically sensitive pristine area of public and private lands. The valley, some 70 miles long, has a population of about 3,500. The nearest post office is at Mazama. It dispenses mail, gasoline, groceries and gossip. It's a general store with a wood-burning stove to chat over. The Methow precinct has about 100 registered voters along a 12-mile strip of highway.

The ski resort would eventually provide for up to 8,200 skiers a day, although the initial numbers are estimated at one-third that amount. There would be a village, condominiums, shops ... the usual resort facilities.

The projected assault of skiers worries some locals. Not only hustle and bustle displacing a laid-back lifestyle, but the loss of winter solitudes, degradation of a pure river, air, noise, and light pollution, and overall a lessening of the "quality of life" for which many moved to this valley in the first place.

The upper Methow is also the home of the largest mule deer herd in the state. Potential disruption of migration patterns, as well as impacts on other wildlife, has brought game officials and conservationists into the fray.

The valley is a long sliver of private land surrounded by national forest. The proposed ski hill is on Sandy Butte, the south wall of the development and on federal land.

Continued on page 19
Ag Secretary Yeutter to address institute

Agriculture Secretary Clayton Yeutter will be the keynote speaker at The Fertilizer Institute’s 1990 annual meeting scheduled for Feb. 11-13 at the Opryland Hotel in Nashville, Tenn. Yeutter will hold a “town meeting” with TFI members on Monday, Feb. 12 at 4 p.m. He will discuss legislative issues for the coming year, including the 1990 farm bill. The theme of the meeting is “Agriculture: Right On.”

“I think it is appropriate to begin the 1990s by focusing on the tremendous benefits of U.S. agriculture,” said TFI President Gary D. Myers. “Our meeting will be a celebration of the success of U.S. agriculture and a preview of the challenges of the next decade.”

Two panel discussions will explore issues for the year ahead. One will focus on the supply and demand outlook for nitrogen, phosphate and potash, the major fertilizer nutrients. Another will be a review of studies being conducted to determine the effects on food production of the elimination of commercial fertilizer.

“Before we make public policy decisions based on risk paranoia, we need to under-

stand the consequences of banning or significantly reducing fertilizer use,” said Myers.

The meeting will also feature TFI committee meetings and a board of directors meeting.

Washington

Continued from page 18

The golf complex would be adjacent to the resort village, on private land. The two 18-hole courses and a three-hole golf “academy” would occupy what is now unused farmland gone to weeds.

Surrounded by mountains that are snow-capped most of the year, its alpine magnificence drew repeated comments of wonder from Graves when he first visited the site last September.

The valley was formed by Ice Age glaciation. When the ice retreated, what little topsoil remained was removed by “outwash,” the flushing of soil by rivers born of the melting ice sheet.

All domestic water in the area comes from wells, and with the aquifer lying beneath a cobble and gravel surface barely covered by soil, golf course opponents cite the possibility of pollution by herbicides, fungicides, pesticides and fertilizers.

The area gets about 12 inches of precipitation a year, most of it as snow. Recent years have been near drought. During the winter of 1987-88, Wells in the valley as far as 10 miles downstream of the resort site went dry. With irrigation of 18 holes in similar terrain using from half to a million gallons a day, the question is, where will the water come from? Not only for the resort and its two villages, but for the remaining 65 miles of river valley.

In the mid-1970s, a coalition of concerned people was formed under the banner “Methow Valley Citizens’ Council.” To the proponents of resort development, this group represented obstruction, tree-hugging and Bambi-loving. MVCC hired an attorney and in court disputed the Forest Service’s Initial Environmental Impact Statement (EIS) for the original Aspen resort. Aspen lost the court battle and took its investment money to British Columbia.

Over the years since then, the Forest Service has worked toward perfecting the EIS. Prior to construction, however, they would have to be dealt with, along with evaluations of alternative sites for the ski hill, air pol-

Continued on page 54

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USGA Green Section honoring Mendenhall

Cited as an important symbol and the last of his era, 94-year-old Chester Mendenhall will receive the 1990 USGA Green Section Award at the GCSAA International Golf Conference and Show in Orlando, Fla., in February.

Mendenhall, who in 1948 was elected the 12th president of the GCSAA, helped pioneer the role of the modern superintendent during the post-World War II golf boom.

As one nominee noted: "Mendenhall...was directly responsible for the development of professional turfgrass managers for golf—men who have built their careers by combining the science, art and dedication necessary to produce today's fine golf turf."

Through Mendenhall's efforts, the GCSAA annual conference was first held in the West and that organization became effective on a national scale.

"Chet Mendenhall's greatest contribution was that he made the GCSAA a national organization," one nominee said. "(He) epitomizes the modern golf course superintendent, and he has been more than a sideline supporter of the Green Section."

As golf expanded in the 1950s and 1960s, Mendenhall actively participated in the growth and development of new machinery, the use of new chemicals, and improving management techniques.

Mendenhall's zeal in promoting his profession and the Green Section has been well documented. A charter member of the GCSAA, the organization presented him its Distinguished Service Award in 1968.

A Kansas native, he helped build the first municipal golf course west of Kansas City. After retiring from his superintendent's job, he designed several golf courses in Missouri and Kansas. He is the last remaining charter member of the National Association of Greenkeepers of America.

N.J. superintendents elect Finamore

Stephen Finamore of Alpine Country Club in Demarest has been elected president of the Golf Course Superintendents Association of New Jersey.

Finamore's fellow officers are: Vice President David Pease of Monmouth County Park System's Hominy Hill Golf Club in Colts Neck; Secretary Cris Carson of Echo Lake CC in Westfield; and Treasurer Leonard Florenza.

Directors elected for two-year terms were John Carpinelli of Moorestown Field Club; Paul Powondra of Princeton Meadows Country Club in Plainsboro; Lawrence Dodge of Essex Fells Country Club; and Bruce Peoples of Spring Lake Country Club.

Fulfilling their second year on the board are Thomas Grinac of Tavistock Country Club in Haddonfield; Richard LaFlamme of Lake Mohawk Golf Club in Sparta; Martin Mantell of La Tourette Park Golf Club in Staten Island, N.Y.; Dave Mayer of Bowling Green Golf Club in Milton; and commercial representatives Shaun Barry of Nor-Am Chemical Corp. in Somerset and Steve Chirip of Lebanon Chemical Co. in Dayton.

Neus elected Mid-Atlantic president

The Mid-Atlantic Association of Golf Course Superintendents has elected William Neus of Hobbit's Glen Golf Club to the presidency.

Neus, who succeeded Walter Montross of Springfield Golf and Country Club, heads a new slate of officers that includes Vice President Nick Vance of Latonsville Golf Course, Treasurer Steve Potter of Woodholme CC and Secretary Kenneth Ingram of Columbia CC.

Meeting at Hunt Valley Golf Club, the association elected Directors Donn Dietrich of Maryland Golf and Country Club, Lou Rudinski of Eisenhower Golf Course, Jim Kelly of Green Hill Yacht and CC, Scott Wagner of Leisure World of Maryland, Mitch Williams of Manor CC and John Laake of River Bend Golf and CC.
Architects pick Zoller for Ross Award

The American Society of Golf Course Architects will present its coveted Donald Ross Award to former Northern California Golf Association Senior Executive Director John Zoller. Zoller's selection "acknowledges the organization's builders and superintendents of all new golf courses," said ASGCA President Robert Trent Jones Jr.

The award will be presented on March 20 at the organization's annual meeting at the Inn at Spanish Bay on the Monterey Peninsula in California. It is given annually to a person who has contributed to the growth, understanding and public awareness of the importance of golf course architecture to the game.

Jones said: "We honor a golf course superintendent, a club manager and true gentleman who has played and contributed to the game of golf magnificently for more than 50 years."

"From caddying to turfgrass expert, and from the workshed to the front office, John Zoller has been everything to the game of golf. He has the unique distinction of having supervised and advised on all seven golf courses within the hallowed gates of the Del Monte Forest on the Monterey Peninsula."

As executive director of the Northern California Golf Association, Zoller led one of the largest associations in the country from 1980 until retiring in 1989. A major accomplishment during that time was development of Poppy Hills Golf Course at Pebble Beach, which marked the first time in North America of a golf course association of volunteers had financed, built and operated its own course for the benefit of its 110,000 members and the golfing public. Poppy Hills will host the National Intercollegiate Championship in June 1991.

The NGCA's effort is now "a blueprint for every state and regional golf association in North America," Jones said. "What better way to establish and make available to players of all skill levels true championship facilities ... to conserve the open-space environment ... to foster 'open to the public' golf courses of high caliber all over the country ... to meet the exploding demand for our grand and glorious game?"

"Every golf course architect appreciates what John has done personally to enlarge and enhance our profession."

Gruber Ohio's Man of Year

Coldstream Country Club superintendent Calvin Gruber was hailed as Man of the Year and Hinkley (Ohio) Country Club superintendent Jean Esposito was presented the Professional Achievement Award by the Ohio Turfgrass Foundation at its Conference and Show in December.

Meanwhile, the OTF installed a new slate of officers including President John Fanning of Cincinnati, a sales representative for the Kentucky turfgrass and seed supply firm of George W. Hill Co.; President-elect Joe Motz, owner of Motz Inc. lawn-care firm in Cincinnati; Vice President Paul Jacobson, who owns Jacobson's in Marysville and works at Morral Chemical in Plain City; and Treasurer Bill Pound of the Ohio State University Department of Agronomy Extension.

Gruber has been superintendent at Coldstream since it opened in 1960 and has kept the Cincinnati course in condition to maintain its Top 100 standing from Golf Digest every year since.

Cited by Fanning as a national leader in golf course groundskeeping, Gruber is known as the originator of lightweight mowing on fairways.

Esposito, the long-time superintendent at Hinkley, was honored for her active work for the Northern Ohio Golf Course Superintendents Association, which she has served as president and for her civic work in the community.

OTF also honored outgoing President Jim Sharp, an irrigation specialist with Century Equipment in Pemberville, and presented service and appreciation plaques to outgoing Directors Bruce Augustin, Ted Pasko and Richard Foote.

Rough duty just got easier at the Old Elm Club

Nearly all the elms are gone now. But that doesn't mean the Donald Ross and H. S. Colt designed Old Elm Club outside Chicago doesn't have its share of trees. Oaks have taken their place over the last 75 years—mature additions that made the John Deere F935 the perfect choice for mowing its roughs.

"We purchased our F935 with a 72-inch deck three years ago for mowing our roughs," says Ed Fischer, superintendent here for the last nine years. "It's the only way to go when you have as many trees as we do. Since then, we've also purchased a flail mower that we use on the F935 to break up aeration cores in the fairway."

"Ease of operation is one of the F935's biggest advantages. We get more work done with the F935 because our operators don't mind sitting on it for eight hours a day. They stay productive longer."

"It's the same story with our John Deere greens mowers. We have 10 John Deere 22s that our operators accepted immediately because they work easier, handle better and are easier to transport than anything we've ever had. Plus, they're easy to adjust and work on and do a beautiful job on our greens."

For the name of your nearest distributor, or free literature on all John Deere's Golf & Turf Equipment, call 1-800-544-2122 toll free or write John Deere, Dept. 956, Moline, IL 61265. We know, like Ed Fischer, you're going to like what you see.

Ed Fischer uses 10 John Deere 22 Greens Mowers to keep greens and tees immaculate at Chicago's Old Elm Club.
New York group cites Oak Hill CC super Hahn

The New York State Turfgrass Association presented the Citation of Merit to Oak Hill Country Club superintendent Joseph Hahn and gave $2,000 in grants and donations to turfgrass research and education.

Meanwhile Stephen Smith of Buckner Sprinkler Co. in Thompsonville took over the reins as president from William B. Stark III and declared that education and the environment would be the keys to his administration.

Declaring that one of his goals is the education of NYSTA members, the general public and state legislators, Smith said the future of the green industry and the environment is a major concern for the 1990s. Balancing these concerns will continue to be difficult, he said, and NYSTA must commit a strong leadership role.

Industry is in a position to help state lawmakers create the best legislation to protect and enhance the environment while maintaining turf to enjoy, Smith said.

Smith heads a slate of officers that includes Vice President Michael Maffei of Back O Beyond in Brewster and Secretary-Treasurer Timothy Maddens of Mt. Snow, Ltd.

Hahn was recognized for his work to educate turfgrass professionals and his "meticulous effort to advance turfgrass culture."

Hahn began work maintaining golf courses at the age of 14, and at 18 became assistant superintendent at Brookfield Country Club in Buffalo. In 1963 he accepted the green superintendent position at Braemar Country Club in Rochester where the second nine holes were then built.

While superintendent at Locust Hill Country Club from 1967 to 1983 he was awarded the first Superintendent of the Year Award by his peers in the Finger Lakes Association of Golf Course Superintendents in both 1970 and 1984, and was in charge of the grounds during six LPGA tournaments.

In 1983 Hahn moved to Oak Hill, which hosted the U.S. Senior Open in 1984 and the U.S. Open in 1989. NYSTA officials said the organization was "proud to honor one of its members who inspires such respect and regard from the entire industry. He is a wonderful example to all who know him."

NYSTA officials said the bulk of the $2,000 contributed was raised at four Poa Annua Golf Tournaments sponsored by golf course superintendents' associations across the state last fall. Proceeds were donated to turfgrass research during the annual Turf and Grounds Exposition at the end of the year.

At the annual meeting plaques were presented to Stark of Turf Renovations in Homer, for contributions during his presidency and as an officer and director for six years; Maffei as a director for 13 years; Richard Canale as a director for six years; and Joseph Laubenstein, who served as secretary-treasurer from 1987-89 and as director from 1983-87.

Serving as directors in 1990 are Eugene R. Bowler Jr. of Green Gene's Inc. in Port Washington; J.R. Brundage of Brundage Lawn Maintenance in Medina; Thomas Corell of J&L Adikes in Jamaica; John Fik of Park Ridge Hospital in Rochester; Steve Griffin of Saratoga Sod Farm in Stillwater; John Libardi of Heritage Park in Loudonville; Karl Olson of National Golf Links in Southampton; Tom Strain of Vestal Hills Country Club in Binghamton; and Stark.

GWAA chooses Linda Craft, Boatwright

The Golf Writers Association of America will honor Linda Craft and P.J. Boatwright Jr. this spring, presenting Boatwright the William Richardson Award and Craft the Ben Hogan Award.

Craft, who was runner-up to Sally Little for the Hogan Award last year, will be honored at the GWAA's Masters Tournament dinner in April. She was followed in the balloting by Pat Bradley and Jim Nelford.

Boatwright edged out Tom Watson, who was followed in the voting by Joe Jemsek, Deane Beman and Tony Jacklin. He will receive his award at the GWAA's annual dinner at the U.S. Open in Chicago in June.

The organization's Players of the Year — Tom Kite, Betsy King and Bob Charles — will be presented their awards at the Masters dinner, Dinah Shore Open and a Senior Tour event, respectively.

Kite received more votes than the other seven Male Player of the Year candidates combined and King was a walk-away winner over six other female players, but Charles won a close vote edging out Orville Moody. Nine other Seniors were in the balloting.

PLCAA turf video available

A new educational tool, a videotape titled "The Value of Turf — For Today and the Future," is available for the turf industry.

The 10-minute tape is available through the Professional Lawn Care Association of America's Education and Research Foundation. Funds from sales of the tape will support PLCAA's work with educational and research-based programs.

For more information or to order copies, contact PLCAA at 1-800-458-3466.

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SPECIAL OFFER
Now you can save even more by switching to ACCLAIM. Buy 3 gallons before March 16, and get 1 gallon free.
Craw named golf sales head at Hunter

Hunter Industries of San Marcos, Calif., has appointed Gard Craw its golf sales manager to head up the sprinkler manufacturer's newly instituted Golf Division, according to general sales manager Chuck Huston.

Craw will oversee product development and worldwide sales as well as set up a new golf products distribution network.

"Hunter Industries is entering the golf market with a line of sprinklers and control systems that will feature the newest technologies in water and energy conservation," said Huston.

Craw joined Hunter Industries as a district manager more than seven years ago when the company was founded. He was recently the institutional series sales and product manager. He has worked in the irrigation industry for more than 20 years.

LPGA promotes two, hires one

The Ladies Professional Golf Association has promoted staff members Kathy Milthorpe and Mike Waldron to the positions of vice president of finance and administration and director of tournament sponsor relations. The LPGA also named Holly Geoghegan of Rochester, N.Y., director of communications.

"As we celebrate the dawning of a new decade in 1990, we also will see the LPGA move into new and exciting avenues of opportunity," said Commissioner William A. Blue in explaining the promotions. 

"We need to ensure that we have the appropriate personnel to fulfill the needs of our sponsors, members and headquarters operations. Kathy Milthorpe and Mike Waldron are tremendous assets to this association and possess all the qualities we are looking for in our top-level management."

Milthorpe, raised in Texas, joined the LPGA in 1986 as manager of finance and administration.

She holds a bachelor's degree in accounting from Texas A&M University and worked with the public accounting firm of Cooper & Lybrand in Houston, Texas.

Waldron will be a liaison to manager of construction services for the United States Golf Association.

He worked briefly as Southeast region affairs representative for the United States Golf Association. Geoghegan owned and operated Bonus Mail, a direct mail marketing firm she founded in 1982. She also established Bonus Graphics, a computer graphics design company that provides integrated marketing communications for advertising, promotions and public relations.

 Slugocki gets promotion at Poellot

James B. Slugocki has been promoted from construction supervisor to manager of construction services for J. Michael Poellot Golf Design Group in Saratoga, Calif. Slugocki will be responsible for managing construction of JMG designed golf courses throughout the world.

He was transferred from Japan back to the California headquarters to assume his new duties. In Japan he supervised construction of JMG's Tomisato Golf Club and the Caledonian Golf Club. The 12 years before joining JMG in 1987, Slugocki was a general construction superintendent with Wadsworth Golf Construction Co. He worked on construction of two courses before that and supervised course maintenance for the U.S. Open at Pebble Beach in California and the PGA Championship at Oakland Hills in Michigan.

He holds a bachelor's degree in natural resources from the University of Michigan and has studied turf and landscape architecture at Michigan State University.

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Aquatrols adds scientist, rep

Aquatrols President Robert Moore has announced the addition of Dr. Mane Santakumari as senior scientist and Phil O’Brien as technical sales representative.

Santakumari has a Ph.D. in plant physiology from Sri Venkateswara University in India and has two years of post-doctoral research experience there and at Rutgers University.

She has had 23 scholarly articles published in national and international journals. At Aquatrols she will assist the director of research in quality control, technical service and product development.

"Dr. Santakumari’s research experience in plant-water relations, antitranspirant development and herbicide activity makes her a valuable addition," said Moore.

O’Brien has more than nine years of industrial sales experience throughout South Jersey and Pennsylvania. He will represent the company in a territory covering Long Island, south to Virginia and west to Harrisburg, Pa.

He is a graduate of Glassboro State College.

Hunters Run appoints Pollitt

Robert K. Pollitt has been appointed PGA director of golf at Hunters Run Golf & Racquet Club in Boynton Beach, Fla.

Pollitt was the club's head professional the past three years and before that director of golf at Mahogany Run in the U.S. Virgin Islands.

Wilson super at Crystal Tree

Peter Wilson has been named superintendent at Crystal Tree Golf & Country Club in Orland Park, Ill.

Wilson is a Pennsylvania State University graduate and formerly superintendent at Medinah CC.

Ciba-Geigy names Jackson rep

Steve Jackson has joined Ciba-Geigy’s Turf and Ornamental as a sales representative in the Northwest.

The addition of Jackson brings the number of sales representatives in turf and ornamental products to 16.

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Scott Boutilier

Ringer taps Boutilier

Scott Boutilier has been named commercial marketing director for Ringer Corp., and has relocated to the Eden Prairie, Minn., headquarters of the manufacturer and marketer of natural, organic fertilizers, pesticides and composting products.

Boutilier previously worked as marketing director for Nitragin (Lipta Chemicals, Inc.) in Milwaukee, Wis., and handled various sales and product management duties with Rhone-Poulenc in Montana and New Jersey. His work with both companies focused on agricultural chemicals and biological products in specialty markets.

Boutilier earned a bachelor’s degree in entomology from the University of Idaho and did graduate research in insect physiology at the University of Minnesota.

Cara Warne

Warne appointed

Neogen Corp., a biotechnology research firm, has appointed Cara Warne marketing services manager.

Formerly with KFGW Advertising, Warne will work in the Predictive Instruments Division at the Lansing, Mich., headquarters.

She is a graduate of Westminster College.
Take the turf test you can’t fail.
1. How much 8-4-24 fertilizer would need to be applied to get ½ lb. of K. per 1,000 sq. ft?
   a. 1.66
   b. 1.05
   c. 2.00

2. What is one of the advantages of using Sulfate of Potash over Muriate of Potash?
   a. Faster release
   b. Better root development
   c. Lower burn potential
   d. All of the above

3. Dollar Spot and Red Thread can be controlled with an application of the following?
   a. Nitrogen
   b. Potash
   c. Fungicide

4. Hairy chinch bug adults can cause the greatest damage in which type of turf?
   a. Ryegrass
   b. Fine fescue
   c. Bluegrass
5. Roughs that have undergone severe drought stress would be best treated with the following formulation?
   a. 46-0-0
   b. 38-6-0
   c. 18-5-9

6. On Bermuda tees and fairways where sprigging has taken place, what product would be most effective in controlling annual weed pressure?
   a. 18-5-9
   b. 19-4-6 with Ronstar
   c. Pendimethalin

7. Fairy ring can be controlled with an application of the following?
   a. Systemic fungicide
   b. Contact fungicide
   c. Fertilizer
   d. None of the above

8. Veronica Filiformis can be controlled with an application of the following?
   a. Acclaim
   b. Bensulide
   c. DCPA

Correct answers on back.
You’ll always make the grade on your toughest turf tests when you choose Lebanon.

When you’ve got Lebanon Total Turf Care on your side, you’ve got all the right products, all the expertise and all the answers you need to keep your course in top condition.

Our premium quality Country Club and Greenskeeper homogeneous fertilizers are formulated with time-proven methylene ureas and sized uniformly for greens or fairways. So every granule delivers a constant, predictable release of plant food—giving you quick green-up, consistent growth and color and a residual base you can build on year after year.

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And nobody offers a wider selection of products for your course—granular or liquid, straight or in cost-effective control combinations.

All our Country Club and Greenskeeper products are backed by a coast-to-coast distributor network of experts who can help you select the right products for your unique course conditions. Respond to changing inventory needs. And provide you with absolutely the latest information on product application and timing.

That’s why even the toughest turf problems can be solved with Lebanon quality and know-how on your side.

For more information on our complete line of Country Club and Greenskeeper Turf Care Products—along with the professionals who stand behind them—contact your local distributor or call our Greenline today, at 1-800-233-0628 or 717-273-1685.
Rain Bird’s expansion means promotions

Golf Division on the move

With the golf boom extending into the 1990s, the Golf Division of Rain Bird Sales, Inc., has expanded to meet the growing needs of superintendents, irrigation consultants, contractors and architects.

Rain Bird has promoted Ed Shoemaker to the position of vice president/general manager in order to oversee the sales, marketing, engineering and manufacturing operations of the Golf Division.

Six new field sales and service positions have been established as well.

The home office in Glendora, Calif., also has brought Steve Christie on board as director of sales and marketing.

Rod McWhirter has been named national golf specification manager and has begun working directly with architects, designers and irrigation consultants across the country.

Four new sales managers are Alan Clark, Shawn Connors, Dave Ferron and Jim Schumacher, with sales responsibilities in the Northeast, Southwest, Rocky Mountain and Southeast areas.

The Golf Division has also created a golf service manager position to provide service support in the Northeast Atlantic Seaboard area.

Shoemaker brings more than 30 years of irrigation and business experience to his post. He previously was Golf Division vice president responsible for the firm’s domestic sales and marketing efforts.

Prior to joining the division in 1985, he served as the director of sales and marketing for Rain Bird’s Turf Division.

Christie has 15 years of golf course and turf irrigation experience.

He will direct the company’s newly expanded field sales and service staff as well as direct the new product development activities and coordinate the maintenance and technical support of the current product line.

Christie was assistant superintendent at Broadmoor Country Club in Indiana before becoming a salesman for the local Rain Bird golf distributor.

McWhirter, who has more than 20 years experience in the golf business, was an assistant superintendent and an irrigation contractor before joining the company.

At Rain Bird he has been a golf irrigation designer, district manager for the agriculture and turf markets, regional sales manager for the Turf Division, and Western golf manager.

Connors worked as superintendent for Arrowhead Country Club in Glendale, Ariz., before moving on to Rain Bird and serving as product application engineer in the desert Southwest and Texas.

Gilbert leaves PGA for post in marketing

Former Professional Golf Association marketing director Edward N. Gilbert was recently named senior vice president of account services for Robinson, Yesawich and Pepperdine, Inc., a full-service agency serving the hospitality, travel and leisure industries.

Gilbert, 38, will be responsible for supervising all marketing and advertising account services for the Maitland, Fla.-based firm.

If you think advances in greensmower technology have leveled off, prepare to take off. The Bunton triplex is not only new, it’s better. We started with fresh ideas and state-of-the-art technology and developed a truly well-engineered machine where every feature produces performance.

STARTING WITH FRESH IDEAS MEANT THE END TO COMPROMISES.

The Bunton triplex is light on its feet, yet heavy-duty in construction. Until now every greensmower ever built was a compromise designed to keep total machine weight down, to reduce turf compaction, at the expense of heavy-duty construction. Rather than striving to reduce total machine weight, our engineers concerned themselves with the pressure actually transferred to the surface. The result is more durable components that improve cutting performance. That means better greens surfaces... and for a longer time.

THE SOLUTION TO TRADITIONAL GREENSMOWER PROBLEMS.

We started by putting weight where it does some good. Our larger reel motors and counterweights sit solidly on the playing surface to eliminate bounce and produce a true, more consistent cut. The unique traction wheel design allows more tire surface area to meet the green, to keep ground surface pressure low. Interchangeable parts keep inventories low and maintenance simple. Better performance results from a true hydrostatic transmission and dynamic braking, welded steel frame construction, extra oil filters, independent reel operation, standard backlapping, and a powerful 18 hp Onan engine or optional 16.5 hp Kubota diesel.

And if that isn’t enough, Bunton offers standard what others have as add-ons. With Bunton, what you demo, is what you get. And at a competitive price.

Call or write today for more information and a demonstration.

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Louisville, KY 40223
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NOW TRIPLEX GREENSMOWERS WILL NEVER BE THE SAME.

For free information circle #124
Tanks
Continued from page 1

Malotke said the biggest reason for leakage is corrosion from outside the tank. Ninety-one percent of leaks come from external corrosion as opposed to physical damage, loose fittings or corrosion from inside, she said.

Underground tanks are regulated — by the Bureau of Underground Storage Tanks — if they are storing petroleum or toxic substances. If a superintendent stores gas or hazardous material in a tank and 10 percent or more of the bottom of the tank is underground, it is considered an underground tank.

"We have a situation at a golf course that had a tank leak and traveled to an adjacent nursing home," Malotke said. "They are looking at spending megadollars to clean up something that was preventable."

"They didn't account for the fact that they were putting twice as much gas into the tank as they were using..."

"If you have a half-gallon leak a day that is 180 gallons in a year." Malotke said that once a tank is pulled from the ground, an inspector will check for holes. If any are found, he will ask for "copious soil testing because he figures you've caused pollution," she said.

"You're trying to find as little as a one-half gallon-a-day leak," she added.

Malotke said a superintendent can do three things to find out if he has a problem:

1) Inventory control: Account for as little as a loss as a half gallon per day.
2) Detection devices: Sink monitoring wells near the outside of the tank; take ground samples and pressure tests.
3) Sample/monitoring: Dig cores or wells around the tank to look for leakage.

"Many people are just taking their tank out. It's a lot less trouble and probably not much more costly," she said.

Malotke said anyone who has an underground tank must notify state authorities.

Last August a law took effect requiring that over-fill protection be provided on underground tanks as a minimum requirement.

She said many people are choosing to install above-ground tanks.

"It's off the ground, out of the way. You do not have 10 percent of the tank touching the ground," she said, but added, "The biggest problem you're going to have with an above-ground tank is with the fire department."

She said many fire departments will not allow above-ground gas storage tanks.

But if a community's fire department does allow that type, it has many advantages, she said.

"You know you're not going to..."

A checklist

- Are your tanks safe?
- Have you upgraded your underground storage tanks?
- Have you installed a leak-detection monitoring system?
- Are your tanks corrosion protected?
- Do you have a monthly inventory record?
- Should you repair or remove any tanks?
- What is the safest and most cost-effective option?

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weeds won't check in all season long.
Structure eliminates hazardous spills

BY MARK LESLIE

The president of a lawn-care business in Ohio said that his firm has "virtually eliminated any serious consequences" from the spills that hazardous materials applicators are going to happen. Fred Haskett said that although "accidents are going to happen," the chemical storage building he and other officials at Green World in Dover, Ohio, designed and built provides complete protection.

Haskett said the 2,500-square-foot pesti-
dose area — covering half Green World's building — was designed to:

• Contain spills.
• Recycle chemicals.
• Provide safe handling hazardous materials.
• Protect water, sewer and storm drainage systems.

Indeed, as much a facility, he said, is crucial to golf courses and the lawn-care industry as a whole, and, in a worst-case scenario, provides a payoff of two to three years.

"We are being watched by a whole host of groups, for a variety of reasons, from the federal government and national groups, to state and local agencies, to private citizens," Haskett said. "And the underlying question is, can we back up our methods, both in the areas of external and internal operations?"

"One accident, one spill, could result in the loss of your business, or the loss of your insurance carrier and your ability to buy insu-

A smaller container is used for the same types of residues from ornamental, tree and shrub spray.
A third tank is available for non-selective vegetation control residues.

"Accidents are going to happen. We are limiting their impact by containing them. We have virtually eliminated any serious consequences from these events," Haskett said. "And with our recovery system we can recover or recycle all spilled materials ... by integrating the storage and mixing systems on site."

"Another aspect of this system is that it can help establish, or enhance, a program of pesticide handling safety," Haskett said. The separate areas are well-defined, and with the addition of signage and color-co-

The primary protection for fresh water is a segregated sink within the building is a backflow pre-

A smaller container is used for the same types of residues from ornamental, tree and shrub spray.
A third tank is available for non-selective vegetation control residues.

The facility Green World built to protect it on our own terms, head-on, will be better than any of the others, and if we can go as far as mine could be spending as much as $5,000 per year on spraying units are parked; a segregated, primary containment area; and a spill con-

Environmental benefits
The major environmental benefit is the reduction or elimination of the potential of ground-water, sewer and water-system con-

"Another aspect of this system is that it can help establish, or enhance, a program of pesticide handling safety," Haskett said. The separate areas are well-defined, and with the addition of signage and color-co-

Haskett's creation can contain any spill Green World might have.

A smaller container is used for the same types of residues from ornamental, tree and shrub spray.
A third tank is available for non-selective vegetation control residues.

The facility Green World built to protect it on our own terms, head-on, will be better than any of the others, and if we can go as far as mine could be spending as much as $5,000 per year on spraying units are parked; a segregated, primary containment area; and a spill con-

'Accidents are going to happen. We are limiting their impact by containing them.'
— Fred Haskett
Tanks

Continued from page 26

have a problem because you can see a leak. You're not regulated by the underground storage tank people, by the EPA (Environmental Protection Agency) if it's gasoline. It's basically probably the safest approach to take," she said.

Malotke said: "Clearly the first line of defense in disposal is to use the stuff up. Mix it with what you need; buy only what you need and use it up."

If a course has materials it no longer uses there are some firms that will exchange other materials for them, she said.

"There are also some chemicals that are on such a 'hit list' that the only way to get rid of them is to fill out a 40-page form with OSHA (Occupational Safety and Health Administration)."

"When you're making your chemical inventory list for OSHA and come across something you no longer use, there is no time like the present to get rid of it," Malotke said.

EPA lists four types of materials that cannot be thrown out:

1) anything that can burn, if it has a flashpoint less than 140 degrees;
2) anything that is caustic or corrosive and can corrode steel;
3) anything reactive; or
4) anything toxic.

To find out if a material is toxic a person should look up its CAS number.

EPA identification numbers are like a Social Security number (for the golf course), she said, while the CAS number is its site ID number.

"If you have 220 pounds or less of waste, in any calendar month, of routine kinds of gasoline, methanol chloride, you don't come under the tight regulations of material disposal," Malotke said.

"But if you have acutely toxic material, it is 10 times worse. If you have an EPA identification number you have to tell them what it is you are throwing away."

Malotke said the expense of disposing of hazardous material should be incentive enough to be careful that any underground tank is safe and not leaking.

"If you have to dispense material then they (EPA) start looking and they have to have lab work done, and they find a chemical in it, the cost starts to rise dramatically. The price of disposing of hazardous material can be upwards of $800 per drum."

"If you will go a long way toward showing the EPA that if you do have a problem it was an accident, that it was totally unexpected, that will keep you off that EPA hit list and will save time as well as money," she said. "But, 'If you can't document that you've been looking (for leaks), and it turns out you've had a slow leak for six months, you are going to have much more of a problem proving that this was, in fact, an accident."

"One of the focuses of management needs to be in the area of waste management, preventing emergencies," she said. "Watch out for signs of leakage; unusual odors; signs of drum or tank damage; unusual sounds; and inspect during a quiet time."

She said that when there is a spill, two things must be dealt with: vapors and ground contamination.

"First, stop the spill from getting bigger, like turning the drum so the hole's on top," she said. "Second, clean it up. Go to the safety data sheet and EPA number, call EPA or a lawyer or environmental firm and they will call EPA."

Spills of pesticides, herbicides, cleaning compounds and similar materials are often required to be incinerated. So it is essential to keep the spill as small as possible and clean it up as quickly as possible before it seeps any further into the ground.

Malotke said she knew of only four facilities in the country that incinerate and they are located in Chicago, Alabama, Texas and Tennessee.

"The cost will be in the neighborhood of $800 per drum to incinerate; $200 to $300 to ship each drum; and another $200 to $300 for lab work on each drum," she said.

Once waste is spilled, a golf course has approximately 180 days to have it shipped. A safety data sheet on materials tells how big a spill must be before it must be reported; what procedures to use; what clothing to wear, etc.

"Any fire can be dangerous when toxic chemicals are involved," Malotke said. "You should plan how you would deal with a toxic fire. Management should know who to call; know where everyone should assemble. You have to know where everyone was when the fire hit."

"You can be seriously fined personally; never mind being responsible for someone being hurt."

---

"You can be seriously fined personally; never mind being responsible for someone being hurt."

— Mary Malotke

---

The Most Advanced
Is Merely A Product

If you've been looking for a lightweight fairway mower that can deliver unsurpassed performance now and well into the future, your search is over. Introducing the Toro Reelmaster® 223-D. No other mower knows your fairways better. And through conditions of all kinds, the Reelmaster 223-D gives you the productivity and consistent quality of cut you've been striving for.

To meet golfers' rising standards, the 223-D combines superior technologies. It begins with an exclusive positive down pressure system. The system, adjustable at 4 positions in 8 lb. increments, helps to maintain the reels in position over varying contours for a smooth, consistent cut.

Next is the exclusive design of the cutting units. An easy rear roller adjustment changes height of cut from 1/4" to 3/4" while maintaining the correct bedknife angle. This assures consistent cutting quality throughout the height of cut range. Quality golfers can't help but notice.

Just a twist of two dials is all it takes to adjust reel speeds. This allows you to tailor your clip length to your specific turf conditions and height of cut at the mowing speed you find most productive.
Storage building

Continued from page 27

tion is achieved by containment dikes, effectively keeping water runoff from going outside the building. It features a self-contained, stainless steel sump where materials spilled onto the floor or through washing can be recovered and returned into the recycling system.

Green World also has coating on the floors and walls that is chemical- and water-resistant, thus inhibiting spills and allowing workers to recover them.

"The other sections of the building, which support our mowing and maintenance operation, are equipped with discharges into the normal sewer system; but they are also equipped with oil and sediment interceptors," Haskett said.

Haskett said his company went through the government system, getting authorized documentation and approval from local and state regulatory agencies and departments, starting with local health, water, sewer and zoning officials and ending with the Environmental Protection Agency.

Detailed charts and graphs and schematics were prepared appraising the specifics of the building, where the water comes into the building and where it leads in various sites and how it's recovered; what is done with container disposal and triple-rinsing; and where the finished product formulation and usage goes.

The result, Haskett said, is "a system that Ohio EPA described to us as the best available technology of this type."

"It provides us with protection from accidents and with handling. It has helped us significantly with public opinion in town among the department heads and municipal people we deal with. It has helped us significantly with insurance rates. And it has established for us a positive relationship with the people who regulate us," he said.

Haskett, who has formed a consulting and design firm to help businesses interested in this type of pesticide containment building, said: "Let's send a new message: that we are a safety-conscious industry; that we are not afraid of good regulation; that we are protecting the environment in and around our facilities; that we are protecting our employees and our neighbors."

"We are only helping ourselves when we do this."

Mower Ever Designed Of Its Environment.

The design of the Reelmaster 223-D has produced a new standard that other lightweight mowers are sure to follow. It's built cleanly and efficiently for smooth operation and easy servicing. All controls are conveniently arranged in one easy-to-reach location.

Maneuverability is unsurpassed due to a short wheelbase and precise, full-power quad-link steering. A taller tire design gives you greater traction with less compaction and faster turning without scuffing.

Golfers expect a well-groomed playing surface. And their standards are rising. Only the Reelmaster 223-D can handle the job. From bent grass to Bermuda, hills to contours, no other lightweight fairway mower gives you this kind of productivity, quality of cut or superior turf. Call your local Toro distributor for a demonstration. Or contact Toro at the address below.

Nicklaus, Palmer to design portion of major project

A $750 million destination resort that will include 45 Jack Nicklaus and Arnold Palmer-designed golf holes is being planned for the U.S.-owned island of Guam.

Johnson Fain and Perreira Associates, a Los Angeles-based international architectural/planning firm, is doing the master plan and design of 1,300-acre Miyama Hills resort community that will include two-hour flight from Tokyo), the hotel and conference center.

Targeted primarily at the Japanese tourism market (Guam is a two-hour flight from Tokyo), the resort community will include 3,000 single-family homes, duplexes, townhomes and condominiums, plus a 200-room luxury hotel and conference center.

For free information circle #128
Wetlands Odyssey: From Problem to Attraction

BY PETER BLAIS

Federal and state laws regulating development around wetlands have forced golf course designers to look at these natural areas in a different light.

Instead of wet holes into which as much fill as possible must be poured to ease play, these lush homes to numerous animals and plants are being incorporated as added attractions into the final design.

"Wetlands are being integrated into the design of a course instead of being destroyed and built somewhere else," noted Kevin Noon, a senior environmental scientist with the Michigan landscape architectural firm Johnson, Johnson and Roy.

"Once a golf course architect experiences integrating wetlands into his design, he usually becomes very hot on the idea. They can make the environment unusually attractive."

Noon was involved with the design of the Ford TPC course in Dearborn in southeast Michigan, an area not noted for its topographic variety.

See related commentary, p. 10, and story, p. 48.

Continued on page 31

One-Pass Mowing & Clean-Up

Mow and power vac at the same time with Goossen's new 90 cu. ft. capacity Vac 'n' Load. It can be used with virtually any front deck or mid-mount mower and is also ideal for fast fall leaf pickup. And when the job's done, it tilts up for easy dumping.

If you need time-saving one-pass capability, then you need to know more about Vac 'n' Load. It gets the big jobs done faster.

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watering just two or three times a year... less gassing and corrosion... and now, the industry's first 2 YEAR BATTERY WARRANTY!

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President

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*2 year limited battery warranty when used with TURBO-Z chargers, installed and maintained per warranty specifications.
“Occasionally we plant saw palmettos and Spanish bayonets to discourage people from walking on the sea oat plantings.” Panic grass, dune sunflower, seagrass and seapurslane were also used to stabilize the sand dunes. In addition to the ecological shot in the arm plants provide, they can also add a competitive challenge. At many of the courses he’s planted, Beeman has placed fresh-water cordgrass between the championship men’s and ladies’ tees. “You have to hit your ball over them. You can’t get away with a worm-burner. The cordgrass makes for a very attractive and abrupt border. It stays green most of the year and turns a bright, golden color in the winter.” It’s nice stuff, said Beeman. Beeman charges anywhere from $5,000 to $15,000 an acre to install vegetated shorelines. That is often cheaper than seawalls, bulkheads and the like, according to Roy B. Mann of the Austin, Tex., environmental consulting firm of R.B. Mann. Mann has consulted on golf course projects in Texas and Massachusetts. Regardless of locale, Mann recommends a developer seek out a landscape architect with the following abilities: • Proven design skills, especially regarding topography and existing tree stands. • A strong understanding of the game. • A grasp of slope and drainage requirements. • A knowledge of turf installation and management. • A thorough knowledge of waterway and wetland characteristics, including natural and man-made features.
GOLF COURSE NEWS

1990 survey of aerator manufacturers

<table>
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<tr>
<th>Company</th>
<th>Model</th>
<th>Type</th>
<th>Walk/Ride/Pull</th>
<th>Hole Spacing</th>
<th>Changeable?</th>
<th>Minimum-Sq.ft/</th>
<th>Maximum</th>
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<td>Cushman Inc.</td>
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<td>Variable</td>
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<td>1 - 5</td>
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<td>Pull</td>
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<td>3 1/4 - 7 1/2</td>
<td></td>
<td>16,000</td>
<td>32</td>
<td>85 w/o weights</td>
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<td>Pull</td>
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<td>3 - 6 1/2</td>
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**the challenge to aerator companies**

and it's reflected in drops in sales — back from the drum types. Superintendents are saying: 'We need the quality. We're willing to pay the extra labor and time to have the quality aeration job.'

"And in lieu of this, Cushman/Ryan and various manufacturers around the country are trying to come up with faster reciprocating aerators. That's why you're seeing the advent of the faster (machines): to give back some of that speed so they can cut down on labor while still maintaining the quality that they want."

Brophy said recent surveys reveal that superintendents want to go deeper in order to combat black layer, an anaerobic layer between two different soil densities, such as sand and topdressing, "And so I think most manufacturers are looking at deeper core aeration or cultivation of the green," he said.

One traditional problem with deep aeration has been that it tends to tear up the surface and it takes a lot of labor to make the greens playable again. Yet Paul Gillen of Aer-Way, Holland Equipment Ltd. said deeper aeration has been the philosophy in Western Europe, particularly England and Scotland, for 10 years. Superintendents there found that they were actually forming a pan by continually aeraating at a fixed two- or three-inch level, he said.

"At the bottom of the coring time there is pressure," Gillen said, "and they found if they continued to aerate at the same depth they were... going to run into problems in growth and moisture... And at the same time they started having problems with black layer. So they knew they had to get down below the black layer and started using our equipment on the greens." Citing research in England that shows grass root systems will grow eight inches and deeper below the surface, Gillen said: "If you've got a root system that's there and established, it has that much more feeder root system to absorb the nutrients, it has that much more tap root system to absorb the moisture... And you don't need as much fertilizer, you don't need as much herbicide because you've got a healthier grass... and it is not as susceptible to compaction because you have that root system. The pluses go on and on and on."

Toro's Brown said, "We're working on deeper timing, deeper core removal, getting below that three-to 3 1/2-inch level is certainly one of the desires."

The major companies have their research arms working on ways to beat the black layering that plagues so many courses.

Brophy of Cushman/Ryan said: "Toro's looking at a program. Jacobsen is. I've heard John Deere is. I know we are."

"When all this equipment is going to be available, God only knows... Normal span from drawing board to the marketplace is Continued on page 48"
The price you pay for waiting.

New Cushman® GA60 with Turf-Truckster®

$21,900*

If you waited for the new Cushman GA60 large area aerator, your patience is about to be well rewarded.

The GA60 has proven to be the most effective reciprocating fairway aerator available. Features such as twin GA30 aerating heads, its own Cushman 327 liquid-cooled power source, a unique 5th wheel configuration, and an exclusive ground speed governor place the GA60 well ahead of the competition in terms of technology and performance.

It also has a price tag that will save you thousands of dollars if you act now. Order before April 1, 1990, (for delivery this year), and you can own a GA60 plus a Cushman 222-powered Turf-Truckster at the introductory price of $21,900, or a GA60 alone for just $15,400.* We are also offering an exceptional leasing program with up to 6 months deferred payment.

Nothing can deliver greens-caliber aeration over a larger area for as little money as the new Cushman GA60. It will definitely be worth your wait in gold. For all the details, contact your Cushman dealer.

*Does not include sales tax, freight, dealer prep or delivery charges; suggested price listed in U.S. dollars. Prices may vary with region. Delivery subject to availability.
GOLF COURSE NEWS

FASTER THAN A SPEEDING TRIPLEX MOWER, SUPER SUPERINTENDENTS ARE OFF TO ORLANDO!

A Guide to the 61st International Golf Course Conference and Show
### Advertisers at the 61st International Golf Course Conference and Show

The following is a list of all exhibitors and their booth numbers at the 61st International Golf Course Conference and Show, sponsored by the Golf Course Superintendents Association of America, Feb. 19-26 in Orlando, Fla. Advertisers in this issue of *Golf Course News* are listed in green, and their booth locations are colored on the map.

Please pull out this four-page center section of the paper and carry it with you as a guide to the show, lectures and other events.

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**61st International Golf Course Conference and Show**

Orange County Convention/Civic Center • Orlando, Florida

February 19-26, 1990

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This page is part of the *FEBRUARY 1990* issue of *Golf Course News*.
Mon., Feb. 19
8 A.M. Monday and Tuesday Two-Day Seminars
1-4 P.M. Tuesday Two-Day Seminars
5-8 P.M. Monday Evening Social
8:30 A.M. - Noon Monday Two-Day Seminar
1-4 P.M. Tuesday Two-Day Seminar
5-8 P.M. Monday Evening Social
9-11:30 A.M. Concurrent Education Sessions
7:30 A.M.-Noon Conference and Show Registration
9 A.M. Ribbon Cutting Ceremony and Trade Show Opens. The trade show floor will close at 5 P.M.
1-4 P.M. Voting Delegates' Check-In
1:45 P.M. Concurrent Symposium
1:45-3:45 P.M. Golf Course Superintendent Certification Exam
9 A.M. Conference and Show Registration
9:30 A.M. Golf Course Superintendent Certification Examination. All examinees must be approved applicants in the certification program and prior to Jan. 15 must have submitted their CGSA headquarter application to test.
11 A.M. International Round Table
11:30 A.M. Winter Club Luncheon
11:45 A.M. Conference and Show Registration
12-2 P.M. Conference and Show Registration

Tuesday, Feb. 20
8 A.M. Two-Day Seminars Continue
1-4 P.M. Two-Day Seminar
5-8 P.M. Tuesday Evening Social
9-11:30 A.M. Concurrent Education Sessions
7:30 A.M.-Noon Conference and Show Registration
9 A.M. Conference and Show Registration
9:30 A.M. Golf Course Superintendent Certification Examination. All examinees must be approved applicants in the certification program and prior to Jan. 15 must have submitted their CGSA headquarter application to test.
11 A.M. International Round Table
11:30 A.M. Winter Club Luncheon
11:45 A.M. Conference and Show Registration
12-2 P.M. Conference and Show Registration

Wednesday, Feb. 21
8 A.M. One-Day Seminars
9 A.M. Golf Management and Turfgrass Biology
9:30 A.M. Golf Course Construction Techniques
10:30 A.M. Pricing Golf Course Restoration and Renovation Projects
11:30 A.M. Integrated Pest Management
12:30 P.M. Introduction to Soil Science
12:30 P.M. USGA Green Section Rating System
1:30 P.M. Water Quality and Irrigation Scheduling

Thursday, Feb. 22
8 A.M. Tuesday Two-Day Seminars Continue
1-4 P.M. Two-Day Seminar
5-8 P.M. Tuesday Evening Social
9-11:30 A.M. Concurrent Education Sessions
7:30 A.M.-Noon Conference and Show Registration
9 A.M. Conference and Show Registration
9:30 A.M. Golf Course Superintendent Certification Examination. All examinees must be approved applicants in the certification program and prior to Jan. 15 must have submitted their CGSA headquarter application to test.
11 A.M. International Round Table
11:30 A.M. Winter Club Luncheon
11:45 A.M. Conference and Show Registration
12-2 P.M. Conference and Show Registration
Golf course show shaping up as ‘extraordinary’ event

This month’s 61st International Golf Course Conference and Show (Feb. 19-26) in Orlando, Fla., is expected to shatter all previous attendance and revenue records, according to conference officials.

"Things are going extraordinary well," said Golf Course Superintendents Association of America Communications Director Pat Jones. "We moved the GCSAA booth around and created another 30,000 square feet to accommodate the extra exhibitors. Registration is way up, even for our members. We should have a record number of superintendents here this year, which is why everyone else is showing up.

"Most of the educational sessions are sold out. The only thing that isn’t is the golf tournament. We expanded our courses this year and we’re expecting about 530 golfers."

The show gives attendees the chance to learn, expand knowledge and keep abreast of the latest in golf course products and services.

"That’s why our members come," said Jones. "We hope they will get a very concerted educational opportunity that allows them to be better managers and superintendents. Education is always the emphasis. And this year there is even more emphasis than ever on the environment.

The weeklong program kicks off Monday with the first of the one- and two-day seminars. These educational sessions, many of which have been sold out for months, run from 8 a.m. to 5 p.m. and will be held every day through Thursday. All seminars, except the Certificate of Continuing Education Guidelines, offer Continuing Education Units (CEUs).

The back-to-school nature of the conference continues Friday with three morning and three afternoon concurrent educational sessions. The morning sessions are entitled Critically Evaluating Your Needs, Golf Course Management Techniques: Part I and Managing Today’s Environment. The afternoon sessions are Golf Course Management Techniques: Part II, Southern Turfgrass Management and Water Quality and Distribution.

Nationally known experts in those fields will speak every 20 minutes on their area of expertise.

The conference officially begins with Thursday night’s opening session, which is held at the Peabody Orlando Hotel. Noted author, speaker and business consultant Dr. Ken Blanchard will be the keynote speaker. His "One Minute Manager Library" has sold more than 7 million copies and been translated into more than 20 languages.

Blanchard’s talk could help a superintendent gain the type of personal insight to make him a more effective manager. The same is true of Joe Griffith, a management consultant who presents proven methods for organizing time, and Joe Griffith, an experienced business consultant who emphasizes practical communication skills. Carson and Griffith will speak Sunday from 9 to 11:30 a.m. "Blanchard is a little new," said Jones. "He’s very effective and a good teacher who doesn’t bore you to death. In the past we’ve gone more for the entertainer at the opening session, rather than a person, like Blanchard, who can also help with self-improvement. He’s a motivator and we hope he’ll set the tone for the conference."

Other informational programs include Saturday’s international roundtable (11 a.m.) and a symposia on sand topdressing and Walt Disney World’s commitment to professional horticulture (at 1 p.m. Saturday), and Sunday’s government relations open forum (10 a.m.).

Both GCSAA President Dennis D. Lyon and his successor, Gerald Faubel, have stressed the importance of cooperation among the various professional associations that benefit from the golf industry. That’s why representatives of other associations will be conducting programs at the superintendents’ show.

The Golf Course Builders of America will present "The Golf Course Builders and Turf Management" Saturday from 1 to 4 p.m. The American Society of Golf Course Architects and several regional mechanics associations will conduct concurrent programs Sunday from 1 to 4:30 p.m. And the United States Golf Association Green Section Program runs from 8 a.m. to noon on Monday, the conference’s final day.

"We approached them (GCSAA) about coming down," said Pat Ryan, vice president of the Chicagoland Golf Course Mechanics Association who is hoping superintendents will encourage their mechanics to form regional associations once they hear the benefits. "They thought it was a great idea. You just can’t get an association going without the support of the superintendents."

Saturday morning is the start of the 2-1/2-day trade show with nearly 500 companies signed up to participate in this year’s event. The 350,000-square-foot trade show floor will be open from 9 a.m. to 5 p.m. Saturday and Sunday and 9 a.m. to 1 p.m. Monday.

"It’s the major show for the turf industry," said Cushman national sales manager Dan Hedglin, whose company plans to have between 30 and 40 of its own employees plus another 150 dealers at the event. "It gives us the opportunity to visit with the final users of our products and lets us introduce many new products in one setting.

There will also be time for business, like Monday’s (Feb. 20) GCSAA annual meeting with, among other things, see the passing of the president’s title from Lyon to Faubel.

Of course if there weren’t some time for fun, no one would show up at these conferences. So in addition to the mind-bending activities already mentioned there will also be the GCSAA Golf Championship on Feb. 19-20; a spouses/children program featuring organized activities and visits to nearby attractions; a merchandise booth where official GCSAA products will be available; and Monday night’s concluding banquet and dancing to singer-Tony Orlando.

Dr. Ken Blanchard

Dr. Gayle Carson

James Irwin

Featured speakers

Dr. Joe Griffith

Busy program prepared for spouses children

The Orlando Spouse/Children's Program has scheduled a schedule plus a new concept: Optional Activities.

The Basic Program offers minimal organized activities at a minimal cost. Optional Activities offer "pay more, get more" program for their jobs easier," he asked. The association's primary mission is to share knowledge on the maintenance of new equipment. That knowledge has taken on increased importance in recent years with the fast-paced change in golf course maintenance technology.

Gone are the days of the "shade tree mechanic" who was seen with a screwdriver and adjustable wrench to sit under a tree and tinker with a mower.

"Today's mechanic is often responsible for $500,000 to $1 million worth of equipment, consisting of a variety of brands including everything from a two-cycle weed wacker to a $50,000 gang mower."

"Jacobsen runs work-shops and Toro runs work-shops and so do the others.

"There’s no school where you can go and learn how to take care of your $500,000 worth of equipment. So it’s important to share knowledge. An association allows that. It’s working well for us for the local level," said Ryan.

"It’s like the corner garage that you were able to take your car to 20 years ago," Ryan said. "Those guys have all but disappeared as cars have gotten a lot more complicated. Now if you just want the occasional adjustment, you have to take it to a special tune-up shop.

"It’s the same way with golf course mechanics. Hydraulic equipment and mowers that cut down to the thousandth-of-an-inch were unheard of 20 years ago. Now they’re everywhere. And if you have no education on how to maintain those machines, then you need one in a hurry."

In fact, it’s the relatively inexperienced novice mechanic trying to upgrade his education who may benefit most from an association, according to Ryan.

"We’re really trying to reach out to the new guys," he said.

The Orlando Spouse/Children Program has scheduled a schedule plus a new concept: Optional Activities.

The Basic Program offers minimal organized activities at a minimal cost. Optional Activities offer "pay more, get more" program for the entire family. Some of the offerings include a continental breakfast, trips to Cypress Gardens, Sea World, shopping in Winter Park, Kennedy Space Center, champagne brunch cruise and an arts and crafts exhibit. 
Continued from page 1 second homes. But there are golf courses on the drawing board in Michigan and Vermont that have been stopped by environmental concerns.

Faubel said he sympathizes with those who sit on environmental boards, especially at the state and local levels. While their intentions are good, most are not trained environmental scientists. And what research is available to them regarding subjects like pesticide use, has usually been done for agriculture, not golf courses.

That information gap is often an obstacle for them with specific information that will allow them to make decisions based on fact rather than emotion,” said the new superintendent's association president.

Faubel uses the word “we” frequently when discussing the game’s future. The need for cooperation extends to the various associations that benefit from golf — the GCSAA, USGA, National Golf Foundation, Professional Golfers’ Association, American Society of Golf Course Architects, Golf Course Builders of America, Club Managers Association of America, National Club Association, etc.

“It’s the game of golf that’s the important thing, not protecting someone’s particular turf. In the past, there hasn’t always been total cooperation. But we have much better cooperation today than we did five or 10 years ago,” said Faubel.

“For example, say you wanted to add a new clubhouse. The bank would probably ask for an environmental audit of the whole course before approving the loan. The new building would affect the superintendent, the head pro, the club manager. So the superintendent needs to have his operation in top-notch condition or the whole business suffers.”

How did Faubel come to the profession?

“Originally I planned to go into agriculture,” remembered the Iowa State graduate who grew up working on Uncle Jess Meyer's Washington, Ill., farm. “But I got a summer job as a night water crew at Washington’s Hillcrest GC just outside of Peoria) while I was in college. That got me interested in becoming a superintendent.

Faubel enrolled in ISU’s turf management program. His one-year internship between his junior and senior years at Pond du Lac, Wisc.’s South Hills Club turned into a five-year stint during which he moved up from intern to superintendent while finishing his degree winter semesters.

“I knew I was in the right field almost right away,” said Faubel. “I went to a superintendents meeting, looked around and saw a lot of grey hair. People who stayed home from the war (World War II) took care of the courses in those days. A lot of those people were getting ready to retire by the 1960s. A young guy with a college degree in the profession was almost unheard of. I saw a tremendous opportunity here.”

After receiving his degree in 1969, Faubel accepted the head superintendent’s post at Saginaw Country Club. Little is known about the course’s architectural history other than a priest laid out and built the 110-acre facility with a team of mules just before the turn of the century. Faubel has tended the turf there the past 20 years.

“It’s a wonderful community,” he explained of his decision to stay at the central Michigan club for two decades. “I’ve been actively involved in the community, doing things like chairing the Parks Commission. The state’s nice. The golfing people are nice. It’s just a nice place to live.”

Much has changed over the past 20 years. Faubel recalls using a scoop shovel to top dress his course. New greens were built with loam dug and mixed on site. All watering was done by hand. That has all changed.

“The technology we can use now is just fabulous,” he enthused. “That technology figures to get even more sophisticated as Faubel leads the superintendents’ association into the 1990s.

“I’m very honored to think my peers have elected me to this post,” he said. “My hope is that I can move the association forward through my leadership.”

Faubel had only plaudits for his predecessor, Dennis Lyon.

“Dennis has done a marvelous job,” said Faubel. “He brought a lot of talents that were sorely needed. His experience working with government associations and his organizational skills were a great help. He sees the GCSAA...
Lyon
Continued from page 1
ence. Kan. Bids on the $4 million project were opened in December and ground broken in January. "It will carry us well into the next century. It was built with growth in mind."

"The climb in membership from 8,000 to 9,000 over the past 12 months. "It shows two things - the strength of golf in the United States and that we as an association provide a valuable service."

• Forging good relationships with the Environmental Protection Agency and federal legislators. Lyon made two trips to Washington, D.C. this year. "The EPA is comfortable coming to us to get our opinions on certain things."
• Developing a stronger, international relationship with other superintendents’ associations. Current vice president Gerald Faubel and secretary/treasurer Stephen G. Cadenelli were very well received at the recent Canadian superintendents’ annual conference. Lyon spent 10 days in Japan, meeting with 400 superintendents and laying the groundwork for many to become GCSAA members. An international roundtable discussion is scheduled (Feb. 24) for the Orlando conference and heads of the Canadian, Japanese, Australian, Swedish, British, French and German superintendents’ associations are expected to attend.

• Working closely with the GCSAA-United States Golf Association joint Research Committee, which is expected to approve funding research on the environmental impact of golf courses this year. "We need to demonstrate empirically the positive impact of golf courses and dispute the often illogical claims that golf courses are detrimental to the environment."

Since the GCSAA is primarily an educational association, it must continue its seminars and conferences that can help the superintendent to better do his job and enhance his professional status, according to Lyon.

The organization also needs to make the public better aware of the qualifications necessary to be a superintendent. One way it will do so is through a 30-minute television spot that will air on ESPN this year.

"We’re hoping this will heighten the public’s awareness of what it is we do," said Lyon. Lyon said he has enjoyed working with the board of directors and GCSAA staff and representing the association at major championships. His dual responsibilities as GCSAA president and Aurora golf chief have sometimes been stressful and left less time for his wife and four children. So while he will miss the post, he looks forward to getting even more involved with things like coaching his 11-year-old daughter’s soccer team which won its league championship this fall under Lyon’s guidance.

As for his successor, Gerald Faubel, Lyon said: "Jerry is a very intelligent, articulate individual who is committed to the organization’s goals. He’ll do an outstanding job as president."

GCSAA’s elections set
 Incoming GCSAA President Gerald L. Faubel’s fellow officers for 1990-91 will be elected during the GCSAA’s annual meeting Feb. 20 at the Orlando conference and show.


Three candidates for director will be elected for two-year terms. Nominees for director are Joseph G. Baldy of Acacia CC in Lyndhurst, Ohio; Charles A. Clark of Broadmoor GC in Colorado Springs, Colo.; Cecil C. Johnston, of Avila Golf & CC in Lutz, Fla.; Charles T. Passios, CGCS, of Hyannisport, Mass.; and Randall P. Zalik of Rolling Hills CC in McMurray, Pa.

Faubel
Continued from page 40
becoming an international organization and helped develop closer ties with superintendents in Japan, the Far East, Canada and Europe. He put the emphasis where it was needed."

For free information circle #137

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For free information circle #137
## Distinguished Service Award

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<td>Andrew Bertoni</td>
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## Old Tom Morris Award

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## Past Presidents

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Growth in golf industry breathes life into aerators

BY PETER BLAIS
The growth of golf has breathed new life into aeration companies with products designed to keep ponds clear and odor free, "Although we have tremendous experience with water treatment, we're fairly new to the golf market," said Daniel Durda, co-founder and president of Aeration Industries, Inc. "But we're approaching the golfwater market this year with an aggressive marketing and advertising program. "We've been selling aerators to golf courses for several years in response to the industry's need for a proven, effective water restoration technology. We're projecting it to be a significant portion of our domestic business in 1990. Aeration Industries, the largest manufacturer of aspirator aeration equipment in the world, markets a patented, surface-mounted aerator that injects (aspirates) air under the water's surface, creating a horizontal circulation throughout the pond. It is a relatively new alternative to vertical aerators (fountains) and chemicals, the traditional methods of treating ponds at golf courses. "We got into the golf market in 1980," said Chuck Barebo, president of Barebo, Inc. (Otterbine trademark), one of the leading manufacturers of vertical aerators. "Now it represents 30 to 35 percent of our business." The purpose of an aerator is to add oxygen and reduce the growth of algae that can cloud relatively stagnant water. In addition to being an eyesore, an algae-clogged pond often has an offensive smell. And when used for irrigation, the algae-containing water can clog filters, valves and screens, fouling sprinkler heads and choking irrigation lines. Algae-filled irrigation water can adversely affect turf growth before eventually washing back into ponds where the algae can grow again. Uncontrolled water-quality problems translate into expensive maintenance headaches. Superintendents often resort to copper sulfate to treat stagnant water. Besides the expense, the heavy metal eventually sinks to the bottom, creating a hazardous waste that may require the pond to be drained, the toxic waste collected and hauled to a special disposal facility, an expensive and time-consuming process. Dead algae also sinks to the bottom, providing a fertile environment for new algae to bloom. Manufacturers tout aerators as a natural alternative to such chemical treatment. The oxygen energizes zooplankton that feeds on the algae. The circulation created by an aerator's flow pattern breaks up stagnant water and prevents algae from growing back.

Whether aeration or circulation is more important is one of the selling points used by manufacturers of horizontal flow and vertical flow aerators. "Aeration and circulation are both vital to a pond's total water-quality management," said Durda in support of Aeration Industries International's horizontal flow aerator. "The algae already produces a lot of oxygen. Our product aerates and, equally important, circulates water. This creates an environment that promotes the growth of beneficial algae and other micro-organisms whose by-products are water, carbon dioxide and oxygen instead of toxic chemicals present in poorly circulated ponds. Lack of proper circulation encourages adverse algae growth that results in unsightly, floating mats of organisms that die, producing by-products like hydrogen sulfide 'rotten gas' and maintenance problems translate into expensive chemical treatments."...
pond aeration equipment companies

egg odor and methane gas. “Fountains have a place. They are pretty and they aerate some. But they are designed to throw water up in the air versus mixing the entire water volume from below the surface. Thus, they cannot mechanize-circulate water effectively.”

Countered Barebo: "Each has its advantages and disadvantages. Ponds of five acres or less and a depth of four to 15 feet are effective places for our floating surface aerators. "If you have a long, rectangular pond and you don’t want any type of display hardware, then a horizontal aerator might be better.”

Steve Brown, president of Airlake Aeration, Inc., sees a need for both, often in conjunction with one another. "Put a 2-horsepower fountain in a three-acre pond, and you don’t have a chance. But add another piece of equipment to get the water circulating and it will work," said Brown, who was director of golf division sales for Aeration Industries International before opening his own firm a year ago.

The rule-of-thumb for aerators is 2 h.p. per surface acre of water. A perfectly round one-acre pond may get by with a 2 h.p. machine.

An irregular-shaped, one-acre pond with many nooks and crannies may require two aeration devices, or more if it contains effluent water, an increasingly important source of golf course irrigation water. "If you use effluent water has a big nutrient load coming in. If it just sits there, it will grow the wrong types of algae. It also has an odor that can permeate into the air. A fountain wouldn’t be right in that situation," said Brown. It’s interesting that both vertical and horizontal flow type aerators emerged from technologies invented for other uses. Barebo bought his firm from an aquaculture company that marketed its vertical aerators primarily to fish growers.

"There are a lot of fountain people who are calling their products aerators. But you have to look at their primary and secondary circulation rates and their oxygen transfer rates," said Barebo.

The Pennsylvania floating surface aeration manufacturer boasts primary pumping rates of up to 3,000 gallons per minute, secondary circulation rates up to 30,000 gallons per minute, and oxygen transfer rates of 2.2 to 3.0 pounds per horsepower. Horizontal golf course aerators manufactured by Aeration Industries International are small (1 to 5 h.p.) compared to larger aeration systems (up to 100 h.p.) the Minnesota-based firm has used worldwide since the early 1970s to solve wastewater problems, increase aquaculture production and restore rivers and harbors. The golf course units are based on the same technology, although they only weigh about about 65 pounds and generally run 2-by-4 feet in size.

Horizontal aerators are not particularly attractive compared to their vertical counterparts. Both Aeration Industries International and Airlake offer decorative fiberglass covers resembling boulders to camouflagether units.

"Some golf course superintendents operate the aerators without any decorative covers," said Durda. "We offer several options for the more aesthetically concerned golf course superintendent.”

Aerator costs vary. Brown prices his horizonal unit at $2,500. Vertical models run from $1,500 to $15,000, he said. Diffused air systems, an oxygen-carrying gridwork of pipes and disks laid out on the bottom of a pond, range from $3,000 to $15,000.

On price, Durda said his company’s horizontal flow type units "are very competitive in the marketplace, options and all. But, more importantly, they eliminate golf course maintenance headaches and water-quality problems.”

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The professional coordination of greenskeepers is in its infancy. About half of all practicing superintendents have joined the newly formed Australian Golf Course Superintendents Association.

Half of all practicing superintendents have joined the newly formed Australian Golf Course Superintendents Association. It lacks an independent office or publication, but several pages of each issue of Turf Craft Australia are devoted to news of the association.

As explained by John Odell, the superintendent at Royal Sydney and president of the New South Wales GCSA, the profession is beginning to upgrade its training techniques and incorporating, on a scientific basis, the accumulated insights of the industry as developed and codified in the rest of the golf world.

Odell is one of the industry's new breed; like Garry Dempsey at New South Wales Golf Course or Martin Rose at Royal Canberra Golf Course, Odell combines extensive on-site experience with a rigorous program of formal academic training.

The result is a whole new generation of greenskeepers with the training to use sophisticated chemicals and the ability, as well, to explain the details of filtration, agronomy and biochemistry whenever the local greens committee has questions.

A good example is Dempsey's work at New South Wales GC, where a course ranked among the world's top 100 has never had pesticides applied to its fairways.

The scientific use of modern chemicals is part of a larger phenomenon that has indelibly altered the face of Australian golf. The process might be called the modernization of the game. Here is a sports culture in which the most exclusive and expensive courses charge no more than $2,000 to join. Membership at most courses can be had for a few hundred dollars — and this for golf around the year.

The clubs are simple, the amenities Spartan. These are golf clubs, not country clubs. Spartan no more

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The conflict with algal blooms starts with the damage; GA tracks and prevents it. AIRE-Oy GolFWater is simple, safe, and virtually maintenance free.

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for designers Down Under

A lot of money is going into development of the game and the changes have begun to affect the character of play and maintenance at the most staid and traditional clubs. The luxury clubhouses, the availability of motorized carts, the manicured, all-green look of these new facilities. When members at traditional venues return from their visits to the Gold Coast or to the Murray River resorts along the border of Victoria and New South Wales, the inclination is to ask why these conditions cannot be reproduced at home.

The answer, of course, is money. To emulate these standards in-house debates concern the propriety of moving along to adopt these modern elements—if not carts, then at least better grooming.

Not every innovation has caught on, however. Two courses 70 miles south of Melbourne at Cape Schanck, designed by Robert Trent Jones Jr., opened in 1987 with much fanfare. They were located on a stunning site of mountainous dunes, with the Tasman Sea on one side and Port Phillip Bay on the other. Critics say many holes are over-designed and artificial, and the course is so demanding that rounds take well over five hours — in a country where the native foursomes average just over three hours. The course virtually requires a motorized cart given the severity of the terrain.

The result is that the municipal course at Cape Schanck is underplayed and the private course subscribed for membership. The hope now is to bring in a private resort developer who would use the golf course as the local point of an exclusive corporate retreat.

Cape Schanck is an exaggerated example of what happens as Australia modernizes. The more encouraging signs are that the techniques of course maintenance have reached new heights of sophistication.

It remains to be seen whether the newest resort courses going up along the coast will continue exercising their effects on the rest of Australia, or whether the abiding force of British golf club traditions will hold their own and preserve the classical traditions of simplicity and quaintness that so distinguish golf in the (former) British empire from golf elsewhere.

Bradley S. Klein, who lives in Bloomfield, Conn., recently spent 10 weeks "Down Under."

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Dan Jones, C.C.C.S., Manager Banyan Golf Club West Palm Beach, Florida

"We've eliminated our algae problems... without the use of chemicals... and for the first time in the ten years that I've been here, our irrigation system is working the way it was designed to. In fact, we haven't had a clogged Clay valve or a blown irrigation pipe since we installed the AIRE-O2 system.

Now my ponds are clean and clear. And my maintenance crews are free to work on the golf course instead of fighting algae problems... I'm also winning lots of compliments from our members."

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As a former British penal colony first settled in 1788, the island continent of Australia has always had the fate of its sports culture shaped by foreign influences. Golf took hold in the early 19th century, but not until the visit of legendary Scottish-born architect Dr. Alister Mackenzie in 1928 did modern principles of strategic course design find a place.

Untill then, home-bred architects had fashioned rough-hewn courses following strictly penal principles, or, in many cases, no aesthetic principles at all.

Recruited by Royal Melbourne for the princely sum of S1,000, MacKenzie supplemented his fee by picking up local work for S250. He lent his acumen on a piecemeal basis to varying degrees. Though credited with New South Wales Golf Course, for instance, MacKenzie made cosmetic changes there to the design drafted by the popular Australian pro Des Soutar.

He added only slight touches to Royal Sydney and The Australian, but both courses have recently been so compromised that nothing remains of Mackenzie's work. At Kingston Heath in Melbourne's Sandbelt, he created what remains today some of the most imaginative bunkering shapes there to the design drafted by the popular Australian pro Des Soutar.

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A major resort complex that will feature six signature golf courses is being planned for an environmentally "sensitive" portion of Florida's Osceola and Polk counties.

The $1 billion project is known as Johnson Island and is located on 8,500 acres 17 miles south of Walt Disney World. In addition to the signature courses, plans call for an equity membership course, par 3 executive course, two-year accredited Golf Academy, multi-training pod facility, 1,500-room hotel and conference center, retail shopping area, marina and retirement village to be built in three phases over 15 years.

Developer Louis Fischer, chairman of Fischer Associates Inc. of South Miami and Kissimmee, hopes to have all necessary permits in hand by the end of the year and the first course in operation by early 1992.

But there are several environmental hoops through which Fischer must jump before the project becomes reality.

The Johnson Island area is home to many forms of wildlife, including two endangered species - the Southern bald eagle and the American wood stork. This has raised concerns with local officials and several environmental groups, among them the Audubon Society and Sierra Club.

"It's a beautiful piece of property. And a lot of people are saying it's one of the best proposed developments they've ever seen," said Fischer, who is hoping to allay those fears by developing just 32 percent of the total parcel. He may also sell some of the environmentally-sensitive land to other developers who would preserve it in exchange for being able to develop wetlands elsewhere as state law allows.

"It has some potential," commented Jack Shannin, development director of Osceola County. "It's the first project I've seen with that much open space. They've done a good job of looking out for the environment."

Fischer applied in December for a regional development review with the East Central Florida Regional Planning Council and the Central Florida Regional Development Council. Because of its size, the proposal is considered a Development of Regional Impact, and must be reviewed by the two councils to determine its effect on local community services.

There are also a number of local, state and federal permits needed before construction can begin. Fischer said he plans to begin the permit application process as soon as he has final approval from the counties by December.

That would allow him to begin the first phase of the project, which includes two golf courses and 500 hotel rooms. The first course should open 12 to 15 months later. Fischer foresees all six courses eventually beginning and ending next to a common clubhouse.

Australia

Continued from page 47 worldwide economic depression, it was 1931. The building of the course was left entirely to Royal Melbourne's greens superintendent, Claude Crockford; the execution of Mackenzie's plan was handed over to former Australian Open golf champion Alex Russell. Thus Crockford and Russell actually worked the land that became the two courses at Royal Melbourne. They followed MacKenzie's plan on the West Course, Russell's on the East.

Most of Australia's courses were designed by native golfers turned architects. Besides Russell and Soutar, Sydney-based pro James H. Scott was among Australia's best.

In the mid-1960s, the great Australian golfer Peter Thomson joined forces with Michael Woolveridge to create perhaps the most notable of all local design firms. Their work brought them not only many jobs in Australia but throughout Asia as well.

Aerators

Continued from page 33 three to five years." Gillen added that greenkeepers have compounded their problems with sand topdressing over the last 25 to 30 years, so that now they have to get down through those layers of the topdressing, or rebuild the green. He said that sand topdressing, if it is not high-grade sand that is similar in particle size, creates an area that inhibits water movement.

"This is why the universities are saying that unless you get in and deeply aerate you'll have to rebuild your greens or suffer with what you've got," he said. "And there's probably only 10 percent of courses that can afford to rebuild their greens."

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What’s prettier: A dump or golf course?

With premier land harder to find, some turn to landfills

BY PETER BLAIS

Richard DeYoung was looking out his office window one recent November day. Several multi-story office buildings and a number of condominium complexes stared back. Smack in the middle of all this mortar and brick was an 80-acre landfill.

“What a great place for a golf course,” said the regional landfill manager of Waste Management of Illinois. “All it would take is a little innovation.”

With undeveloped land becoming rarer and increasingly expensive, more and more forward-thinking people are beginning to see a useful and profitable future for the nation’s growing numbers of abandoned dumps.

“More and more nowadays we’re having to deal with things we’ve never had to deal with before, because premier, easy-to-build-on land is now taken by houses. What is left is what the golf course is allowed to go on. So we’re usually left with a swamp, a hole or a landfill. A golf course is used to cover up a lot of blemishes. We haven’t quite gotten into putting golf courses on toxic waste dumps, but it’s something that would be an added amenity,” said Golf Course Builders of America President Perry Dye.

Waste Management (which incidentally doesn’t own the landfill outside DeYoung’s Westchester, Ill., window) opened nine holes over a reclaimed landfill last year in Batavia, Ill., about 30 miles west of Chicago. A second nine is scheduled to open next year and plans call for the course to expand to 27 holes in the not-too-distant future.

The company is negotiating a contract with the owners of a Techny, Ill., landfill where Waste Management hopes to build a nine-hole course after the dump closes in the spring of 1992.

Building a golf course over a landfill has several advantages. First it helps return land to a profitable use.

“The waste industry has been slapped around for taking valuable property out of use and then abandoning it. Building a golf course can change that,” said DeYoung.

A second advantage is the chance to turn an actual financial profit on land nobody wants. DeYoung figures it will take five years for the proposed Techny course to make money. Whether it builds a course or not, Waste Management is required to maintain the closed landfill for 30 years. What this boils down to for Waste Management is spending money for 30 years or making money after five.

“And we’ll be giving something back to the community. People liv-

ing near a landfill usually complain it drives property values down. We understand that. A new golf course would help property values appreciate,” said DeYoung.

A third advantage is that landfill land is relatively cheap compared to prime, undeveloped land and requires little if any cleaning. The 160 acres of reclaimed municipal landfill that became California’s Santa Clara Golf and Tennis Club in 1986 was free, according to project manager Damian Pascuzzo, a senior associate with the Robert Muir Graves Golf Course Architects.

“You can’t buy one acre of land out here today for less than $100,000,” Pascuzzo said. But there are disadvantages to building over a dump site. One of the biggest is figuring out what to do with the methane gas formed by decaying, subsoil garbage. Methane is lighter than air, so it can rise to the surface, where it will kill any grass. It is also explosive if exposed to heat.

USGA Green Section National Director William Bengeyfield tells a story of his days as director of grounds and maintenance at Industry Hills Golf Club, which was built over a California landfill in the late 1970s.

The grass on the 17th green of the Eisenhower course was growing poorly, so one of Bengeyfield's workers decided to dig down a few inches with a post-hole digger to see if he could discover the problem. After digging the hole, the worker lit a match to look inside.

“Continued on page 51
Golf course architect Robert Muir Graves designed this course on 160 acres of reclaimed municipal landfill in Santa Clara, Calif. The land was free. It is now the Santa Clara Golf and Tennis Club.

Landfill courses

Continued from page 50

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and cost as much as $1 million on an 18-hole course," said DeYoung. Then there is the matter of settlement. As the garbage decays and shifts under the ground, so does the land lying above it, Bengeyfield said Industry Hills had to replace a handful of greens within the first three years.

"You have to think of things like 'What are we going to do if this part of the course suddenly sinks five feet?' We've been lucky, though. We expected more problems than we've had at Batavia," said DeYoung.

At Santa Clara, flexible High-Density Polyethylene pipe was laid over most of the course to avoid breakage when parts of the course settled.

"It even hugged the mounds we made for trees perfectly," noted Pascuzzo. "And it's priced fairly competitively with regular PVC pipe. We were able to use it down to two inches in diameter."

There are also state laws stipulating the amount of soil cover over certain portions of a landfill. The cover is necessary to maintain the integrity of the clay cap placed over most closed landfills. Irrigation pipe can't be laid unless more cover is added, an additional expense.

Half of the Santa Clara course was placed over a new part of the landfill and half over an older part.

Methane collection systems are standard equipment now in landfill courses. As elaborate as a sprinkler system, they can cost as much as $1 million on an 18-hole course.

The new part was mounded and drained well, explained Pascuzzo. Not so the older part where the original fill varied from one to six feet in depth. Contractors used heavy equipment to actually reconfigure the garbage into slopes and valleys before recovering it with a new clay cap.

The city appealed to area contractors to bring in their extra fill to bring the topsoil cover up to code.

"The city just had to pay to truck it in. We were able to get it for about $3 a yard compared to the $10 to $15 it would normally cost," said Pascuzzo.

"And it's tough to have water holes over a landfill," added DeYoung. "At Batavia we were able to put some water on land adjacent to the landfill. At Techny that would be difficult. So there will be more sand traps."

But despite the difficulties, experts look for more courses to be built over landfills as open land becomes more scarce and more landfills are forced to close.

"It will definitely happen more often," said DeYoung. "We all want to find a use for that property."
Maintaining Tour's most difficult hole

BY FRANK POLLARD

Spectacularly molded along the cliffs of the Pacific Ocean, Pebble Beach is a master challenge not only to the golfer but its groundskeepers as well.

The annual listing, "The Toughest Holes on the PGA Tour," based upon hole-by-hole shot-making statistics kept on each venue visited during the PGA schedule takes annual note that Pebble Beach tests, and even intimidates, the golfer.

The latest report lists Pebble Beach's 8th hole as the most difficult on the Tour and the 9th as the fourth toughest. Also making the top 100 are the 10th, 12th and 14th holes on the links course where craggy cliffsides border fairways.

It's been often stated that the 8th hole at Pebble Beach begins a stretch of three consecutive par-fours (holes 8, 9 and 10) unmatched anywhere for their pure difficulty — and magnificence.

While golfers test their own mettle playing Pebble Beach, Larry Norman must daily face the challenge of keeping the course in top shape.

And Norman, the golf course superintendent, makes it clear that "maintenance practices are not geared to make holes easier or harder here at Pebble. We would draw the rough long, speed up the greens, narrow the fairways or make the greens excessively hard and fast. But that is not our intent and we would never do that.

"Our practices are simply to give the players — pros and amateurs alike — a very fair playing surface."

He adds: "The golf course speaks for itself. All the credit for those tough holes has to go to the course designers who maintained the natural setting, built small greens well protected by bunkers and mounds, and rewarded not only distance but extreme accuracy and short game skill."

What's interesting is that with the whims of the weather on the Monterey Peninsula, particularly in the winter months (rain, high winds and occasional sleet and snow) when the AT&T Pebble Beach Pro-Am is held, one might believe that playing conditions were a major factor in the toughness of the holes.

Not so. When the latest statistics were announced, the weather, according to the record, was "near perfect every day."

Says Norman: "This is a coastal bluff golf course and the winds do come up and are a factor in play, making Pebble Beach play up to its designed potential. The PGA Tour has its specifications and we do our best to meet those specifications. We set the course up agronomically the way they want it and maintained the natural setting, built small greens and fairways throughout the course.

"In fact, we keep the course in the best condition we can on a day-to-day basis, which is very nearly up to Tour standards."

Surprisingly, Pebble Beach is still a public golf course and people from all over the world come to walk in the footsteps of the greats past and present. And what more fun than to tackle some of the toughest holes in golf and put a par on the scorecard where even some of the pros couldn't.

Hole number 8

The par-4 8th is 431 yards with a blind tee shot to a flat hilltop plateau with a cliff dropping off abruptly along the right side of the fairway. A good drive (one might want to use a 2-iron or 4-wood if they are long hitters) places the golfer in a position to go for the green from the top of a cliff plunging some 150 feet into an oceanic chasm.

Jack Nicklaus calls it the greatest second shot in golf with a long to medium iron across the awesome water-filled chasm to a tiny green edging it and guarded by five large bunkers. The green is perhaps the fastest on the course and is inclined toward the sea. In strong winds coming off the sea, it is very nearly impossible to get on this green in two.

Hole number 9

This hole has been called by many Tour professionals the toughest par-4 in golf. At 464 yards, the downhill fairway slopes in its length to the right toward the sea, with 30-foot cliffs over which a pushed tee shot will put the golfer on the beach or in the water, depending on the tide. Bunkers guard the high side of the fairway, leaving a tight landing area for the drive. A long, very difficult second shot must thread its way between a barranca with a formidable bunker and the cliff to a small green with cliffs adjacent to and behind it. Shots going through the green can easily make their way to the beach below.

Even while facing such stiff challenges, the golfer has to face the distraction of the magnificent views.

It's reported that a visiting Scottish golfer of some on-course prowess once stated he could not play Pebble Beach. "It's too damned beautiful," he said. "I can't keep my mind on the game."

Frank Pollard is a freelance writer based in Hollister, Calif.

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Landmark developing first course in northern U.S.

Landmark Land Co. is getting involved in its first northern U.S. course at Petoskey, Mich.'s Three Fires resort complex, according to the Detroit News.

Three Fires is an 1,100-acre property, including 5 1/2 miles along Lake Michigan, being developed by Southfield developers Larry LoPink and Daniel Holloway.

Included in the project is a 27-hole golf course scheduled to open in the spring of 1992.

According to the Detroit News, it is believed that Landmark Vice President and Charlevoix, Mich. native Chuck Fairbanks was influential in his company's decision to venture out of the warmer climes, where it has developed such well-known facilities as PGA West and LaQuinta in Palm Springs, Calif., Oak Tree in Edmond, Okla., and Palm Beach Polo and Country Club in Florida.

Before getting into the real estate development business, Fairbanks was head coach of the National Football League New England Patriots, the defunct United States Football League's New Jersey Generals and the University of Colorado.

Michigan's golf boom also had a lot to do with the Landmark decision.

The state has more public courses than any state in the country and is among the leaders in number of players, frequency of play and number of courses.

Westchester in LA closing holes for changes

Parts of the Westchester Golf Course adjacent to Los Angeles International Airport will be closed for portions of the next two years while renovations are being done.

A fully automated sprinkler system, modern clubhouse and redesigning of several holes means nine of the 18 holes will close for up to two years and the driving range for two months.

The $3.5-million facelift will eventually result in longer holes on the executive course, a larger pro shop and better lighting for nighttime play.

Washington

Continued from page 19

ion in the nearby Pasayten Wilderness, completion and approval of ski hill and resort village master plans, along with state and county approvals.

Since the golf course site is on private land, the court battles thus far may have impact only if the developers tie the golf to the skiing, or if there is land swap between the developer and the Forest Service.

There is a small National Forest Campground next to the course site which the developers have considered as an entry to the course. A campground could be considered wherein private land owned by Early Winter would be traded for the campground. Federal lands equal Supreme Court requirements.

On its own, the golf course still has to be led through a maze of permitting by federal, state and local agencies before construction can begin.

MRRI's Devin is confident Graves is the architect to get the job done. Graves is familiar with the Northwest and has produced The Resort at Port Ludlow (Wash.) and Black Butte Ranch (Oregon) courses, both perennial "Top 100" courses in golf magazine rankings. He last year completed a new course, Meadowood, for Spokane, Washington.

Graves has a reputation for being a particularly conscientious environmental planner when it comes to course design and construction.

The developers of Early Winters are optimistic that Graves will find the answers to the environmental problems.

Through what might have been a public relations fiasco, the golf aspect of the resort was not publicized until a year or so ago. The project was referred to locally and in the Seattle and Spokane media as "The Ski Hill."

With the increased prominence of golf as a major recreation, MRI began to give it more emphasis. Many opponents of the ski hill and base village are hearing for the first time that golf is in the future, too, and they don't like it.

"It's had enough to have an 18-hole course up there," said one, "but putting in 36 holes is a slap in the face."

The major concern seems to be for the aquifer—the quality and quantity of water.

"I'm delighted," said another. "I hope they give the locals a special deal to join. Otherwise, we won't be able to afford it."

Officially, Devin is hopeful that construction of the first 18-hole course will begin late this summer.

He's being noncommittal, however. Nobody knows better than he that any timetable will be determined by the level of opposition.

Bob Spiwak is a freelance writer and photographer who lives in Mazama, Wash.

Pressure Island eyed for championship course

Pressure Island located adjacent to the eastern Texas city of Port Arthur would be a good location for a championship golf course, according to Jim Hardy of Golf Services Group of Houston.

Hardy made his suggestion at a November joint meeting of the City Council and island commission. The two groups hired Golf Services to do a feasibility study on the possibility of building a golf course to stimulate the island's economy.

"High-quality golf is the current, primary, large-scale real estate and economic development tool employed throughout the United States," Hardy was quoted in the Beaumont Enterprise.

Hardy recommended building a championship, daily-fee course, something he said is unavailable in the Port Arthur-Beaumont area.

An eight-member committee of councilors and island commissioners was appointed to further study the proposal.
On the Green

Continued from page 70

intentions and kept up on the latest research in the field.

He double-verticuts every three weeks, then applies about one-eighth a yard of sand per thousand feet of green. The sand is the same as what was used to build the greens. He cuts at 5/32 inch, using Toro groomers. To feed the healthy turf, 1/10th pound of potassium in amounts equal to that gation is gen content, discouraging the growth of poa. Greens are aerated twice a year. In September a hollow-tined aerator is used, and the cores are then worked back into the turf. In the spring, when play is heavier, the grounds crew punchs the putting surface with quarter-inch solid tines. Maximum irrigation is one inch per week on the sand-based greens.

Becker is convinced that "spoon feeding" of nitrogen is a vital combination of controlling bentgrass growth and, with lower nitrogen content, discouraging the growth of poa. Applying potassium in amounts equal to that of nitrogen gives the turf rigidity and improved resistance to disease. This again minimizes the opportunities for invasion of poa.

Becker said, "The person who developed the spoon-feeding concept should get a medal!"

Daily, the superintendent checks for scalping of repair or hole-change plugs. If one is scalped, it is replaced with a healthy one. Where undulations have been scalped — a rare occurrence because of the top-dressing program — they are top-dressed and watched carefully.

"Using the groomers allows the greens to be cut at 5/32 instead of one-eighth and we get the same amount — about 8.5 to 9 on the stethometer," said Becker. He is happy with this, considering twice-a-year aeration that keeps the greens "pretty soft."

To prevent outer-pass tracking with the riding mowers, which can wear down turf and leave a vulnerable area, the outside cut is moved in six to eight inches twice a week.

Any poa that does appear is immediately removed with cup cutters or a knife, then replaced with Penncross plugs. So far, Becker has not used any chemicals for poa prevention on the greens, although he uses Scott's TGR on the fringes and tee boxes, which are Bristol vieta merit Kentucky bluegrass.

The Victa/fescue fairways are constantly moved in six to eight inches twice a week.

Bob Spitzak is a freelance writer and photographer who lives in Mazama, Wash.

presents a good putting surface pays off in the care and dedication they give their greens, he said.

Becker said he has seen poa invade courses. Some in the area are now almost totally comprised of this grass in the greens. He has seen pure bentgrass greens go to half poa in less than three years.

Winter damage from desiccation, snow mold, ice and just plain cold temperatures will likely produce some turf thinning or kill, he noted.

"If you don't re-sod or seed with bentgrass, you can be guaranteed that the poa will move right in," he said.

FAA rule pushes course away from airport

Developers of an 18-hole golf course at Yakima (Wash.) airport probably won't be able to build on their proposed site, but may be able to do so on a nearby one.

The airport board told Spokane developer Dan Clark, president of Pacific International Corp., in late December that the proposed site south of the main east-west runway was too close to the airport.

The Federal Aviation Administration requires that golf course boundaries at airports be a minimum of 1,000 feet from the center of runways. That stipulation left just 30 acres available for development. Though an exception is possible, developers were told it is unlikely.

However, the board encouraged Clark to consider a 130-acre site site west of the runways that the airport now leases to a rancher.

Yakima currently has just one nine-hole course, although it could support two 18-hole municipal courses, according to National Golf Foundation standards.

Clark hopes to build an 18-hole municipal course with clubhouse and pro shop. The total price tag should be between $2 million and $3 million.

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Watch for the results of the survey in an upcoming issue. Thank you for your assistance.

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25. How many different courses have you worked at as head or assistant superintendent?
26. Do you plan to be at this course two years from now
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   b. professional advancement
   c. financial reasons
   d. other (please specify)
27. How would you rate your satisfaction with your job. (Circle one):
   a. very satisfied
   b. satisfied
   c. dissatisfied
28. Would you recommend this career to your son or daughter.
   Yes  No
29. What is your age
30. Gender
   Male  Female
31. Are you married...
   Yes  No
32. Have you ever been divorced.
   Yes  No
33. How close do you live to your course
34. The degrees you have earned (Circle those that apply)
   a. high school diploma
   b. associate degree
   c. bachelor degree (specify)
   d. masters degree (specify)
   e. other (specify)
35. Total annual maintenance budget (circle one):
   a. under $50,000
   b. $50,000-$99,999
   c. $100,000-$249,999
   d. $250,000-$499,999
   e. $500,000-$749,999
   f. $750,000-$1,000,000
   g. over $1,000,000
36. Annual amount spent on equipment maintenance and repair
37. Annual amount spent on irrigation maintenance and repair
38. Annual amount spent on pesticides and fertilizers
39. Total capital expenditure budget (circle one):
   a. under $100,000
   b. $100,000-$249,999
   c. $250,000-$499,999
   d. over $500,000
40. Do you tend to buy equipment from one company. Yes  No
41. What is the most enjoyable part of your job
42. What is the least enjoyable part of your job
43. What is the biggest challenge facing your profession in the coming decade
44. In what ways do you see your job changing over the next decade

But, of course, no matter what fertilizer you use, you have to start with the best seed. Penncross, Oregon Blue Tag Certified Seed, is the standard of the industry. For thirty-five years it's proven itself through heat, drought, snow and flood as the premium surface for greens, tees and fairways.

Your Scott Tech Rep— a trained agronomist— can help you design a seeding and fertility program to fit your exact floor plan and your budget. Which makes it seem silly to consider anything else. Because the way we see it, designing a golf course and skimping on the turf is like designing a swimming pool and skimping on the water.

Commentary
Continued from page 10

miniums; in other words, wetlands. Once the Corps of Engineers outlined the protected wetland areas, the design concept for Oak Knoll was set into motion. The design objective was to use the wetlands to create a playable, yet challenging course, without destroying the delicate wetland environment.

The first step was to relocate wetlands away from the target landing areas in the fairways. This helped speed play because errant tee and approach shots were not landing in low-lying marshy and weedy areas. This concept also helped protect the environment because golfers hitting the errant shots were not tromping through the sensitive environment of a wetland looking for their golf balls.

In addition to moving the wetland areas, ponds were built between the wetlands and fairways to act as a buffer zone. This water buffer offered additional wetland protection and improved overall water drainage on the course.

Around greens and tees, wetlands were established for definition and beauty, but wherever possible they were protected by "building" the hazard out of play except for the most errant shot.

An example At Oak Knoll, the fairways and greens on the 1st and 9th holes and the forward tees on the 9th were built by filling in the low-lying wetland areas. Because total wetland area cannot be reduced, a new wetland environment was created to surround the 8th green. Also, a pond was built along the 1st fairway and green.

The 8th hole at Oak Knoll is a short par 3 requiring a tee shot over the new wetland area to a green visually surrounded by wetland. The beauty is that the wetland adds to the hole's character and definition and, at the same time, is protected because it is usually out of play.

For the approach to the green on the 1st hole, the golfer must factor in the pond next to the fairway. The pond buffer protects the wetland area and helps create a challenging par 4.

Today and in the future, wetlands will play a key role in not only golf course development, but in the balance between man and nature. The industry should look at wetlands as part of the environment that needs to be protected — and a natural feature to be used in golf course design.

Q: WHAT DO YOU GET WHEN YOU COMBINE A PRUNER, TRimmer/BRushCUTTER, EDGER AND BRANCH CLIPPER?

A: THE REDMAX RECIPROCATOR!

RedMax has designed, patented and manufactured the most revolutionary multi-purpose trimming unit in the industry—The Reciprocator.

THE RECIPROCATOR ENHANCES SAFE OPERATION.

It features two 20-tooth, reciprocating blades that dramatically reduce the danger of debris becoming flying projectiles and prevent the kickback that is normally caused when a blade strikes a fixed object. Trimming sand traps, edging near parking lots or around flower beds, and pruning trees are accomplished more quickly, safely and precisely with The Reciprocator.

THE RECIPROCATOR IS VERSATILE.

It can be used as a trimmer/brushcutter, edger, branch clipper and pruner. What's more, its blades can be submerged to trim underwater. And like all RedMax products, The Reciprocator features the quality engineering of Komatsu Zenoah—a leader in technology for over 50 years.

Let the RedMax tradition of quality work for you in The Reciprocator, the new EBA430 and EBA440 autostart backpack power blowers, and the complete line of trimmer/brushcutters, hedge trimmers and chain saws. RedMax is at the leading edge of technology. And the future of landscaping is here in The Reciprocator.

Don't be left in the past. Contact RedMax today for your free demonstration and test The Reciprocator for yourself.

THE RECIPROCATOR SAVES TIME.

As shown in this sand trap application, the steel blades remain safer during use because they DO NOT ROTATE 360°. The Reciprocator's blades move back and forth in a 2° to 3-inch range of motion.

Don't miss the same reciprocating innovation with our new Reciprocating Edger. Visit us at Booth #3603-3604.

RedMax
We've got the power.

As shown in this sand trap application, the steel blades remain safer during use because they DO NOT ROTATE 360°. The Reciprocator's blades move back and forth in a 2° to 3-inch range of motion.

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For free information circle #157

When you consider the staggering amount of wetland acreage that has been destroyed over the years it is little wonder wetlands and the wetland environment are now protected under the Clean Water Act of 1977.
Klauk

Continued from page 13

personnel can develop their full potential. Klauk's schedule is demanding in a way a 6-month-old baby is demanding at feeding time. TPC Sawgrass gobbles up 12 hours a day, six days a week during most of the year. That almost doubles to 120 hours a week just prior to and during The Players Championship held annually in March.

"The job is a lot more demanding on your time than I ever would have thought. But I enjoy it very much," said Klauk, who entered the field 18 years ago.

Klauk, 40, was a scratch golfer in high school. He went to the University of Florida, though he never played on the golf team.

"That was back when the university was national champion. I might have been able to play at other schools, but not there," he said.

Still, Klauk knew his career would be tied to golf. He had no desire to be a pro, so he turned his attention toward becoming a superintendent, an occupation that was gaining in popularity and prestige in the early 1970s, he said.

He enrolled in the College of Agriculture, graduating in 1972 with a bachelor's degree in ornamental horticulture and a specialty in turfgrass management.

After graduation, Klauk remained in the Sunshine State, spending two years as superintendent at John's Island Club before moving on for a 1½-year stint at Pine Tree Golf Club in Boynton Beach. The next stop was TPC at Eagle Trace for three years before settling in at Sawgrass in 1987.

Klauk has helped host six PGA Tour events since joining the Tour staff.

"His knowledge of the game has helped him to continually modify and improve conditions of the (Sawgrass) course," said Cal Roth, director of golf course maintenance operations for the TPC.

Sawgrass is a Pete Dye-designed course. There are no fairway bunkers, but many sand and grass bunkers around the greens.

"They require a tremendous amount of hand labor," Klauk explained. "We have 14 Flymos (a floating, air-cushioned mower) for the bunker faces.

"They (bunkers) are nearly vertical in na-
on Ciba-Geigy's Banner

The Environmental Protection Agency has approved several label amendments for Ciba-Geigy's Banner fungicide on turf. Banner now can be used to control gray leaf spot on St. Augustinegrass and gray and pink snow mold on all labeled grasses. Several usage recommendations have been modified.

"These label amendments are encouraging, and we will continue research on these difficult-to-control diseases," said Dr. Doug Houseworth, turf and ornamental products manager for technical support.

Banner's watering-in statement has been amended to address recommendations on a case-by-case basis.

In Florida, Banner now can be used for disease control on all Bermudagrass except on greens when temperatures exceed 90 degrees Fahrenheit.

EPA approves label changes on Ciba-Geigy's Banner

Applewood Seed enlarging dealer and grower network

Founder and president Gene Milstein said Applewood Seed Co. is setting up a larger network of growers and distributors to make wildflower sod available on a more regional basis.

After years of research, Applewood introduced the wildflower sod in 1987 as a means to instantly cover ground with perennial wildflowers. The sod is now produced nationally by licensed growers.

Meanwhile, the Arvada, Colo., company is continuing to conduct research on its difficult-to-control diseases," said Dr. Doug Houseworth, turf and ornamental products manager for technical support.

Banner's watering-in statement has been amended to address recommendations on a case-by-case basis.

In Florida, Banner now can be used for disease control on all Bermudagrass except on greens when temperatures exceed 90 degrees Fahrenheit.

Controlling erosion is an essential element in golf course operations. Erosion left unchecked while construction is in progress will cause extensive rework and delays.

NORTH AMERICAN GREEN erosion control revegetation blankets add a new dimension of confidence in seeding activities. Constructed with netting containing Ultraviolet enhancers, NORTH AMERICAN GREEN DS150 is ideal for professional turf installations. DS150 degrades in about 45 days. DS150 is one in a series of products to control erosion and to establish vegetation. With their unique design, NORTH AMERICAN GREEN blankets stay in place controlling erosion where other methods fail.

For more information contact your NORTH AMERICAN GREEN distributor.

Environmental monitoring equipment used to be complex and not very accurate.

Like the ancient pillars of early man, disease prediction can be mind boggling. EnviroCaster changes history and makes turf disease easier to predict.

EnviroCaster provides the information you need to make environmentally safe management decisions. Even when you can't be there, EnviroCaster is working 24 hours a day monitoring the conditions that lead to turf damaging disease. The computerized weather-proof field unit is simple to operate and allows permanent record keeping with just the touch of a button.

EnviroCaster

For complete information on how EnviroCaster can serve you, contact NeoGen today.

Call (517) 372-9200.

Lesco donates to research effort

Lesco, Inc. has presented a check to the Musser International Turfgrass Foundation from the proceeds of a Lesco promotion. Through Turf-Seed Inc.'s Blue Tag Promotion Program, Lesco redeemed 50 cents on each tag redeemed from Turf-Seed's Oregon Certified Turfgrass Varieties. Musser is a non-profit organization dedicated to supporting education and research in turfgrass development and management. It funds research on further development of turfgrass research and education by establishing fellowships for outstanding turfgrass science graduate students working toward their doctorate degrees.
Prefabricated bridges displayed

DeBourgh Manufacturing, Town & Country Bridges is offering a new 12-page catalog of pre-engineered/pre-fabricated bridges. The catalog shows numerous installations including resorts, golf courses, pedestrian highway overpasses and underpasses, parks and walking trails. Complete specifications are provided.

The bridges are constructed of self-weight bearing steel, which is virtually maintenance free. Bridges come in spans of 10- to 200-foot widths of four to 12 feet and standard concentrated loading up to 10,000 pounds. They are delivered pre-assembled and can be set in place within three hours.

For a free catalog contact DeBourgh Manufacturing Co., Town & Country Bridges, 9300 James Ave., South, Minneapolis, Minn. 55431 or phone 1-800-328-8829. Circle No 252

Maccaferri details various structures

Maccaferri Gabions Inc. is making two free brochures available that may interest golf course architects and superintendents.

The first is a 27-page brochure on culverts illustrating the use of gabions, wire-mesh baskets and filled with rock for culvert headwalls and small dams. All of these structures could be relevant to golf course developers and maintenance personnel.

The brochures are available by writing Maccaferri Gabions, Inc., 403 Governor Lane Blvd., Williamsport, Md. 21795 or calling 301-223-6910. Circle No 254

JOIN THE TURF CLUB

Membership has its advantages. Kubota offers the most reliable mowing and verticutting unit on earth—the Veri-Reel.

Built for total turf maintenance whether you have golf courses, sports fields, sod farms or commercial mowing applications, the Veri-Reel provides verticutting and mowing in one proven unit. Verticut 18 holes in less than a day. Outcuts triplex mowers. Easy mowing/verticutting head changeover. Power pack mounted conveniently on tractor’s three-point hitch. Direct drive hydraulics for consistent cutting speed.

How your tractor performs can have a significant impact on the efficiency of your operations. Kubota excels with direct-injection diesel engines in both the M400SNU Turf Special and L1250F Turf Special for greater power, performance and economy.

The advantages of Turf Club membership are numerous. To find out more, write Kubota Tractor Corp., P.O. Box 7020-T, Compton, CA 90224-7020.

For free information circle #161
Ransomes mower just for fairways

Ransomes Inc. has introduced a new state-of-the-art mower specifically designed for fairway mowing.

The Fairway 5000 provides the fine cutting of a greens mower, but has greater speed (six mph) and wider cutting capability (106 inches) than a greens mower or triplex.

Several special features for operator comfort have been added including high-back suspension seat with arm rests, power steering, tilt steering wheel, readable gauges and all-hydraulic design for raising and lowering cutting units.

Automatic three-wheel drive and wide turf-tread tires contribute to the Fairway 5000's excellent traction.

Balanced weight distribution and the automatic differential lock feature (patent pending) make the machine an excellent hill climber, Ransomes says.

In addition to fairway mowing, the Fairway 5000 can be used to narrow strip tees and landing areas or mow collars around greens.

Ransomes is offering optional quick-change Verticut heads that are great for grooming and thatch control.

Power for the Fairway 5000 is provided by a 23 h.p. liquid-cooled diesel engine for performance and economy.

For further information contact Maria Large, Ransomes Inc., Johnson Creek, Wisconsin 53038 or call 414-699-2000. Circle No. 306.

American Irrigation Repair & Supply has developed a new two-part universal sprinkler housing that co-owners Harlan Bimat and Dave Tanner feel will revolutionize the sprinkler industry.

The Eagle Universal Housing is currently pending patent registration in the United States.

This two-part housing (consisting of a base and bell) can be used with any two-, four- or eight-hole sealamatic (SAM) bearing guide, Rain Bird sprinkler as well as some Weathermatic sprinkler heads. Basically, one size fits all.

The unique feature is that the housing allows for servicing the sprinkler by detaching the bell and leaving the base and sprinkler in the ground.

The bell can be removed by loosening a few screws.

The type of sprinkler can also be changed while using the same housing.

"The problem in the past was that you had many different types of sprinklers and each time you had to repair or replace one you had to match the correct bearing guide to the corresponding housing," Tanner said.

"With our Eagle, you only need one housing."

Developed for use with the Eagle are a soft-coated lid for sports field applications and a custom check valve.

The lid features a memory that, if hit by a piece of equipment, allows the lid to return to its original shape without breaking or leaving sharp edges.

The custom check valve stops low-end drainage and prevents low-pressure flooding.

Housing, lid and check valve are now in production.

More information is available by calling (415) 659-8558. Circle No. 311.

Irrometer Co., Inc. has introduced a new soil moisture control system for automatic irrigation systems.

The Watermark Four Zone Moisture Control panel interfaces with any standard 24 VAC irrigation controller.

The new system allows an irrigator to divide the valves on a controller into as many as four zones representing various irrigation needs.

Each zone then has its own moisture sensing station that in turn controls the valves which irrigate that "irrigation need zone."

Benefits include reductions in water, labor, maintenance, energy and fertilizers lost to excessive irrigation along with healthier turf and plants.

For more information call 714-689-1701. Circle No. 328.
Solatrol’s light-energized irrigation system installed

The Chula Vista Golf Course in Bonita, Calif., recently became the first course to install a light-energized irrigation management computer.

Chula Vista, operated by American Golf Corporation, installed Solatrol Inc.’s LEIT 8000 water management system on one of its greens to study future applications for entire courses.

The computer’s enormous capacity lets groundskeepers control watering schedules with greater precision than ever before because they can automatically adjust for type of soil, terrain and time of year.

Because it is energized totally by light, the LEIT 8000 also eliminates the need for batteries, external solar panels and AC power.

A few hours of ordinary daylight (even subdued light) is enough to operate the system day and night for over 1,400 on and off operations, more than most irrigation systems perform in a whole month.

For more information interested people may contact Solatrol, Inc., 11055 Roselle St., San Diego, Calif. 92121 or call 619-452-4524.

Lesco introduces subsurface drainage strip for trenches

Lesco, Inc. has developed a new, economical subsurface drainage system.

The Turf Strip Drain is installed in narrow, two-inch wide trenches deep enough to not be touched by aeration equipment.

It intercepts water flowing through the root zone, shallow ground water and surface runoff and directs it to a storm water outlet.

Normally installed in a grid pattern to take advantage of ground slopes, it provides up to 35 percent more water movement than perforated pipe.

The Turf Strip Drain is composed of a high-density polyethylene core covered by a tough, non-woven polypropylene needle-punched geotextile fabric. It is one inch thick and is shipped in 100-foot rolls.

It is resistant to fungus growth and inert to common acids found in soil.

A trencher is the only specialized equipment needed to install the Lesco product.

The only other tools required are a utility knife, duct tape and a shovel. It is simpler to install and greatly reduces soil disturbance and displacement compared to conventional drain pipe.

For more information contact Bob Hobar at 216-333-9250.

Hunter markets new arc sprinkler

Hunter Industries is making available the I-40-ADS, a new adjustable arc sprinkler that can be set anywhere between 40 and 360 degrees with a simple adjustment with the water on or off.

The sprinkler is also available as model I-40-36S for fixed, full-circle coverage.

Both models are supplied with five interchangeable nozzles to vary the radius and discharge rate.

The radius may be varied from 45 to 67 feet and the discharge rate from 7 GPM to 25.3 GPM.

The new sprinklers offer several advantages including safety-cushioned rubber covers and stainless steel risers.

Vandal-resistant features include a small 1-5/8-inch exposed surface diameter and heavy-duty retraction spring.

For more information, people may contact Hunter Industries, 1940 Diamond St., San Marcos, Calif., 92069 or call 619-744-5240.

Circle No. 319.

FORTHOSE WITH THE KNOWLEDGE TO CONTROL TURF DISEASES, A FUNGICIDE THAT FINALLY LETS YOU USE IT.

Instead of one blanket rate, Banner® gives you the freedom to prescribe just the right treatment for up to twelve specific turfgrass diseases.

At rates that, in many cases, are lower than what you may be using now.

Which means Banner not only lets you use the knowledge you have, but lets you use it to increase efficiency and save money.

And isn't that, ultimately, the greatest sign of smart management?
Classen's Turf Slicer overseeds and slices at the same time

Classen Mfg. has introduced the Turf Slicer, a new way to overseed and/or slice in one operation. Turf Slicer has a front-mounted seed box that operates by friction from drive wheels. Rotating slicer blades slice the sod to a pre-determined depth up to 1-1/2 inches. Depth is adjustable with finger-tip screws. The self-propelled unit moves at 2.37 mph and covers 21,000 square feet per hour in a 21-inch swath.

For more information contact Classen Mfg., Inc., 1407 Pine Industrial Rd., Norfolk, Neb. 68101 or call 402-371-2294. Circle No. 329.

Two pull-behind aerators for Feldmann

Feldmann Engineering & Manufacturing Co., Inc. has introduced two new pull behind core plug aeration tools that cover a larger area quickly. The Feldmann 2340 aerates a 32-inch swath and the 2340-48 a 48-inch one, penetrating up to 2-1/2 inches when towed behind a garden tractor or riding lawn mower. Lift-up handles pop the 10-inch pneumatic tires into place for easy transport.

The load tray can be weighted an 82-inch swath with model 2340 and a 132-inch swath with model 2340-48.

For additional information contact Feldmann Engineering & Manufacturing Co., Inc., P.O. Box 153, Sheboygan Falls, Wisc. 53085. Circle No. 344.
New products introduced by Rain Bird

Rain Bird has introduced the golf industry's first computerized hydraulic irrigation control system. The new device combines the advanced features of the MAXI System IV computer control system with those of a stainless steel field satellite and a complete family of hydraulic valve-in-head rotors.

The MAXI System IV offers Flo-Manager, an energy and time saving feature. It also provides “Cycle and Soak” which yields extensive water savings by automatically preventing the repetitive dripping, pooling and run-off that occur when water is applied faster than it can be absorbed by the soil.

The system can also provide ET-sensitive scheduling and communicate directly with an optional on-site weather station.

Tied to the computer system is a complete family of hydraulic valve-in-head rotors that operate independently and insure individual head control for precise watering.

Rain Bird has also added several new rotors.

The 47DS, 51 DS, 95DS and 91DS Stomantic Rotors (SAM) are housed in high-strength, plastic cases with a stabilizing flange all designed to withstand the rigors of overhead golf maintenance equipment and golf carts.

They are engineered to stand up to the most demanding water quality conditions and are available in full-circle and part-circle models.

The 47DL and 51 DL valve-in-head, low-pressure electric rotors are designed to provide substantial energy savings by operating at a pressure setting of just 60 psi. The diaphragm valve-in-head feature permits independent operation of rotors throughout the course and has an individual head control for precise watering.

For more information call Peter B. Johnson at 818-963-4831 or write Rain Bird Sales, Inc., Golf Division, 145 N. Grand Ave., Glendora, Calif. 91740. Circle No. 340.

Injectable wetting agent available

Aquatrols is introducing a new soil-wetting agent formulation, AquaGro injectable, created specifically for injecting into golf and landscape irrigation systems.

Injectable is a low-viscosity formulation containing 33 percent AquaGro soil-wetting agent. Available in 55-gallon drums, it can be injected into irrigation systems using any commercially available irrigation injecting pump.

Like the other AquaGro formulations, AquaGro Injectable will reduce water run-off and evaporation and enhance the performance of water-soluble chemicals.

For more information contact Aquatrols, 1322 Union Ave., Penascola, N, 08110, or call 800-257-7797. Circle No. 321.

Sod Slide fixes damaged greens

Milton Turf Products has introduced the Sod Slide, a tool for repairing greens damaged by hydraulic oil spills, winter kill or vandalism.

It easily cuts out the damaged sod and the replacement strips from your turf nursery. It is available in three-, five- and seven-inch sizes.

For more information call 800-456-4351. Circle No. 334.

The better, more natural looking lake and pond dye

Why settle for artificial looking dye when TRUE BLUE™ will give your lake or pond a natural, living color appearance. The secret's in our tried and true blue formula that makes the other brand look unnatural by comparison.

Try it and see for yourself why TRUE BLUE is fast becoming the preferred lake and pond dye. The one that's a natural. For more information and a technical bulletin, call or write today.

For free information circle #163

Building houses pesticides safely

Environmental Products, Inc. recently introduced a new pesticide storage building. Available in two basic sizes, the E.P. Containment System meets or exceeds most state and local codes.

The System has a 100 percent, leak-free containment floor and is properly vented to prevent vapor accumulation. It features on-site construction or can be shipped pre-assembled. Standard features include a chemical-resistant, Epoxy finish and three-panel locking, double-panel doors.

Additional optional features include a double-wall, explosion-resistant package; forced air venting; lake and pond dye; and chemical-resistant floor liners.

For additional information call 216-683-0889. Circle No. 351

Cover reduces maintenance

Seidelhuber Metal Products, Inc. has introduced a new type of galvanized steel grating designed to provide a permanent, heavy-duty covering for golf course catch basins and drain inlets.

The new grating is designed to provide optimum drainage while catching leaves and other debris on the surface for easy cleanup.

In addition to reducing maintenance costs from clogged drains, the new grating helps prevent accidents to players and course personnel caused by poorly enclosed basins and inlets. Available in spans up to five feet, it will support golf carts, mowers and ground maintenance vehicles.

For more information call 800-635-6948. Circle No. 335.
Cushman GT-1 offers new features

The newest addition to the Cushman line of turf vehicles is the Cushman GT-1. Powered by an economical eight-horsepower gasoline, air-cooled engine, the GT-1 has enough capacity to carry up to 1,000 pounds of cargo. The vehicle features a fully automatic torque converter with automotive-type differential that transfers more engine power to the drive wheels for more pulling power. The four-cycle engine burns regular gasoline, eliminating the need for oil-gas mixtures. With a 19.5-foot outside clearance circle and an overall width of just 45-1/2 inches, GT-1 has plenty of maneuverability for just about any type of grounds work. The 44-by-40-by-8-inch cargo box holds up to eight cubic feet and 1,000 pounds of payload. For more information call 800-228-4444. Circle No. 302

DID YOU KNOW!?! DURA PLASTICS NEW SWING JOINT ADJUSTS AT THE HEAD AND AT THE SERVICE TEE.

Dura introduces the first fully-adjustable 360° Swing Joint.

With Dura's new design, vertical adjustments can be made up to 8¼ inches without digging down to the service tee. No other swing joint can match Dura's ease of adjustment to final grade.

Plus.... you get Dura's traditional quality.

• Double O-ring

• Lifetime lubricated

• Sweep elbows at directional changes

• Schedule 80

200 psi rated

Weather Pro small, reliable

Spectrum Technologies, Inc. has introduced a small, affordable computer weather station. The Weather Pro applies micro-processor technology that is sophisticated, highly accurate, easy-to-use and affordable. The Weather Pro provides wind speed, high wind gust, wind direction, temperature, wind chill, high and low temperature, daily and accumulated rainfall and clock. It also scans selected functions, instant metric conversions, battery and AC operation. Contact Spectrum Technologies, Inc., 12010 S. Aero Dr., Plainfield, Ill. 60544 or call 800-247-8873. Circle No. 341

Precision Labs develops safety station

An emergency safety station for immediate eye, face or body flushing in the event of an accident has been developed by Precision Laboratories Inc. The emergency station consists of a sterile, isotonic buffered saline solution and wall-mounted backplate. Bottles pull out for fast access when accidents occur. Installed in work areas, near chemical mixing or processing, the system is designed for immediate response in the event of an acid, caustic or water soluble chemical mishap. Tamper-evident seals and special twist-off caps ensure the contents are sterile and contaminant free. Bottles are date-coded for added protection. The Emergency Wash Station is available in 32-oz. or 16-oz. containers.

For further information people may contact Precision Laboratories Inc., P.O. Box 127, Northbrook, Ill. 60065 or call 800-323-6280. Circle No. 322

Kubota adds new mower attachments

Two new attachments are available for Kubota Tractor Corp.'s F-Series front mower, a turf blower and cab enclosure. The F5535 blower is quickly attached and has a wind velocity over 255 m.p.h. that can be directed left, right or forward. An optional deflector angles the wind downward to assist in windrowing. The soft-sided cab provides protection from the weather and comes standard with two headlights, an 1/8-inch tempered glass front panel and manual wiper. An electric wiper and hard-sided cab are optional equipment. For more information contact Kubota Tractor Corp., 550 West Artesia Blvd., Compton, Calif. 90220. Circle No. 304.
E-Z-GO first with electric speed control

E-Z-GO is the first major golf car manufacturer to offer an electronic, solid state speed control as standard equipment on its electric golf cars.

The electronic speed control generates tremendous savings for the golf car fleet operator by reducing energy costs approximately 28 percent and lengthening battery life. It also produces a smoother ride than both electric cars with conventional rheostat speed controls and gasoline-powered golf cars.

The 1990 E-Z-GO electric car will provide at least three rounds per charge on any regulation course.

For information call E-Z-GO Division of Textron Inc. at 404-788-4311. Circle No. 338.

Bunton offers new reel for greens care

For superintendents concerned with reducing thatch and runner problems to achieve faster, truer and healthier greens, Bunton Co. is now offering a new Greens Conditioner Reel for use with its Triplex Greensmower.

The reel features 273 vertical knife blades in a helical pattern on 1/2-inch centers, and at 3,600 rpm the heavy-duty gear motors issue a high frequency of clip while conditioning the greens.

Many of the components are interchangeable with components on the Bunton walking greensmower to minimize spare parts inventory.

For more information contact Bunton Co., P.O. Box 33247, Louisville, Ky. or call 502-966-0550. Circle No. 307

Z-bend pliers make engine work easier

Oasis Control Products has developed a set of pliers that will make a Z-bend in throttle and choke wire without the fumbling involved using needle-nose pliers.

The Z-bend can be formed by simply inserting the wire into the notches at the end of the pliers and squeezing until a perfect 90-degree bend is obtained. These pliers will also cut any size wire up to 3/32 of an inch.

For more information write Oasis Control Products, 2614 Niles Cortland Rd. N.E., Cortland, Ohio 44410 or call 216-637-9442. Circle No. 316

VIT products train root growth

Two new products, Root Barrier and Root Deflector, have been added to the VIT Arbor care line.

Root Deflector is a cylindrical training device for tree roots that gently forces them to grow downwards, preventing root girdling and other harmful root-bound conditions.

Unlike other products, Root Deflector accommodates tree root expansion with "tear-away" flares that spread as roots grow. Root damage and liability problems due to hardscape and structural damage are also avoided.

Root Barrier is a special underground training system that allows trees to be planted close to curbs, sidewalks and other hardscape. It has been used extensively by municipalities in median strips and other heavy pedestrian areas.

For more information contact Linda Knoche at 619-723-0255. Circle No. 347

Buckner introduces valve-in-head sprinkler line

Buckner has introduced a new family of Valve-In-Head sprinklers for golf and institutional applications.

The very popular cam drive sprinkler and piston valve are combined in a compact package of high-tech plastics, bronze and stainless steel.

These products include several innovations and features not available in other Valve-In-Head products. The cam drive pressure can be adjusted and measured at each sprinkler by means of a Schrader valve mounted on the sprinkler head, which allows for optimum performance and water use. All sprinklers offer an adjustable speed of rotation for quick springing.

For more information contact Buckner Inc., 3481 N. Brawley, Fresno, Calif. 93722; (209) 275-0500. Circle No. 310

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First-rate disease and weed control demands a professional's touch. And here are the Turf Care products that have what it takes.

Daconil 2787® The cornerstone of a professional spray program. Daconil 2787 is economical to use and the most effective, broad-spectrum turf fungicide on the market. Controls 12 major turfgrass diseases. Available as a flowable or wettable powder formulation.

Daconil 2787® WDG. A new water-dispersible granular formulation that is virtually dust-free. Pouring and mixing are fast and easy. The 5-lb. reclosable container means better handling, storage and disposal.

Dacthal® The preemergence herbicide that consistently delivers superior broad-spectrum control of crabgrass, spurge and 22 other tough annual grasses and broadleaf weeds. Available as a flowable or wettable powder formulation.

Daconate® 6. The proven postemergent herbicide. Highly effective against pesky weeds such as crabgrass. (Sold as Bueno® 6 in western states only)

2 Plus 2 (MCPP + 2,4-D Amine). As effective as it is economical against more than 20 hard-to-kill broadleaf weeds such as clover and dandelions. Contains no dicamba.

Frigate® adjuvant. The only product specifically formulated to enhance the performance of Roundup® for control of perennial and annual weeds. For turf renovations and non-cropland use, too.

When it comes to turf care, you'll see the difference in the professional's touch.

For free information circle #168

The Turf Care pros.
Golf Course Marketplace

To reserve space in this section, call Simone Lewis, 813-576-7077

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Golf Course News 69

February

68—South Carolina Landscape & Turfgrass Association's 14th annual Grounds Maintenance Conference and Trade Show at the Sheraton Charleston Hotel. Held in cooperation with Clemson University, the conference is designed for the green industry, especially businesses and educational institutions involved in lawn care application and maintenance, turfgrass management, landscape design and implementation, maintenance of ornamental gardens for public use and recreation, and nurseries. Contact SCLTA at P.O. Box 335, Clemson, S.C. 29633.

9-11—United Golf Exposition and Trade Show in Fort Wayne, Ind. For further information call 800-421-SHOW.

15—The American Sod Producers Association's Midwinter Conference and Exhibition at The Hilton at Walt Disney World Village in Orlando, Fla. Contact Sharon Topel, meetings administrator, ASPA, 1855 Hicks Road, Rolling Meadows, Ill. 60008; 312-705-9898.

15—Connecticut Turf and Landscape Conference at the Hartford Civic Center. Contact the Connecticut Grounds Keepers Association, Inc., P.O. Box 876, Bethel, Conn. 06801; 203-791-6815.

21-22—Crittenden Golf Real Estate Development Conference in Palm Springs, Calif. Contact Crittenden at P.O. Box 1150, Novato, Calif. 94948; 415-382-2486.

23-26—61st International Golf Course Conference and Show, sponsored by the GCSAA at Orange County Convention/Civic Center in Orlando, Fla.

28—New Jersey Landscape 1990, hosted by the Bergen County Landscape Contractors Association, will be held at The Stadium Club at Giants Stadium in East Rutherford, N.J. More than 80 exhibitors will be present and guest speakers and educational seminars are planned. Contact Skip Powers at 201-644-5228 or Jim Stewart at 201-327-0830.

March

67—GCSAA seminar on Landscape Plant Materials at Lafayette Hill, Pa.

15-16—GCSAA seminar on Insect Pest Control at the Stadium Club at Giants Stadium in East Rutherford, N.J.

19-20—Maine Turfgrass Conference and Show, sponsored by the Maine Golf Course Superintendents Association, at Holiday Inn by the Bay in Portland. Contact committee chairman Kevin Ross at 207-829-3880.

19-20—GCSAA seminar on Business Communication and Assertiveness Techniques at Minneapolis, Minn.

25-26—American Society of Golf Course Architects' 44th annual meeting at the Inn at Spanish Bay in Pebble Beach, Calif. Contact the society at 221 North La Salle St., Chicago, Ill. 60601; 312-372-7900.

April

16—GCSAA seminar on Spanish Bay in Pebble Beach, Calif. Contact the society at 221 North La Salle St., Chicago, Ill. 60601; 312-372-7900.

18-19—Crittenden Golf Real Estate Development Conference in Orlando, Fla. Contact Crittenden at P.O. Box 1150, Novato, Calif. 94948; 415-382-2486.

— For more information or to register, call the Golf Course Superintendents Association of America at 800-472-7878 or 913-841-2240. The seminars are dependent upon the availability of the instructors, and are therefore subject to change.
Becker devises poa annua solution

BY BOB SPITWAK

Ask any golf course superintendent what he fears most about his greens and the answer will likely be poa annua taking up residence. Poa, or annual bluegrass, is as invasive as crabgrass, and while puttable, it weakens and disfigures bentgrass greens. It is prolific, goes to seed even when cut at putting heights, and delights in traveling to locations on the soles of golf shoes and on mowers.

Superintendent Chris Becker runs the greens show at Fairways Golf Course in Cheney, Wash. His job began three years ago when the course was built. His mission: the finest putting surface around. This meant keeping the Penncross bentgrass greens completely free of poa annua.

The weed thrives in this geographical area. Springs are wet, autumns a little less so. Summer days rarely go above 90 degrees and winters offer a warming blanket of snow that protects the shallow-rooted grass.

Becker's formula for poa-free greens is based on a decade of experience as a superintendent. In this time he has continually tested products, talked informally with other superintendents, and even taken a different approach to this problem:

**Continued on page 55**
Let's face it, most golf cars look the same. At Hyundai, we focused our resources and research on high performance, low maintenance and longer life. Hyundai Golf Cars were not created in a vacuum, but rather from lessons learned on the golf course. Round after round after round, Hyundais were driven to perfection.

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