

# GOLF COURSE NEWS

THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY

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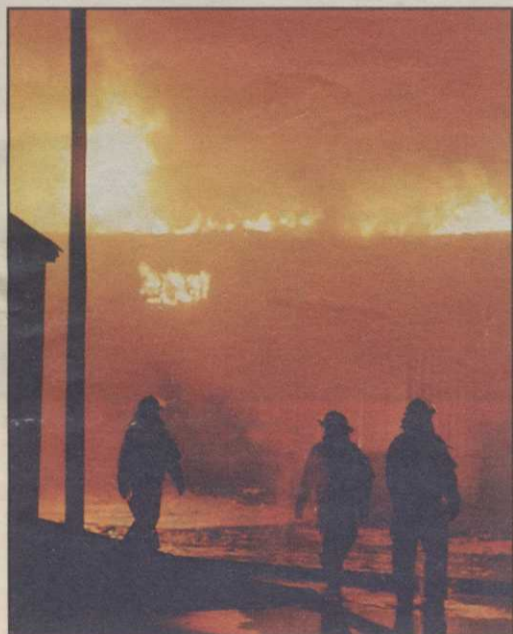
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Greg Brown photo, Waterloo (Iowa) Courier

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## Gunning for better disease resistance

Newest biogenetic research goes biolistic

By PETER BLAIS

The U.S. Golf Association, seed companies and others are taking their first baby steps into the area of genetically engineered turfgrasses, hoping research will eventually lead to plants that are resistant to many turf ailments.

Recent advances in the technology of transferring genetic material, specifically the biolistic method, has helped make that possible, according to Dr. Peter Day of Rutgers University's Cook College.

Basically this involves taking a plastic projectile with a surface layer of tungsten or

gold. It is then coated with DNA containing the desired genetic trait.

The projectile is fired with a 22-caliber cartridge toward a steel plate with a small hole. A partial vacuum containing grass cells is on the other side of the plate. The steel stops the projectile, but the DNA continues through the hole and hits the target cells. Some of the DNA penetrates the nucleus.

Continued on page 22

## Reregistration claims another industry victim

By HAL PHILLIPS

The specter of EPA reregistration has doomed another chemical product to the dustbin of history.

Miles Inc. announced in early April that its Dyrene fungicide products, which contain the active ingredient anilazine, have been voluntarily canceled due to the cost of obtaining data for reregistration support.

"There are a lot of people around here who are sad to see it go," said Rick Robb, marketing manager for Miles. "But it was a business decision. We have another fungicide product (Baleton) pending reregistration and it was too expensive to go ahead with Dyrene."

Continued on page 45



Jeff Martin

By MARK LESLIE

A living, breathing, working laboratory in which handicapped and able-bodied people alike can play championship-level golf.

That's what the folks at Clemson University hope to develop on a 250-acre plot of land that contains peach orchards and borders manmade Lake Hartwell on their Clemson, S.C., campus.

"This project hits all the hot buttons," said Bob Wilson, the National Amputee Golf Association national director who is involved as a consultant for the

Continued on page 32

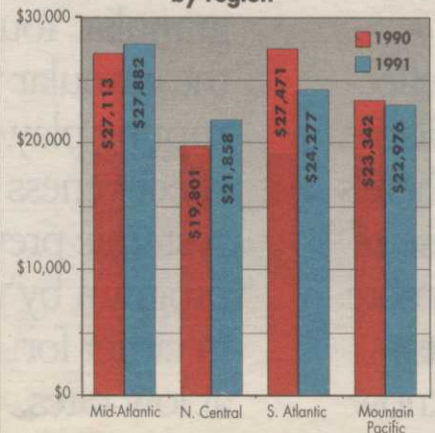
## Clemson University to create course/laboratory



### NEW IDEAS FROM AN OLD MASTER

Architect Robert Trent Jones Sr. stands on the first tee at his Oxmoor Valley course in Birmingham, Ala. Built by Sunbelt Golf Corp., Oxmoor Valley is one of eight golf complexes constructed with Alabama state pension funds. For related story, see page 5.

### Average maintenance expense per hole by region



## PKF report says rounds up, maintenance costs down at resort and daily fee courses

By PETER BLAIS

Signs of recessionary times: Rounds were up, revenues stayed even and maintenance costs went down at daily-fee courses from 1990 to 1991.

That's the message contained in the first "Trends in Resort and Daily Fee Golf" published by the National Golf Course Owners Association and Pannell Kerr Forster Consulting Inc., the accounting firm that also does the "Clubs in Town & Country Report" for the pri

Continued on page 42



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CIRCLE #101



## NEWS IN BRIEF

**SINGAPORE** — Organizers of Golf Asia '92 have reported that \$61 million in business was done the last four days of the show, held this spring in Singapore.

Show organizer Connex Private Ltd. said \$26.4 million in sales related to resorts, \$17.5 million to course design, \$14.65 to course equipment, and \$2.45 million to equipment and accessories.

The visitor count, Connex said, was 21,300. That included 12,600 golf enthusiasts and 8,700 trade visitors. Trade visitors from abroad totaled 3,200.

♦♦♦

**POCONO PINES, Pa.** — There will be no second golf course at the Pinecrest development in Tobyhanna Township. Supervisors voted unanimously to deny approval of the 11th phase of the 2,000-acre development.

♦♦♦

**CINCINNATI, Ohio** — Winton Woods Golf Course will shut down Aug. 3. The 18-hole course will re-open early next summer with a new look at a cost of \$2.5 million. A complex of practice greens and driving ranges called a training academy will be constructed. Five ponds will be added, and sand traps and bentgrass installed.

The academy, which should be ready by late spring, will embrace an executive nine-hole course, driving range, high-level practice area, project center, clubhouse, indoor auditorium with practice net and audio-visual equipment.

♦♦♦

**COEUR d'ALENE, Idaho** — Coeur d'Alene Indian tribal officials hope to build a multimillion-dollar waterfront resort complex that would include an 18-hole golf course.

The tribe is seeking a grant from the Administration for Native Americans. Tribal press secretary Bob Bostwick thinks the resort could be open in the fall of 1993.

## Fazio to design Pebble Beach companion course

**MONTEREY, Calif.** — Tom Fazio is the architect for an 18-hole golf course to be built among the hills and canyons directly above Pebble Beach Golf Links.

The amended 350-lot cap on development from the allowed development of 900 lots in Del Monte Forest will increase open-space areas to more than 430 acres.

Said Fazio from his Henderson, N.C., base, "It's obviously a very exciting place for a golf course... From a golfer's point of view, it's Utopia."

The new course, tentatively named the Forest Course, would complement Pebble Beach Golf Links, Spyglass Hill, The Links at Spanish Bay and Old Del Monte Golf Course as layouts available to the public.

Irrigation would come from the potable water created by establishment of a water reclamation plant in partnership with the Monterey Peninsula Water Management District, Pebble Beach Community Services District and Carmel Area Wastewater District.

Enough water would be created to serve 900 households.

## Golf Course Europe sponsors alter format

Golf Course Europe '92 and the International Golf Development and Investment Conference '92 have combined, changing the format and venue of the conferences.

The shows' organizers — ExpoConsult of Maarssen, Holland, and Executive Conference & Seminars Inc. of San Rafael, Calif. — will hold the event Nov. 12-14 at the Monte Carlo Convention Center. Cannes, France, had been the scheduled site.

More information is available from Charles Duff at Executive Conference & Seminars, P.O. Box 3118, San Rafael, Calif. 94912; 415-453-1184.



Dan Nierling photo, Waterloo Courier

The June 6 fire at Standard Golf took nearly 18 hours to subdue.

## Standard Golf back on its feet, accepting orders following fire at Iowa headquarters

**CEDAR RAPIDS, Iowa** — Rebounding from a major fire June 6, that destroyed offices, shipping area and a portion of its manufacturing facilities, Standard Golf June 22 began accepting from distributors new orders for its golf course accessories.

There were no fire-connected injuries to personnel. Authorities believe an electrical malfunction caused fire, which resulted in approximately \$2.5 million in damages, according to John Kelly, director of marketing for Standard.

It took every available firefighter from Cedar Falls and neighboring Waterloo, Janesville, Dike and New Hartford to fight the fire. And it took all night, from 10:17 Saturday night until 3:50 p.m. the following Sunday.

President Peter Voorhees said the

company has secured temporary quarters nearby, adding, "We were fortunate that several important components of our business were saved," said Voorhees. "These included machine room, powder coating facilities, warehouse and screen printing operation."

"Thankfully, we also have backup copies of our computer files as of the close of business June 5, and a surprising amount of paper files and records continue to be recovered."

Manufacturing operations are expected to resume soon. Standard Golf is receiving finished products and raw materials from suppliers.

Since the screen printing operations and files were unaffected by the fire, orders for personalized flags will continue to be shipped on schedule.

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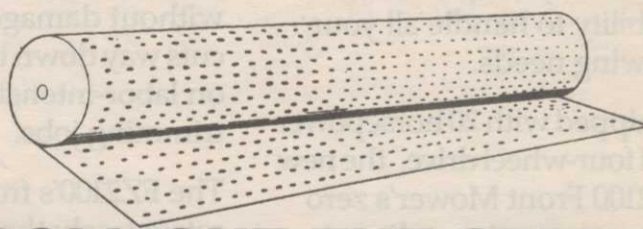
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# EPA says most UST owners obeying financial laws

By PETER BLAIS

More than 95 percent of underground storage tank (UST) owners and operators required to be in compliance with federal financial responsibility regulations are in compliance, according to a recent Environmental Protection Agency report.

The Superfund Amendments and Reauthorization Act of 1986 mandated that EPA establish financial responsibility requirements for UST owners to ensure that costs to clean up accidental releases and any third-party liability claims were covered.

"In general, golf courses have shown a

high degree of compliance," said Mike Scott, the agency's public liaison officer for golf course issues.

According to the report, most tank owners are complying by using state assurance funds. Forty-three states have established such funds.

State financial assistance programs (e.g. loan guarantees, direct loans, grants) help alleviate some of the economic burden. Programs are available in 17 states.

States are in the best position to establish assistance programs tailored to the specific needs of their communities, the report found. Therefore, EPA should provide the

states with assistance when requested, the agency recommended.

Other recommendations included:

- Congress should amend the Resource Conservation and Recovery Act (RCRA) to permanently exempt UST-contaminated media and debris from its hazardous waste management requirements. The exemption would keep corrective action costs from doubling.

"We have to face the facts in the real world," said Scott, when asked how environmental groups have responded to this softening of disposal laws. "We can't take the attitude that if we can't afford to do the

job perfectly, we should do nothing at all. We can't let that stand in the way of doing something significant."

- EPA should extend the financial responsibility compliance date for the last category (which includes non-marketers with net worth of less than \$20 million) from Oct. 26, 1991, to Dec. 31, 1993. It has done so.

While most mom-and-pop operations likely fall below the \$20 million ceiling, Scott cautioned that amount is easy to exceed if a course has several partners. If there is any doubt about net worth, check to make certain, Scott advised.

- EPA should clarify the liability of UST lenders, thus removing a current barrier to financing UST facilities and making more capital available to UST owners. A lender is a potentially responsible party if a tank fails, Scott said.

The EPA is seeking something similar to the secured creditor exemption found in the Superfund law that would exempt lenders from most liability problems, Scott said. EPA started this procedure in March.

- EPA should publish a policy directive clarifying the flexibility that exists in the federal corrective action regulations and promotes cost-cutting opportunities.

Again, this is borrowed from the Superfund regulations. Basically it means the agency needs to inform tank owners that there may be several ways to achieve the same goal, Scott said. If one method costs less, but yields the same result, then owners should be able to use the less expensive method, he added.

Coupled with EPA-funded projects that help state and local programs streamline their cleanup procedures, this should cut costs, red tape and clean-up time. The agency also started this procedure in March.

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CIRCLE# 104

## PGMS reviews OSHA standards

Regulatory review of key OSHA standards specifically applicable to the green industry is available through the Professional Grounds Management Society.

"Most businesses simply do not have the personnel to spend the time locating, reviewing and interpreting federal regulations," said Technetrain's Pete Ruschell.

Included is an overview of the federal regulations plus a copy of the regulation that has been reviewed. Where applicable, state agencies, background, examples of permits and inventory lists are also included.

Information is divided into individual packets, with purchasers selecting the areas that pertain to their interests.

Specific packets are hazard communication, small chemical disposal, trenching standards, spill control, small quantity generator, confined space safety, storm water/wetlands, underground and above-ground storage tanks, general safety guidelines, and recordkeeping.

Cost of each packet is \$22, with PGMS members being eligible for a discount. People should contact PGMS at 10402 Ridgland Road, Suite 4, Cockeysville, Md. 21030; 410-667-1833.

## Ala. Retirement System gets green light for eighth facility

MONTGOMERY, Ala. — An environmentally sensitive tract of land along the Alabama Gulf Coast has been preserved and development of a 54-hole golf complex approved after weeks of complicated negotiations.

"There won't be a state park in the United States that will even come close to that type of golf facility," said Jim Martin, commissioner of the Department of Conservation and Natural Resources, of the complex to be built on state property near Romar Beach.

Martin and David G. Bronner, chief executive of the Retirement Systems of Alabama, huddled with officials of the city of Orange Beach, which owned a nearby piece of property that figured in the development.

The park system will acquire 580 acres of undeveloped land from Orange Beach, which bought the property for \$1.3 million many years ago. Orange Beach will receive a portion of the green fees at three 18-hole courses to be developed by the Retirement Systems.

The courses, designed by noted architect Robert Trent Jones, will be built on about 420 of the 800 acres at the Gulf State Park parcel. Development cost will be about \$16 million.

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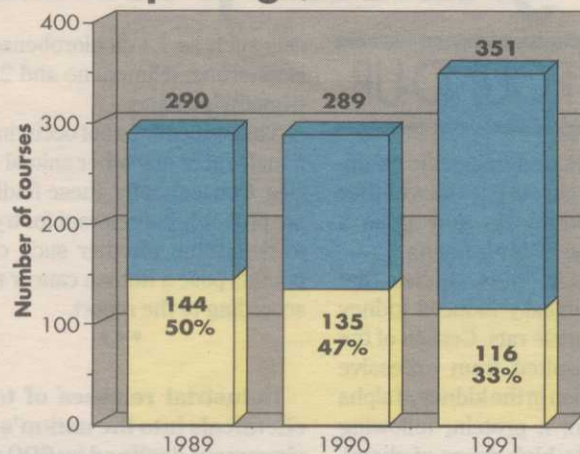
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## Real-estate related course openings, 1989-91



Source: Pannell Kerr Forster

## Supers counter course bashing

HILO, Hawaii — "Golf course bashing" linked to chemicals used to maintain courses was flayed by course superintendents Bob Itamoto and Neil "Buster" Bustamente at a recent meeting of the Hawaii County Council's Planning Committee.

Itamoto has been superintendent at Mauna Kea Beach Hotel for 27 years, Bustamente head of Mauna Lani Resort's courses for 10 years.

Detailing how their courses are watered and fertilized, they said little pesticides and her-

bicides are used to maintain the courses. They denied poisoning the coastal areas of the Big Island or using water needed for domestic consumers.

Blaming the media, Bustamente declared that much of what has been said about environmental hazards involving golf courses has been untrue and based on false assumptions or misunderstandings.

Council members say some agency should monitor pesticides, fungicides and other chemicals used on golf courses.

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CIRCLE# 105



# Report compares risks of granular pesticides to birds

The EPA has released a report comparing the **risk to birds posed by different granular pesticides** and announced a new approach to evaluate those posing the highest risk.

Dry granules pose a particular risk because they are consumed by birds as grit or with food elements.

Of the 99 compounds tested, 14 pose a high risk of killing birds, according to the "Comparative Analysis of Acute Avian Risk From Granular Pesticides."

The 14, all of which are carbamate or organophosphate insecticides, include aldicarb, bendiocarb, carbofuran, chlorpyrifos, diazinon, disulfoton, ethoprop, ethyl parathion, fenamiphos, fonofos, isofenphos, methomyl, phorate and terbufos.

All but one are registered for use on corn (the single largest use of granular pesticides) or turf.

EPA has already canceled diazinon for use on golf courses and sod farms and reached an agreement with the registrant of carbofuran to phase out more than 99 percent of its granular formulation by 1994.

Before taking additional regulatory action on any of the 14 chemicals, EPA will further evaluate their effects, along with other pest control alternatives, on both corn and turf.

Before beginning the reviews, EPA is allowing registrants of the 14 pesticides 90 days to propose voluntary risk reduction measures, such as lower application rates, fewer applications per year and better soil incorporation.

•••

As part of the Prior Informed Consent (PIC) procedures, EPA has transmitted a **list of pesticides that are banned in the United States** to the United Nations Environment Programme.

PIC is a voluntary U.N. information-sharing program to promote safe management of chemicals. Member countries can use the data to determine whether to allow, restrict or prohibit future imports of specific chemicals. As of February, **109 countries were participating in the program.**

EPA's submission contained 53 pesticide compounds and 13 additional pesticides for the 1A-Plus list, chemicals considered very toxic. The environmental agency will hold public meetings soon to explain PIC.

•••

**EPA will not place used oil destined for disposal on its list of hazardous wastes** under the Resource Conservation and Recovery Act.

Used oil destined for disposal is already subject to full regulation as hazardous waste under RCRA and other statutes if certain contaminants exceed regulatory levels. Used oil for recycling is exempt from most hazardous waste controls.

•••

An EPA science panel has established a **significant new policy on assessing human health risks from environmental exposure to chemicals.**

Generally, risk assessments assume that any chemical causing tumors in test animals also may cause cancer in humans. However, a new report by the EPA Risk Assessment Forum recommends, for the first time, that agency risk assessors not use

## EPA ROUND-UP

animal data under specific conditions for trying to predict whether certain chemicals may pose a cancer hazard for humans.

The report cites studies that found chemically induced kidney tumors in male rats. Certain of the tumors resulted from excessive accumulation in the kidney of alpha 2u-globulin, a protein, following exposure to high doses of chemi-

cals such as 1,4-dichlorobenzene, isophorone, d-limonene and 2,2,4-trimethylpentane.

The cancer does not occur in the female rat or any other animal species. Consequently, these findings are probably not relevant for trying to determine whether such compounds pose a human cancer risk, according to the report.

•••

**Industrial releases of toxic chemicals into the nation's environment declined by 600 mil-**

**lion pounds**, or 11 percent, from 1989 to 1990, according to the agency's 1990 Toxic Release Inventory. Total releases and transfers decreased 26 percent since 1988.

The top five states in total releases were, in order, Louisiana, Texas, Indiana, Tennessee and Ohio.

The top six industries for releases, also in order, were chemical manufacturing, primary metals, paper manufacturing, transportation, plastics and fabricated metals.



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## EPA sets new standards

EPA has established new standards to limit contamination of drinking water by 23 chemicals.

Required by the Safe Drinking Water Act, the new guidelines have a preventive thrust since most of the 23 contaminants are rarely found in drinking water.

The chemicals include nine pesticides, five inorganic chemicals and nine synthetic organic chemicals. Dioxin,

beryllium, cyanide and anti-mony are a few of the affected chemicals.

The standards will require 80,000 public drinking water systems to meet the new criteria and monitor for the contaminants. EPA estimates 260 systems, serving 340,000 people, will have to treat their water for excess levels of any of the 23 contaminants. It estimates the regulations will cost those systems \$46 million.

## Cherry Valley gets additional \$117 million financing

LAWRENCEVILLE, N.J. — DKM Residential Properties Corp. has secured \$117 million in financing from the Bank of Montreal to continue substantial ongoing development at Cherry Valley, its exclusive master-planned country club community on the outskirts of Princeton.

The Montgomery Township community, planned to accommodate 475 homes priced from about \$500,000 to \$1 million, is being developed by DKM around a Rees Jones-designed 18-hole golf course on 644 acres.

"We're committed to creating the area's premier country club community emphasizing an exceptional lifestyle and distinctive homes," said Frank C. Weed, DKM's vice president and general manager. "This financing not only enables us to accelerate current development activities, but the very magnitude of the commitment, particularly in an extremely sluggish economy, is indicative of the Bank of Montreal's confidence in DKM and the success of Cherry Valley."

Robert S. Powell Jr., president

of DKM's parent company, DKM Properties Corp., noted that the Cherry Valley financing is the seventh new loan transaction closed by DKM in the last 24 months. The loans total \$185 million.

Recent activity at Cherry Valley, which will be developed in 10 stages over the next nine years, has concentrated on site development in its first two neighborhoods.

Construction of homes in the two villages is slated to begin in July when Cherry Valley opens the back nine of the golf course for play, giving golfers a full 18 holes of championship-caliber golf. The front nine opened last September and membership in the private country club has surpassed 150.

## Brantley leaves Fla. Golf Council

The Florida Golf Council is "alive, active and intends to continue to lead (golf industry) efforts in this bellwether state," said the group's acting executive director.

Jack Mathis, a partner in Emerald Dunes golf course in West Palm Beach, confirmed the council's viability in the wake of Bobby Brantley's resignation as executive director.

Brantley, former lieutenant governor of Florida, resigned on June 20 to pursue other consulting and lobbying opportunities, but will continue to lobby for the council at the state Legislature in Tallahassee and around the state.

Brantley wrote to Raymon Finch, chairman of the council's board of directors: "I regret that the golf clubs of our state have not supported our efforts to the extent that we had expected."

Mathis said, "We regret the loss of Bobby Brantley but look forward to his continuing to do a terrific job working with government agencies in Tallahassee and around the states."

"It is our hope that the golf industry, which during this difficult economic time has not been as supportive as it might have been, will take this time to rally around the council and provide the necessary support for it to continue its efforts."

The council was formed in 1990 to address the issues facing the golf industry as a collective body. Its growing membership totals 80, Mathis said, adding, "We have to build a bigger base."

## Gardner council buys course land

GARDNER, Mass. — The Gardner City Council recently approved a resolution endorsing the city's purchase of 66 acres off Eaton Street for expansion of the municipal golf course.

MANAGING

A GOLF

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# Building a cooperative atmosphere new EPA golf official's goal

Golf industry, agencies, environmental groups and neighbors share many of same goals, Scott says

By PETER BLAIS

Building a coalition between the golf industry, environmental groups, consumers and the Environmental Protection Agency is the primary goal of the EPA's new public liaison officer for golf course issues.

The chance for cooperation exists because the four groups share a common goal, a healthy environment, said Michael Scott, recently named the EPA's first liaison officer for agriculture and golf.

Like any outdoor sport, golf is dependent on a healthy environment, Scott said. If a course's air isn't clean or water pure, golfers won't come. So the golf industry and EPA want the same thing. Yet, often, they are at odds.

"The agency has really missed out on an opportunity in outdoor recreation over the years. Every outdoor sport has an environmental interest," the 20-year veteran of the EPA's public affairs office said.

Scott said his job will be to make sure the EPA recognizes the golf industry as a potential friend, rather than an enemy. National EPA Director William Reilly has done much to foster a cooperative attitude among business and environmental groups, he said.

The national office's recent approval of the Homestead Resort project in upstate Michigan showed the EPA will cooperate with the golf industry if circumstances warrant it, Scott said.

"But we'll look at things on an issue-by-issue basis and do what we have to do," he said. "Inevitably, some decisions will leave environmentalists saying we're siding with business while others will leave business people complaining we're crippling their industry."

Like liaison officers in other EPA divisions, Scott will be responsible for informing industry associations, manufacturers and suppliers how proposed EPA regulations could affect them.

"If a golf course pesticide was being considered for cancellation, I'd go to the Golf Course Superintendents Association of America, U.S. Golf Association and businesses to inform them of any possible cancellation order," he said.

Other issues Scott will deal with include promoting less-toxic pesticides and other alternatives to chemical and fertilizer use; interpreting wetland regulations; and informing the industry how possible Clean Air Act legislation could affect the golf industry.

"Our research could lead to regulations on off-road and small-engine emission controls later this

year," he said. "That could affect tractor, mower and gas-powered golf car makers."

Scott said he can also help "penetrate the EPA bureaucracy and tell people who they should be dealing with."

"One out of 10 times I'll know the answer to a question," Scott said. "More often I'll be able to put the caller in touch with the right person."

"Environmental problems have become so complex that there are many overlaps in responsibility. Back in the early 1970s, things

*The agency has really missed out on an opportunity in outdoor recreation over the years.'*

- Mike Scott

EPA golf liaison officer



were easily segmented. Air pollution belonged to one division and water pollution to another.

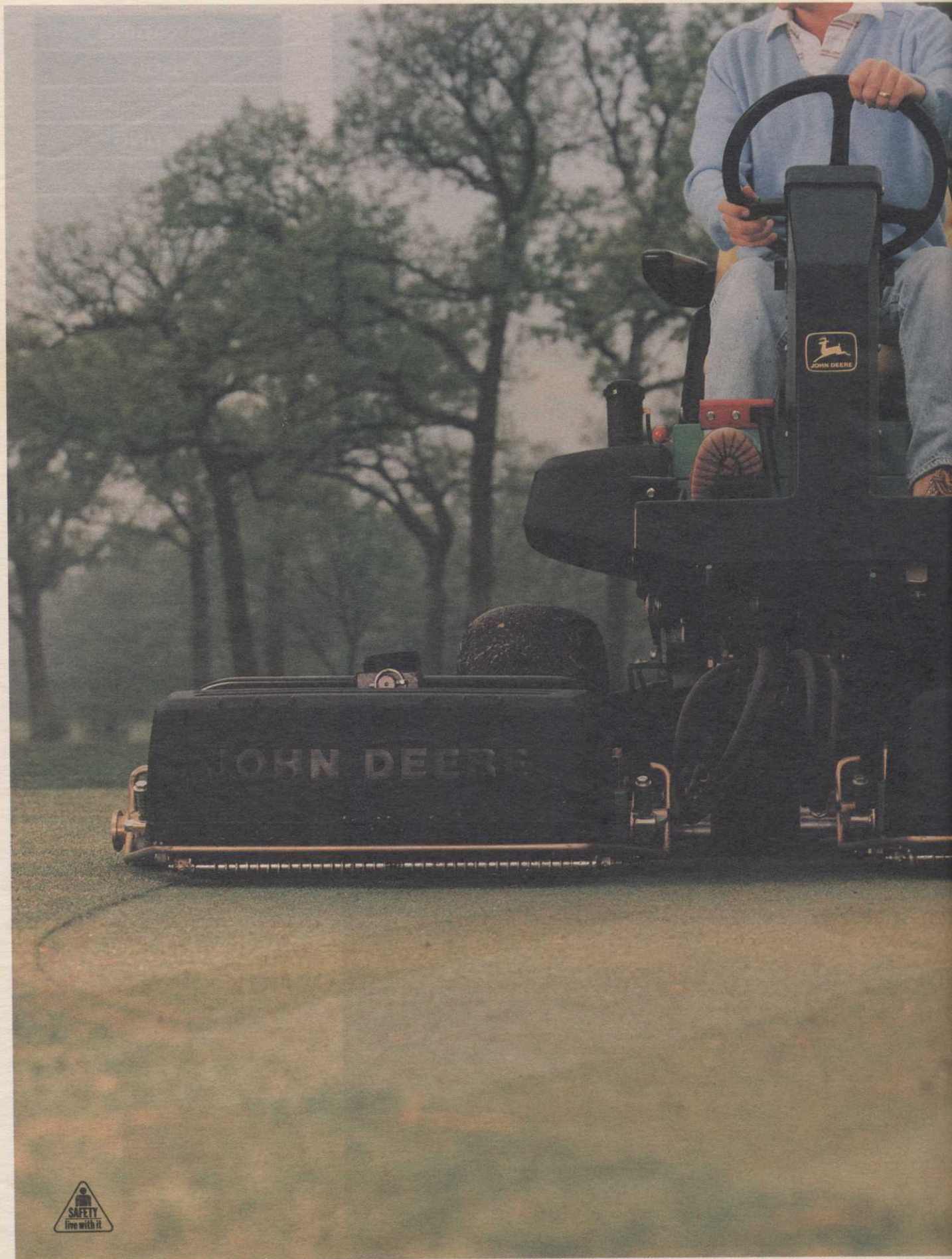
"Things are not as easily compartmentalized now. Ground water, for instance, is a major concern of four EPA

offices — pesticides, water resources, toxic waste-Superfund, and resource conservation and recovery. Who knows what department they should contact when they call? That's where I can help."

In the future, EPA would like to move away from specific regulatory formulation and toward conceptual environmental planning, Scott said.

"We'd rather bring groups together to share ideas rather than taking specific action," he said.

"The big thing around here right now is pollution prevention. Mr. Reilly has us looking at everything we can do to prevent pollution before it occurs rather than just cleaning it up all the time."





## EPA advises developers to avoid most wetlands

Following is some straightforward advice offered by the Environmental Protection Agency when working with wetlands.

- The best way to avoid problems is to avoid wetlands in the first place.
- Examine alternative sites before purchasing wetlands.
- If you do get involved with wetlands, you need to be prepared — learn the regulations and policies of the relevant agencies.
- Initiate early coordination with the permitting agencies, such as the Army Corps of Engineers and EPA. If you anticipate that your proposal may be particularly controversial, you may want to identify major interest groups and, where appropriate, solicit their input.

Golf industry public liaison officer Michael Scott believes this may be the most important step.

"Talk to people, especially EPA, as soon as you begin planning. Do not wait until there is a problem," he wrote.

- Do not assume that compensatory mitigation will solve all your problems.

Incorporating environmental amenities can enhance the value of property, therefore it is important not to undertake activities that will adversely affect resources, according to EPA literature.

Consider state-of-the-art technology in your designs to reduce adverse environmental impacts, the agency suggests.

For answers to wetlands questions call EPA's Wetlands Protection Hotline at 800-832-7828.

## GCSAA to sponsor Asian show next spring

LAWRENCE, Kan. — The Golf Course Superintendents Association of America is taking the opportunity of the booming golf market in the Pacific Rim to sponsor a golf course conference and show in Singapore on March 15-21, 1993.

GCSAA President William R. Roberts said the force behind planning the event is meeting the educational needs of the region's golf course management professionals and offering manufacturers and suppliers a cost-effective way to sell their products internationally.

"The booming golf market in this area of the world presents an excellent opportunity for GCSAA," Roberts said. "It is our intention — as it has been with our domestic activities — to produce a first-class conference and show with the highest quality level of education possible, and to make the event professionally rewarding for all."

A full program of educational sessions, seminars, a distributor program and trade show — all planned with multiple-language interpreting — will be offered to exhibitors and attendees.

International representatives from Toro, Jacobsen, Ransomes/Cushman, John Deere, Rain Bird, Robert Trent Jones II and Club Car have already committed to participate in the Pacific Rim event, the GCSAA said in a press release.

Exhibitor information will be mailed to industry representatives in July. Attendee information will be sent in August.

## Homestead resort to fight decision

GLEN ARBOR, Mich. — Developer Robert Kuras said he will find a way to build a golf course at the Homestead Resort despite a June 8 U.S. District Court ruling overturning national Environmental Protection Agency approval of the project.

The court ruling set aside U.S. EPA Administrator William Reilly's May approval of the controversial course near Sleeping Bear Dunes National Lakeshore. In approving the project, Reilly had overruled his EPA Chicago regional office, which had earlier rejected the course because of wetland considerations.

District Judge Richard Enslin agreed with environmental groups that the wetlands issue should have been transferred to the U.S. Army Corps of Engineers after the EPA regional office's objection. Reilly's decision went beyond the law, Enslin said.

Kuras is deciding whether to seek Corps approval, appeal Enslin's ruling, or choose another tactic.

## City official says no to golf plan

OYSTER BAY, N.Y. — A developer's plan to construct a golf course on the Shattuck Estate near the Long Island Expressway was shot down by Oyster Bay Supervisor Lewis J. Yevoli.

The county board of supervisors usually follows Yevoli's thinking. While the informal proposal had been put forth as a money-maker, Yevoli said it would actually cost the county money.

Yevoli added that the county purchased the property for parkland in the 1960s and that use should be confined to that area.

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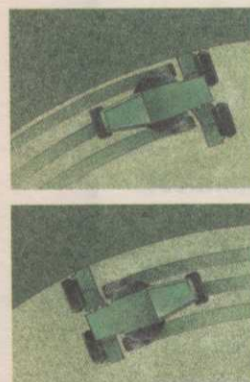
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Patented offset cutting units on the 2243 allow you to stagger your wheel tracks each day by simply changing the direction of your perimeter cut.



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## Pedal to the metal at Indy

INDIANAPOLIS, Ind. — It's full speed ahead for major renovation of the 27-hole Speedway Golf Course.

Architect Pete Dye has supplied the blueprints, the Hulman organization the money to keep construction crews in high gear in transformation of the course into 18 challenging holes. Completion date target is July 1993.

The ninth and 10th holes will become a mammoth driving range. Holes 7 through 10 will be outside the motor speedway track. The remainder will be outside.

The 14th hole will have two greens, one on either side of a water hazard.

A 50-foot spectator mound, which will run along the left side of the 18th fairway, will have the capability of seating 30,000 to 40,000 spectators, according to Rollie Schroedler, veteran Speedway head professional.



Pete Dye

## CC backers hope to boot soccer

PLEASANT HILL, Calif. — Backers of the defunct Pleasant Hill Country Club, who promised restoration of the old course, hope to give the boot to bank owners' plan to replace the fairways with a soccer field and children's playground.

Bank of America acquired the 50-acre property in March when Dividend Development Corp. of Santa Clara defaulted on its mortgage. Dividend, which closed the course in August 1990, had City Council approval

to build 104 homes and reduce the 18-hole pitch-and-putt course to a nine-hole executive course.

Golf course neighbors opposed to the Dividend plan now prefer it to the bank's new plan.

Said Robert Lambert: "When I bought my home 20 years ago, I thought in 20 years, when I retired, I'd be able to go up the hill and play a little golf. Now I'm faced with a tot lot. I'm a little big for a sand box."

## Jake Gaither GC improves security after robberies

TALLAHASSEE, Fla. — Players at Jake Gaither Golf Course still must worry about lost golf balls, but their wallets and well being should be safer now. Responding to an armed robbery of golfers last February and a 1989 beating — where a golfer was bludgeoned with his own clubs — city officials have improved safety conditions at the course.

Workers have cleared dense underbrush surrounding the course, particularly at holes 4, 5 and 6. The woods — where the suspects are thought to have lurked — are located at the furthest point from the clubhouse. Ranger patrols have been increased, and barbed wire will be added.

Course use dropped following the robberies, but the regulars have returned, according to club officials.

## Lost Springs G & AC off to very soggy start

ROGERS, Ark. — Despite more than a week of rain that forced closing of the new 18-hole Lost Springs Golf and Athletic Club the day after course opening June 6, project developer and architect Jim Lindsey forecasts a bright future for the development.

The \$3.5 million development includes a swimming pool, clubhouse and three apartment complexes with 600 units.

Pro shop staffer Greg White noted that membership is nearing 300. When that happens, the club will become private.

## Legislature OKs Ill. airport course

SPRINGFIELD, Ill. — Taking a golf flier on airport-owned land is becoming fashionable in Illinois.

Legislation giving the DuPage County Airport Authority permission to use airport-owned land for non-aviation purposes has been approved by the General Assembly. The bill has been sent to Gov. Jim Edgar for consideration.

Planned is a 180-acre, 18-hole golf course as part of a \$131 million airport expansion.

## Author's farm possible golf site

CLINTON, Tenn. — A golf course may take root on the farm of late "Roots" author Alex Haley.

Developers David Jones and Buford S. Bray have approached Anderson County commissioners concerning a course. They have first option to buy the farm and land and control 35 acres between Bufalo and Hines creeks.

Haley's estate would be preserved. Haley died Feb. 10.

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## Contract battle continues over Sandridge

FORT PIERCE, Fla. — A bitter contract bidding battle last February involving the \$1.95 million expansion of Sandridge Golf Course has exploded into federal grand jury deliberations in the local U.S. District Courthouse.

Jurors reportedly heard evidence involving Indian River County Commissioner Doug Scurlock, one of the commissioners who voted to award the project to Guettler & Sons, a Fort Pierce contracting firm.

Another bidder on the project claims Scurlock had previous business ties with Guettler.

Prince Contracting Co. of Palmetto, the apparent project low bidder, is suing Scurlock, Guettler

and the County Commission over the vote, claiming Scurlock had a conflict of interest.

Federal agents have been questioning witnesses and serving subpoenas in an attempt to collect evidence of possible corruption by "one or more" Indian River County officials.

Scurlock in mid-April resigned as chairman of the Land Acquisition Advisory Committee, the Finance Advisory Committee and the Solid Waste Disposal District.

Guettler firm president Phillip Guettler twice has appeared before the grand jury. Representatives of other firms with alleged or proven ties to Scurlock also have testified.

## Judge rules safety net stays

PLANO, Tex. — The 20-foot safety net Catharine and Joseph Mansour erected to stem the flow of stray golf balls into their yard and home may stay, State District Judge John Roach has ruled.

Errant tee shots from the eighth hole at Chase Oaks Golf Club have shattered several windows at the Mansour home. The city termed the protective screen a fence, which exceeded the eight-foot

high limit. Judge Roach ruled that a variance in one instance "was not contrary to the public interest."

Neighbors of the Mansours in the same line of fire are exploring similar safeguards.

Because the par-five doglegs to the right, some players try to cut the corner.

The Mansour home is a "hazard" fancied sluggers think they can carry. Too many fall short.



## City ponders future of course

SARASOTA, Fla. — "Fairways cross fairways, the layout is basically screwy," said Sarasota Mayor Jack Gurney of the American Course, part of the municipal Bobby Jones Golf Complex and renovated in 1988 for \$1.8 million.

City Commissioner Nora Patterson put it more strongly. "We just got taken to the cleaners. The project was badly done and a waste of money."

The city considered a claim against Prince Contracting, but concluded it did not have sufficient evidence to proceed.

The renovation saddled the golf complex with debt payments of about \$200,000 a year.

Since renovation, losses have ranged from \$21,706 to \$216,175 a year, Gurney said. Course options now range from leasing it to a private entity to "doing nothing."

## Frenchman's Bend on the legal mend

MONROE, La. — Investors Bishop Johnston and Mary Ann Johnston of Monroe and Larry Jones of Sterlington plan to revive the luxurious Frenchman's Bend development which ran afoul of lawsuits in the 1980s.

Additional investors will be sought for further development, which could include an Arnold Palmer golf course, clubhouse, recreational facilities, a lake, more lots and a bridge across the Bayou DeSiard north of Monroe to provide access to U. S. 165.

## Planners approve Hunter's layout

PASO ROBLES, Calif. — The county Planning Commission has unanimously approved a golf course on Highway 46 east of this city.

Environmentalists will appeal the decision to the Board of Supervisors, claiming the course will cause destruction of many plants, particularly blue oaks.

The commission recommended that it monitor oaks preservation during course development. Ken Hunter proposes to build the course.

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Refer: Michigan Turfgrass Proceedings, Vol. 4, Jan. 1975  
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# All points bulletin on (place your name here...)

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Have you secured that plum job at the ritzy club with deep pockets?

(Let us know.)

Or have you stowed away on a steamer bound for Fiji, in search of tropical tranquility and decidedly less snow mold?

(Tell us about it.)

*Golf Course News* wants to know where you've been all this time. When you move, it can take weeks — even months — for the world to catch up.

I know how it is. I've uprooted myself quite a few times over the years — so many, in fact, my



Hal Phillips  
editor

mother is convinced I'm part of the Federal Witness Protection Program.

Superintendents, like journalists, are known to be a restless sort. Assistants want to run the show and head supers are always looking for a better situation, a more forgiving climate.

The average superintendent generally spends three to five years at a particular course. This means approximately two percent

of the nation's courses — or about 250 — break in new superintendents every month. Furthermore, upwards of 250 new courses crop up each year — 351 in 1991.

Therefore, each month about 500 of you need to inform us as to your whereabouts.

In theory, one job change can set off a chain reaction affecting large groups of maintenance professionals. On a smaller scale, if someone takes a new job, that someone must be replaced.

In any case, when you've landed that new position, don't keep it a secret. People want to know... Like that guy you met at the trade show... Or that industry rep with whom you've developed a real

rapport... And that guy who may want the job you left behind!

The point is, it's a lot of work to tell every single acquaintance where you've gone to seek your fortune. So, let *Golf Course News* do it for you.

Every month, we plan to run the definitive list of "who's gone where." We'll come up with a snappy title, like "Who's Gone Where," or something like that.

When you've moved on, send your name, title, new club address and phone number to:

*Golf Course News*, 38 Lafayette St., Yarmouth, Maine 04096. Throw in your picture, if you like.

We'll do the rest.

## Education, the only protection against misinformation

Vice President Dan Quayle was teeing up at a golfing event recently and a foursome member, NFL football coach Hank Stram, asked, "What's your handicap?"

"Jay Leno," the VP replied with a smile.

The media — the dispensers of information from late-night talk shows to *The Wall Street Journal* — is powerful. And it can be more than a joke, or a harassment. It can be outrageous. It is often unjust. It can be terribly one-sided. It too often gives in to perversions, because some in it are perverted themselves.

Sorry, but you just can't trust what you see, hear and read in all of the press. And I'm not just talking about the Leno Show and super-market tabloids.

David Rockefeller, recently addressing the Bildenbergers (global government group) in Germany, began with these ominous words: "We are grateful to *The Washington Post*, *The New York Times*, *Time Magazine* and other great publications whose directors have attended our meeting and respected their promises of discretion for almost 40 years. It would



Mark Leslie  
managing editor

have been impossible for us to develop our plan for the world if we had been subject to the bright lights of publicity during those years. But, the world is

now more sophisticated and prepared to march towards a world government."

Sounds like major players in the media helped keep the "New World Order" under wraps for four decades!

Misinformation can be found in golf industry circles as well, especially with media coverage of all the public hearings on zoning, environmental and other issues involved with building and maintaining golf courses.

It is easy to grumble at newspapers and television news, and others who affect public opinion. But to do something about abuse, realize there are two major reasons for misinformation in the media: 1) Some report-

ers and editors have "a mission"; 2) others know no better than to believe a lie told by an "expert" who does or ought to know better.

Time science editor Charles Alexander said, "I would freely admit that on this issue we have crossed the boundary from news to advocacy."

Cable News Network environmental editor Barbara Pule said, "I do have an ax to grind. I want to be the little subversive person on TV."

Then, we hear stories of self-proclaimed "experts" who tell all sorts of half-truths and no-truths to planning boards and city councils. Neither the board members nor reporters know the statements are false, and they are reported.

The reporters in those cases are pawns. They need to be educated.

Edith Efron said: "I was particularly interested in understanding the role of the press in disseminating a group of major myths in which environmental cancer is now embedded. The manipulation of the press by scientists, above all by some government scientists, has been so severe that the issue that should concern us is the manipulation, not the press."

Even in advertisements — or should that be "especially" in ads — false impressions and even outright lies run amuck.

Kip Tyler, superintendent at Salem Country Club in Peabody, Mass., and editor of the newsletter of the Golf Course Superintendents Association of New England, reported an ad he heard on WBZ radio. Promoting a new public golf course in the area, it professed immaculate playing conditions that, according to the ad, "our other public courses do not."

"I was not aware that the area public courses offer (according to the ad) poor quality playing conditions, parched fairways, and scruffy groundskeeping," Tyler said.

Superintendent Pat Finlen said in an editorial in the *Cactus & Pine GCSA's "Cactus Clippings"* that a lawn care company's ad asked "Is your lawn poisonous?" and said pesticides could be hazardous to your children and pets if they were applied to your lawn.

Reading the company's claim to use alternatives to "all-chemical lawn care," Finlen said: "What I found offensive was not that they had alternatives, but that they chose to label all others as being poisonous, toxic chemicals."

Finlen called the firm and discovered its program consisted of using organic fertilizer. But when it came to getting rid of broadleaf weeds, the company would use potassium salt to selectively burn out weeds if he had little or no infestation; but if it was substantial, they would use more conventional means.

New, all-natural lawn care companies using scare tactics may draw new clients. But it also harms the image of golf courses, which can be perceived as overdosing the ecology with chemicals.

What can people in the golf industry do to solve this problem? Educate those boards, city councils — and reporters by speaking at their public meetings.

Take the lead from Bob Itamoto and Buster Bustamente, superintendents at Mauna Kea Beach Ho-

Continued on next page



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# Bridging cultural gaps with understanding and course design

By DESMOND MUIRHEAD

I am sad and melancholy at the growing rift between America and Japan. I hope that golf can help bridge it.

In the early 1980s I renewed my acquaintance with Japan, after a break with golf course architecture from 1974-1984. At this time I visited Tokyo to secure financing for some new towns we designed in Australia. It was then that I met Sabu Sawamura and Nitto Kogyo Co. They remembered New St. Andrews north of Tokyo, which we had designed with Jack Nicklaus in 1972, and which has since become one of Japan's better known golf courses. (Shinyo Golf Club near Nagoya, recently the venue for the Japanese match-play PGA Tournament, was the result of this visit to Tokyo. It took five years from conception to opening.)

We presently have five new courses under construction in Japan, each of which is unique in its own way. It may not be possible to build a great course each time as is frequently announced. Usually a great course needs time to become great.

After returning to golf course architec-

*Desmond Muirhead was educated at Cambridge University in England. He has designed more than 100 golf courses, including Muirfield Village and Mission Hills. He pioneered in the relationship of golf courses and residential developments. He has homes in Jupiter, Fla.; Newport Beach, Calif.; and Honolulu, Hawaii.*



Desmond Muirhead

ture, I made an extensive study of St. Andrews, which is the mother of golf course strategy, and concluded that there are a few definite underlying tactical principles, most of which were contained in St. Andrews.

They were like musical notes. They could be made into an infinite number of combinations to produce anything from musical comedy to grand opera. I was frankly after grand opera.

St. Andrews was also filled with symbols. Bunkers called Lion's Mouth, Coffin, Principal's Nose, depressions called The Valley of Sin, and so on. I determined to adapt these symbols to a new type of course to fix another important element of design memorability. Since then, I find it easy to recall all 18 holes of my courses and others can remember them by walking them once. Yet I cannot recall accurately all the holes at Mission Hills, Calif., which was designed in 1968.

The other attribute that St. Andrews has in great measure is atmosphere. It is holy ground like Charters Cathedral or the Meiji Shrine. We wanted a similar atmosphere on our new courses but we could not wait hundreds of years for it. So we had to infuse the designs with energy. In this way they could emerge full-blown with atmosphere.

We also felt the best courses had a powerful intellectual component. The best brains at the great University of St. Andrews reworked nature at St. Andrews. It is a myth that it was built by nature alone.

Other famous courses like Cypress Point, Augusta National and Pine Valley, besides having great natural sites, all have a strong intellectual component. We like to feel Muirfield Village and Mission Hills have this component. I believe Mission Hills' intellectual quality is the reason for its success.

Golfwise they are traditional courses. Yet, artistically they are often a break with tradition.

Greatness in a course comes from many ingredients. A great site — of which there are many potentially great in Japan, plus a great conception — is a wonderful start. The way you arrange the elements, the symphony of the hazards, the breadth and sweep of the sequence, the stimulation of the mass, void, distance and contrast which any great landscape must present.

The vast amount of cut and fill needed to build a golf course in Japan allows for sculpture on a large scale, and I like to think of myself as an earth-form artist.

This is exciting whether the course is filled with symbols as at Segovia, an orthodox course such as Muirfield Village, or the new golf course we are doing for Alpha Cubic in Japan. About one-half of our new courses are traditional.

I like working in Japan because I feel I have a more literate audience there than elsewhere. One of our clients, Seiji Tsutsumi, head of one of Japan's largest corporations, is a poet. That has to be very stimulating.

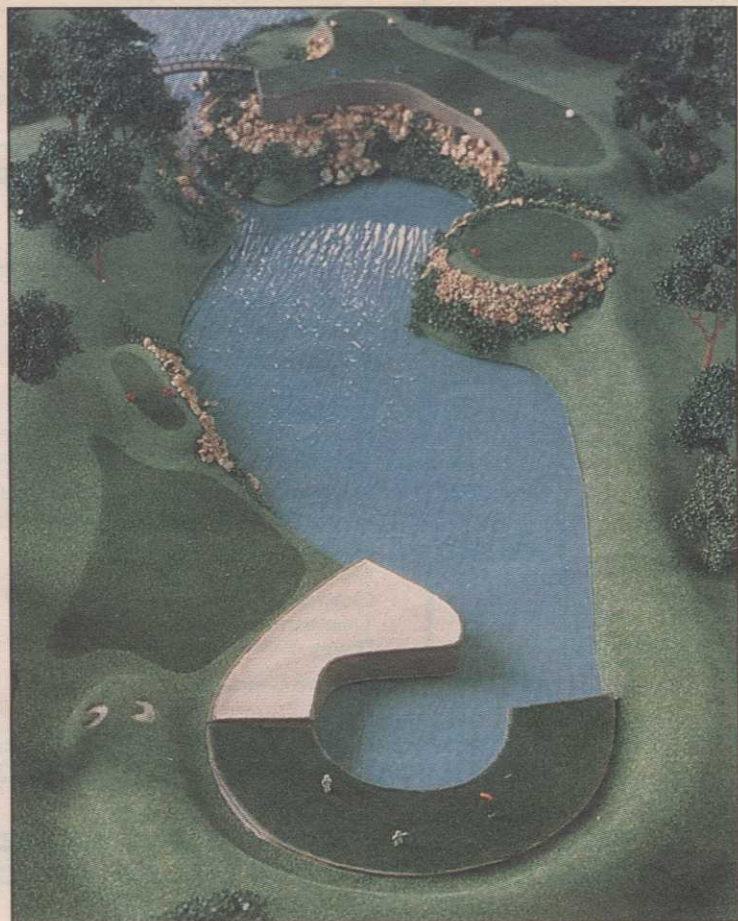
We like to think the wild, incalculable poetry of Japanese porcelain, which I collect, comes out in our work in Japan.

We want to make courses that compress the past, present, and future into one with myth and mystery, emotion and vision. As one designs, there is a surge of clustering

and fragmenting effects that are constantly adapting to the rhythms and sequences of both golf and the evolving landscapes.

In Japan, art is woven into the way of life. In the Anglo-Saxon countries, it is peripheral to it. So I would like each of my courses in Japan to be a masterpiece. I would like to become a national treasure of Japan like my admired acquaintance Kakiemon XIV.

Finally, never forget that everywhere golf is only a game, not a religion, a marathon or an endurance test. It should be entertaining, enjoyable, amusing and memorable.



*Pictured at right is a scale model of the 190-yard, par-3, 17th hole at Segovia Golf Club in Chiyoda, Japan, one of architect Desmond Muirhead's Far East projects. The 7,050-yard private club has a Spanish theme with each hole named after a symbol of that Mediterranean country.*

## Fighting press manipulation with education

Continued from previous page

tel and Mauna Lani Resort, respectively.

Speaking to the Hawaii County Council's Planning Committee, they detailed how their courses are watered and fertilized. They said they use little pesticides and herbicides, and they denied poisoning coastal areas or using water needed for domestic consumers.

Bustamente said much of what has been said about environmental hazards involving golf courses has been based on false as-

sumptions or misunderstandings.

The committee got a taste of the truth, not a dousing of error.

Henry Adams said, "Practical politics consists of ignoring facts."

By acting on your feelings and knowledge, perhaps you can make old Henry out to be wrong. If we sit idly by, watch out! The next action by an ill-informed public — driven on by a "mission-driven" reporter — could be in your own backyard.

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Attracting money for your golf or resort project is the key to your success. As the US money market pulls out of the recession you will discover what the new capital markets will be looking for and the types of projects, debt and equity ratios, IRR's and much more.

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Throughout the conference there will be a separate area where you can network with potential investors, buyers and sellers for your development. You will be afforded the opportunity to display your project (free of charge) in our buy sell forum... affording you instant feedback on your projects value and interest before an international network. Worth the price of the conference alone! Sign-up and get more details.

Note: Simultaneous translations will be provided throughout conference proceedings.

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### Monday, October 5, 1992

Tentative Schedule (subject to change)

- 3:30 PM Registration Desk Opens
- 4:30 PM **USA/Mexico Cultural Exchange Session**  
"How to Do Business in Mexico"  
A panel of banking, construction, government and legal experts will discuss doing business in Mexico and the Mexican culture.
- 6 - 7:30 PM Pre-Registration Welcome Reception & Cultural Exchange  
Cocktails & Hors d'oeuvres - Poolside

### Tuesday, October 6, 1992

- 9:30 AM **General Session I & Opening Ceremonies**  
Welcome by Mexican Government Official  
Special Keynote Address  
**The International Picture Part I**  
Finance, Market Feasibility & Investments
- 11 AM Business Networking Break  
Meet with up to 30 tabletop Exhibitors  
Plus: Buy/Sell Marketplace opens
- 11:30 AM **Concurrent Panel Discussion Sessions**
- | Golf Development  | Resort Development   |
|---|--|
| Our Panel of Experts will discuss financing, design, construction, market feasibility, and international trends affecting golf developments. Questions & answers will follow each Panel Session | Our Panel of Resort Development Experts will discuss opportunities and insights regarding timeshares, megaprojects, marinas and hotel resort developments. |
- 1:30 PM Special Keynote Luncheon
- 3 PM **Executive Workshop Series I**
- Financial Packaging
  - Market Feasibility for Golf
  - Master Planned Resort Developments - "MEGA Projects"
  - How to Attract Foreign Investors
- 4:30 PM **Executive Workshop Series II**
- USA/Mexico: NAFTA Update
  - Resort Development Opportunities
  - Land Planning & Use
  - Investments & Valuations
- 6:30 - 8 PM Meet the Speakers Networking Reception -  
Cocktails & Hors d'oeuvres will be served on the hotels terrace

### Wednesday, October 7, 1992

- 9:30 - 11:00 AM **General Session II**  
**The International Picture Part II**  
Management, Operations, Design & Construction
- 11:00 AM Business Networking Break -  
Meet the Speakers & Tabletop Exhibitors
- 11:30 AM **Executive Workshop Series III**
- Golf Course Design
  - Golf Construction
  - Management & Operations for Resorts
  - Management & Operations for Golf Courses
- 12:45 PM Tabletop Exhibitor Discussions & Meet the Speakers  
Private lunch meetings on your own
- 2:30 PM **Executive Workshop Series IV**
- Environmental Concerns
  - Clubhouse Design & Construction
  - Timeshares & Condos
  - Design & Construction
- 4:00 PM Program Concludes

A limited number of Tabletop Exhibits are now on sale. Call for more information 800-285-2332!

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### ATTENDEE PROFILE At Our Recent Conferences

80%	Developer/Owner
75%	Presidents/CEO's
60%	New To-Be Built
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35%	Private Clubs & Resorts
65%	Public & Semi Private Resorts

## Acapulco Mexico

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Type of Projects  
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• Timeshares

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**HAZARD COMMUNICATION COURSE SET**

A self-paced Hazard Communication Correspondence Course is now available from the Golf Course Superintendents Association of America.

The \$50 course features exercises on developing a written hazard communication program and how to write and conduct the training program.

GCSAA said superintendents completing the course should be in complete compliance with the OSHA Hazard Communication Standard. The course can be ordered from the GCSAA Education Department at 913-832-4444.

**TREESDALE HIRES NAPORA**

PITTSBURGH, Pa. — Larry M. Napora has been appointed director of greens and grounds at Treesdale, a new master-planned community here.

The appointment was announced by developer representative Jess Gift, president of Trees Development Co.

Napora is responsible for supervising construction of the 18-hole championship Arnold Palmer-designed course and, upon completion, will manage daily maintenance operations of the course and community grounds.

Previously, Napora was director of greens and grounds at Philadelphia Country Club. He gained recognition as superintendent at Oakmont Country Club.



Larry Napora

**JACKLIN GUIDE AVAILABLE**

POST FALLS, Idaho — A step-by-step guide for selecting, planting and maintaining top turfgrass varieties is available from Jacklin Seed Co. here.

The manual is designed to assist golf course superintendents and turf professionals in identifying the varieties, blends and mixtures, recommended seeding rates and planting instructions best suited to a variety of golf course applications.

Also listed is "troubleshooting" information to assist in diagnosing and treating common turfgrass disease and maintenance problems.

Contact Jacklin's marketing department, 5300 West Riverbend Ave., Post Falls, Idaho; 208-773-7581.

**GCSAA NOMINEES BEING ACCEPTED**

The Golf Course Superintendents Association of America is accepting nominations for the offices of president, vice president and director.

Deadline for nominations is Sept. 1, according to Nominating Committee Chairman Gerald L. Faubel.

Nominations should be sent to Faubel at GCSAA headquarters, 1421 Research Park Drive, Lawrence, Kan. 66049-3859.

# USGA specs undergoing facelift

By PETER BLAIS

Changes in greens construction recommendations and soil laboratory testing procedures are on the horizon as a result of a recently concluded study by the U.S. Golf Association.

The biggest change could make the previously mandatory 2-inch intermediate coarse-sand (choker) layer optional in areas where appropriately sized gravel is available to place under the top 12 inches of amended soil, according to Dr. Norm Hummel, a Cornell University turfgrass researcher who conducted the year-long study financed by the USGA Green Section.

The newly proposed specifications recommend that to forego the choker layer, 80 percent of the underlying gravel particles must be between 2 and 6 millimeters in diameter, Hummel said.

"I just got a note from a developer saying removing the intermediate layer would save him \$150,000 in construction costs. That's money that could be invested elsewhere on the course," Hummel said.

How about those unable to find the right gravel size who still need the choker layer? Don't totally despair, Hummel advised. Savings could be on the way there, too.

Hummel recommended increasing the range for intermediate sand layer particle sizes from their current 1 to 2 millimeters up to 1 to 4 millimeters. Builders are more

likely to find the larger diameter sands and fine gravels locally than they were before, saving transportation charges to truck in the finer sand from great distances.

"Developers have banged their heads against the wall trying to find the right intermediate layer sand for years. It shouldn't be a problem with the new specs. Many fine gravels fall between 1 and 4 millimeters," the university researcher said.

It is important to remember that these and other suggestions have not yet been accepted by the USGA, according to Green Section National Director Jim Snow. The Green Section Advisory Committee reviewed Hummel's recommendations at its June 8 meeting.

Snow planned to forward them to golf industry officials worldwide late last month and invite comment. Those comments will be collected by mid-August and reviewed by the Advisory Committee. The Green Section could act on them when its full staff meets in mid-October.

"I'd be surprised if most of the recommendations aren't adopted," Hummel said.



Dr. Norman Hummel

"There was some discussion at the Advisory Committee meeting, but not much disagreement. Europeans have some different ideas and different materials available, so they may want to modify some things. But I'd be disappointed if the recommendations changed greatly."

Among Hummel's other suggestions are:

- Changing the gravel layer from a uniform depth of 4 inches to one that is a minimum of 4 inches, but varies with the contour of the green.

- Allowing the top 12-inch amended soil layer to have 3 percent of its sand particles more than 2 millimeters in diameter and 10 percent more than 1 millimeter. "That tightens things on the upper end. More coarse material is allowed in the current specs," Hummel said.

On the finer end, the new recommendation would have 80 percent of the top-layer sand falling between 0.15 and 1 millimeter, with a minimum 60 percent between 0.25 and 1 millimeter. That leaves 10 percent that can be less than 0.15 millimeter.

"It would allow more fine sands than the current specs," Hummel said. "The idea is to allow the use of more local materials."

- Introducing specifications on soil selection and organic matter in the top layer. The final amended soil mix could have up to 3 percent clay and 5 percent silt. Organic matter in the top layer should contain at

Continued on page 20

## USGA unveils research progress

New bentgrasses on horizon due to USGA-funded turfgrass breeding



Environmental projects mostly in initial phases of preparation

Two new heat-tolerant creeping bentgrasses are expected to be released this year, and major strides have been made with native grass species — tangible results of ongoing research being supported by the United States Golf Association.

USGA Green Section National Director said in his 9th-year report on the 10-year turfgrass research effort that "important strides have been made in improving major turfgrass species for golf, including bentgrass, Bermudagrass, zoysiagrass and even poa annua."

He also said great improvements have been made with native species such as buffalo grass, alkaligrass, blue grama and curly mesquitegrass.

Snow said the expected bentgrasses will come from Texas

A&M University's breeding program, conducted by Dr. Milt Engelke.

One of these new cultivars will be named 'Cato' bentgrass, in honor of Paul Cato, a long-time supporter of golf, former president of Colonial Country Club in Fort Worth, Texas, and founding president of Bentgrass Research, Inc., which has contributed at least \$20,000 per year to Texas

Definitive information from the 21 USGA-sponsored three-year environmental research projects that began last year will not be available, for the most part, until the end of the study, late 1993 or early 1994, according to the United States Golf Association.

USGA Green Section National Director Jim Snow said in his first-year summary of the research that for most projects "1991 was a year of constructing facilities, developing and testing experimental procedures, and collecting preliminary data.

"It also should be pointed out that an ambitious quality assurance/quality control program was established for all of the pesticide and nutrient fate studies, ensuring data that can be validated under the closest of scrutiny."

The USGA donated \$3.2 million to the projects to investigate the effects of golf courses on the environment. Its Executive Committee determined to focus research on:

- the fate of pesticides and fertilizers applied to golf courses;
- development of alternatives to using chemical pesticides to control certain pests; and
- impacts and benefits of golf courses on

*Little the USGA does, or is likely to do, will have more effect on the future of golf than funding and monitoring turfgrass research.*

— David Fay

USGA executive director

Continued on page 23

## Brooks takes helm of Lawn Institute from retiring Roberts

James R. Brooks has been named executive director of The Lawn Institute, replacing Dr. Eliot Roberts, who retired May 1.

The announcement was made by Mike Robinson, president of The Lawn Institute and Seed Research of Oregon.

Brooks, 52, has held positions with the Professional



James Brooks

Lawn Care Association of America, Edgell Communications and the Golf Course Superintendents Association of America during the past 18 years.

Robinson said, "We are extremely pleased to have an individual of Jim's stature and reputation assume the leadership role for the institute.

"His proven expertise in marketing, public relations, and association management will enable The Lawn Institute to become even more active and visible in educating the public as to the environmental benefits of improved lawns and sports turf through use of better turfseed varieties, and in promoting the important role the turfgrass industry plays in helping to protect and enhance our environment."

The administrative headquarters will now be in Marietta, Ga. The new address is The Lawn Institute, 1509 Johnson Ferry Road, NE, Suite 190, Marietta, Ga. 30062; 404-977-5492.

Continued on page 23

# The rolling of the green

## Attaining tournament-ready putting surfaces has become an art and science for supers

By TERRY BUCHEN

**D**uring amateur and professional men's and ladies' championships, the superintendents and grounds crews work tediously for perfection in the slightest detail to have the golf course peak out during tournament week. Perfect putting greens are the most critical.

The art of green maintenance is difficult at best but some useful tools are available, and superintendents have taken them one step further with some innovative modifications. Multiple mowing, frequent light top dressing, and rolling of the putting surface help provide firm, fast greens in ideal tournament condition.

Adding weight to a walk-behind greensmower is one example of superintendents' ingenuity. Double Eagle Club has an old "walker" that the crew uses to mow greens and tees after they are top dressed. Then it rolls greens and tees, with the reel turned off.

On the course, we felt it was important to have weights, front and rear, to counterbalance the roller when making turns. We accomplished this by building a frame out

of 1-1/2-inch metal angle irons, using them as weight trays and then adding old, used bedknives on either side of the fuel tank.

With this type of design, we can add and subtract the weight we feel is needed on any given day. The rear bedknives weigh about three pounds and are from a five-gang lightweight fairway mower.

The front bedknives weigh about 1-1/2 pounds and are from walk-behind greensmowers. They are secured with 3/8-inch all-thread and the bedknives are stacked in an alternating type pattern. We are able to add up to 100 pounds on each weight tray and we can add some bricks to the front grass catcher for additional weight.

The front roller also is changed to the particular conditions of the day as we use a weihle roller most of the time but occasionally use a solid roller. The weight assembly is easily removed with three bolts on either side.

Bob Alonzi, superintendent at Winged Foot Golf Club in New York, uses a similar-type mower with a single frame on either side and a series of "lead"-type weights mounted horizontally over the top of the



Adding weight to rolling devices is one trick being perfected among superintendents.

Photo by Terry Buchen

engine. He has had excellent results for the many major championships held at his club.

Mike McBride, superintendent at the Muirfield Village Golf Club, has another excellent idea. The front reel on a walk-behind greensmower is removed and a large-diameter pipe is mounted in place, filled full of melted-down "lead," providing heavy weight concentrating on the front roller part of the mower.

This has proved successful for maintaining tournament conditions year round, plus beneficial during The Memorial Tournament on the PGA Tour, held annually in Ohio, McBride said.

The 1990s have brought a new type greens roller that is showing good results on tournament-caliber courses throughout the United States. A riding-type roller is newly on the market that rolls from side to side instead of the conventional forward/backward motion. It has two steering rollers that are 4-1/2 inches in diameter and one drive roller that is 6-1/2 inches in diameter.

The Speed Roller weighs 465 pounds. Another 300 pounds may be added by filling the drive roller with water. The standard rollers are made of steel nickel clad, with stainless steel rollers as an option. The rollers are 38 inches wide, are

powered by a 5.5-horsepower Honda engine, has a hydrostatic-type transmission, and is almost twice as fast as using a walk-behind greensmower type roller because of its width and because the turnabouts on the greens edge are virtually eliminated.

The Speed Roller is manufactured in Gasport, N.Y., by Friend Manufacturing Corp., which has been in business since 1895 and has made some durable golf course sprayers used frequently today. For further information, contact The Turf Keeper, Inc., P.O. Box 529 Honeoye Falls, N.Y. 14472; 716-624-4221.

A similar roller is also available from Australia that is being distributed through Woodbay Enterprises in the Phoenix area, (telephone 800-661-4942). It is called the Smooth Roll.

"We are really excited about the results we are seeing with these side-by-side new rollers on the market that superintendents are using when hosting one of our events," said Allan MacCurrach, senior agronomist for the PGA Tour, who is a former superintendent.

"We are seeing Stimpmeter speed increases of around one to 1-1/2 feet after using either one of these new type implements," observed Dennis Leger, assistant agronomist for the PGA Tour and a well-respected former superintendent.

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## Gaines retires from UGeorgia, but will continue his work at Tifton Lab

T. Powell Gaines has retired from the University of Georgia Coastal Plain Experiment Station at Tifton after more than 26 years as a research chemist in the Agronomy Department.

He will continue his work as owner and president of the Tifton Physical Soil Testing Laboratory, Inc., which he founded in 1976.

A native of Elberton, Ga., Gaines received a bachelor's degree in chemistry in 1961 from the University of Georgia and was director of the Soil and Plant Analysis Laboratory for more than 15 years.

During his career at the Experiment Station, Gaines published more than 170 scientific publications with 95 co-authors.

He developed and published 32 chemical methods for soil and plant analysis, wrote two chemical method handbooks on soil and plant analysis, and received more than 2,000 reprint requests from over 100

foreign countries for copies of his publications.

A certified professional chemist, Gaines was selected a fellow in both the Association of Official Analytical Chemists and the American Institute of Chemists.

He is a member of the American Society of Agronomy, Tobacco Chemists Research Conference, Tobacco Workers' Conference, and American Peanut Research and Education Society.

He is also a member of the Council on Soil Testing and Plant Analysis and is listed in Who's Who in the South and Southwest, Who's Who in Science and Engineering, Who's Who in Georgia, and the American Men and Women in Science.



T. Powell Gaines





# Cummings: Mastering communications smooths the way

By VERN PUTNEY

"The greatest need for a golf course superintendent today is to learn how to communicate." Use of the written word to inform, educate or explain can avoid many problems, said John C. Cummings, superintendent of golf course and grounds at Berry Hills Country Club in Charleston, W.Va.

Cummings uses a unique question-answer approach to keep membership abreast of course developments. Whenever there is an annual meeting to discuss and vote on capital improvements, Cummings prepares a written question/answer format which is mailed out in the annual report.

He tries to put down any question, no matter how seemingly trivial, that he figures a member might ask. This way, no one is put on the spot at the meeting. Their questions have been answered. This process sold a conversion of Berry Hills' fairways to Bermudagrass in 1988. Cummings used this packet to "sell" the need to reconstruct the 40-year-old bunkers on the course and to sod green and bunkers banks to bluegrass. (Construction began in March.)

It is his experience that, if informed ahead of time, membership will support your program. They don't like surprises.

Cummings was first attracted to golf at

age 14. The native of West Virginia worked five summers at the Marietta, Ohio, Country Club pro shop under Bernie Wentis, and two summers on the grounds crew under Charley Lincicome, now at Bucknell University Golf Course in Lewis, Pa.

All the books on management couldn't compare to knowledge gleaned in the field, declares Cummings. "Wentis and Lincicome nurtured and encouraged, and much of my program today is a product of their teachings."

Here's Cummings' question outline and responses:

Q. Does your club or facility demand posting for pesticide applications?

A. No, but I voluntarily post notices at the first tee and the pro shop on days we spray. The signs stay up for 24 hours. We are prepared for mandatory posting in the future.

Q. Are you in "Hazard Communication Compliance" in your maintenance facility?

A. Yes, we have had video training films for our personnel who handle pesticides or other hazardous materials. We post a list of all hazardous materials used at the workplace.

Q. Is your aerification (cultural practices) based upon proper agronomic timing or golfing event convenience?

A. Yes and no. In 1990, I was forced to

aerify and top dress based upon the golf committee's event schedule. At the time allowed for me to aerify, we received heavy rain in the afternoon. I had topdressed heavily following coring. I had seven greens with topdressing material on them which could not be dragged or brushed

in. I lost three greens because the turf was smothered by heavy, wet top dressing.

Since that incident, I sit in on golf committee meetings when they schedule events. They work around my plans. If conditions are too bad, I can use my own judgment as to when to aerify, considering the nature of the event such as a one-day best ball versus a three-day member-guest.

Keeping all parties updated is the professional way. Any phone calls will be met with the correct response. A member doesn't want to bring our three guests and be surprised. Members frequently contact me to ask when the greens will be back to normal. This way, if need be, they can play elsewhere.

Q. If it is based on proper agronomic timing, how have you convinced your superior to accept this?

A. They have learned through the problem encountered in 1990. We aerify between April 15 and May 15, depending on soil conditions and soil temperature and when or if we are applying pre-emergent herbicides and/or TGR's. We then aerify the day after Labor Day, again weather permitting and hinging around the TGR application and any overseeding plans. We need to do it early enough for full recovery before cold weather hits.

Q. Do you have communication with the pro shop staff?

A. Yes. Usually once or twice a week to find out about upcoming events — size, timing, shotgun starts, tee times, amount of play the previous day, etc.

We also meet once a week with other department heads and our general manager to hear the general activities of the entire club.

Q. Schedule of events for the year?

A. Yes, I sit in on committee meetings. I hear their plans; they hear mine.

Q. Daily contact and communications?

A. Not every day in person. We do, however, fill out and post a "Course Status Card" at the pro shop that informs them and the players of the cart policy for the day, what we are mowing, if we are spraying chemicals, and pin placement sheet.

Q. How are you notified for non-scheduled events (last minute)? A. We receive a "party" or event sheet for outside outings ahead of time. We try for no last-minute events.

Q. Are you limited on irrigation times? If not, how do you communicate this to the membership or public?

A. We are not limited to irrigation times by the utility company or anything like that. However, if I water in the morning, I schedule the controllers so that they are ahead of the first group of golfers, off at 8 a.m. I try to do my heavy watering on Mondays, when the club is closed, and at

SUPER FOCUS



John Cummings at Berry Hills Country Club.

night, between 10 p.m. and 4:30 a.m.

If I need to water in a pesticide or fertilizer during play, I avoid heavy play days, and also inform the pro shop to let the players know of irrigation. This need is rare. A crew member or I will stay at the controllers when we syringe greens, for example, so as not to get anyone wet.

Q. Who has final decision on course closings?

A. Usually it is agreement among the golf pro, green chairman and myself. I inform them of the reasons for closing. We consider the day's special events. At times a superintendent must look the other way for the good of the club revenue-wise. For example, we would hate to turn away a \$10,000 outing.

Q. Who has final decision on cart limitations?

A. Most generally I do. We have a complete cart path system from #1 through #18. We never close the course to cart traffic. We will close the course when turf conditions are too wet.

In the spring, coming out of dormancy, we keep the carts in the rough on paths. In the summer, we prefer that carts travel in the fairways rather than the rough, which is mainly cool-season turf. The Bermuda can withstand the traffic in the summer, but damage can occur if traffic is allowed at dormancy break. Very seldom do we use a "Rough Only" sign. This leads to a worn area just parallel to the fairway. Golfers won't think to scatter, instead falling into a "follow the leader" pattern.

Cummings, who gained CGCSA status in 1984, prepared for the Berry Hills post he's held since 1984 with superintendent positions at Clarksburg (W.Va.) Country Club, and Chartier's Country Club in Pittsburgh. He also was assistant superintendent at Sandy Brae Golf Course in Amma, W.Va.

A member of GCSAA since 1977, offices include past director of the Greater Pittsburgh GCSA, W. Va. GCSA president 1990-91; vice president and secretary-treasurer and past chairman of these committees while serving on the W. Va. GCSA board since 1981 — bylaws, education, fund-raising, membership, pesticide workshop and golf.

Cummings' lone regret at his "workaholic" ethic is lack of quality family time. Wife Cindy and sons Alan, 8, and Philip, 5, have suffered somewhat.

The 1978 Ohio State University graduate, with a bachelor's in natural resources, specializing in parks and recreation administration with emphasis in turf management, is remedying home time shortage via a capable assistant.

The best part of that setup, said Cummings, was having Sundays off last summer, and attending church as a family.

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## Back to school pays off for Antoniazzi, 35

By PETER BLAIS

Out of work and low on options, Paul Antoniazzi was not looking ahead to the summer of 1990.

Like many laid-off workers in the economically depressed Northeast, the 35-year-old production worker was wondering what the heck to do with the rest of his life when the Pittsfield, Mass., General Electric Co. plant closed that May.

Few jobs remained in western Massachusetts for a 10-year production worker with a 13-year-old bachelor's degree in natural resources. But being a father of two, Antoniazzi wasn't about to give up.

He knew several students who had gone through the University of Massachusetts' Stockbridge School of Agriculture and emerged with degrees and jobs.

He also discovered the Training and Re-education Act, a partnership between the federal government and private industry to help pay for retraining of American workers laid off due to foreign competition.

To take advantage of the program, students must train in a growing field with good employment potential.

Antoniazzi took a battery of aptitude tests and came up strong in horticulture. An admissions counselor recommended turf management. Though he had no prior turf experience, and classified himself as an "occasional golfer," Antoniazzi enrolled in the two-year turf management program that fall.

"I was very hesitant to go back to school at the beginning. I worked extra hard and did very well on tests. Fortunately, I've been one of the better students right along," he said.

Added Professor Richard Cooper, coordinator of the UMass two-year program: "One of the few positives from the bad economy is that we've had money available for retraining. A lot of older students, who have lost their jobs, have taken advantage of it.

"They've increased the number of incoming students to the turf program and improved the quality of students. Older students are a more career-oriented bunch. Most have been top-notch, motivated people."

Antoniazzi began a five-month internship in March 1991 at Cranwell Resort & Golf Course, a 70-year-old Wayne Stiles and John Van Kleeck layout in nearby Lenox. He trained under superintendent Karl Baumann, also an older student, who had graduated from

UMass a few years earlier.

"Many other students had already worked on golf courses. But that internship was invaluable for me because I didn't have any previous experience," Antoniazzi said.

Antoniazzi's wife, Mary-Lou, along with his children, Jessica,



Paul Antoniazzi

9, and Daniel, 6, attended graduation ceremonies in late May. He returned to Cranwell as assistant superintendent shortly thereafter.

"It's worked out perfectly," Antoniazzi said.

"There was a lot of anxiety. Losing a job is awful, especially when there is no place else to go. And raising a family while going to school is tough.

"But everything has worked out for the best. I'm doing something I like and my family couldn't have been more supportive."

## Brooks appointed superintendent at Palmer-run The 'K' Club in Ireland

ORLANDO, Fla. — Tom Brooks has been named golf course superintendent for The Kildare Hotel and Country Club (The "K" Club) in Straffon, Ireland.

Robert Holzman, Arnold Palmer Golf Management Co.'s chief operating officer, announced Brooks' appointment when it reported on May 29 that the firm had signed a course maintenance service agreement with the "K" Club.

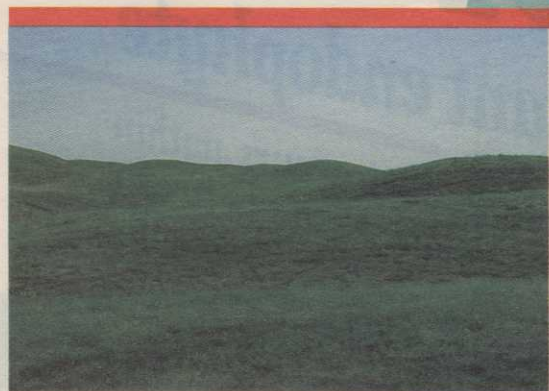
The "K" Club is an exclusive

country club, which features an 18-hole Palmer-designed course.

Brooks assumed his position on July 1. He had been working as assistant superintendent at Dayton Valley Country Club in Nevada — a Palmer-managed facility — for two years.

He has 12 years of experience, and was awarded a bachelor's degree in horticulture, with a minor in business administration from the University of Nevada in 1988.

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*'Older students are a more career-oriented bunch.*

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— Prof. Richard Cooper  
UMass

# Soil laboratory tests will be standardized nationwide

By PETER BLAIS

The U.S. Golf Association Green Section plans to use the year-long work of Dr. Norm Hummel to standardize laboratory testing procedures on soil samples for golf course construction, hopefully ridding the industry of inconsistent lab results and helping ensure quality construction.

The USGA plans to adopt the testing procedures and seek their approval from the American Society of Testing and Materials this summer, according to Green Sec-

tion National Director Jim Snow.

The Green Section Advisory Committee discussed Hummel's recommendations June 8. Snow declined to discuss the specifics of the new testing procedures until "a couple loose ends" are straightened out in late June or early July.

"I'd rather not say something now when we're not sure exactly how they will read," he said.

Developers have long been frustrated by sending identical soil samples to different labs and getting different results.

*No one has overseen testing procedures for soil samples, so individual laboratories evolved their own techniques. That's why builders can send off the same soil sample to different labs and get different numbers.'*

— Jim Snow, USGA Green Section

"No one has overseen testing procedures for soil samples," Snow explained, "so individual laboratories evolved their own techniques. That's why builders can send off the same soil sample to different

labs and get different numbers."

Once the testing procedures have been adopted, the Green Section will begin sending out blind tests once or twice yearly to make certain soil laboratories are using the

standardized tests. If the results are far different than expected, the Green Section will work with the laboratory to correct its procedures.

Snow said about eight labs are doing only golf course soil testing, while another eight would like to either become involved or currently test golf course samples as part of their overall business.

"We'll encourage builders to use experienced labs employing the standardized tests," Snow said.

Snow said the Green Section will also make available soil-testing equipment that can be used to test soil mixes on site, making it unnecessary to send samples to a lab.

"Many builders don't have time to take samples and send them to a lab," Snow explained. "That has caused problems. For instance, some courses have ended up with half as much organic matter in their soil mix as they wanted. Others have had twice as much."

Unlike laboratory equipment, on-site test apparatus measures weight rather than volume, Snow said. It costs less than \$1,000 or can be borrowed from regional Green Section offices as part of their Turf Advisory Service.

## USGA green specs about to change

**Continued from page 15**  
least 80 percent organic material and a fiber content of 20 to 50 percent.

"Compost is becoming more readily available throughout the country and is being used in golf course construction," Hummel noted. "Finely ground bark, rice hulls, sewage sludge and other organic waste products can be acceptable if composted to the curing or stabilization state. The use of compost will have a precautionary note because of the variability of different products."

- Returning infiltration rates to the specifications. The USGA would recommend two sets of numbers — a normal range for the favored grass species in that geographic area and an acceptable range in unusual circumstances, i.e. poor water quality or a cool-season grass used in a warm-season climate.

- Moving fertilizer recommendations out of the Green Section's "Tips for Success" and into the USGA specifications.

"Everyone I've worked with has been very cooperative and felt the specifications review and standardization of lab procedures needed to be done," said Hummel, who will return to his Cornell post in July.

Hummel said he was surprised at his historical review of the scientific literature that led to some of the USGA specifications. For example, no research was done to support the use of the choker layer, he said.

"It seemed to be an arbitrary decision that it should be there," Hummel said. "It worked and served a purpose, so it became an accepted part of the specs."

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# Prestigious climb continues for trailblazing superintendent Patty Knaggs

By HAL PHILLIPS

Patty Knaggs clearly didn't have time to sit down and discuss the last thing on her mind — namely, her recent hire as head superintendent at Hazeltine National Golf Club in Chaska, Minn. She graciously found time. But over the course of an hour-long interview, Knaggs was never afforded a moment to relax; duty never stopped calling... She advised crew members on which rain gear to buy; wrangled with an industry rep who couldn't find the solid tines she needed; excused herself to meet a new rep who had dropped by the maintenance compound; and answered a constant flow of phone and walky-talky calls.

Twelve days into her new job at Hazeltine and Patty Knaggs was definitely in the flow, under the gun — and loving every minute of it. "This is a great operation," she explained in between phone calls. "You can tell it's been very well run for a long time — by the former superintendent and the members.

"There have been adjustments, but they've all been good adjustments." Knaggs came to Minnesota by way of Westchester Country Club, where she was head superintendent for three years. Her experience at the Rye, N.Y., club — PGA Tour stops, a demanding membership — prepared her well for Hazeltine, site of two U.S. Opens including the 1991 affair.

She wasn't, however, prepared for the weather. "It's milder here than where I came from," she observed. (Indeed, the mercury hovered uncharacteristically around 85 on this early-May morning.)

"It's been fun. You can't beat a climate where it's 80 degrees every other day, and the attitude of all the people here has made it so easy for me. "They're constantly funding new projects here. It's nice to work for an organization that knows exactly what it wants. The prevailing attitude is, 'Golf is the reason we're here. We're not here for any other reason.'"

That feeling carries over to the grounds crew, including longtime Hazeltine assistant superintendent Dave Deem. "That's one of the reasons I felt comfortable coming here. Dave went out of his way to be polite, and he didn't have to do that."

Coming in on top of an existing staff is never easy — for a woman in a predominantly male field, the situation might have been quite touchy. But Knaggs maintains the transition has been smoother than smooth — not that it keeps her awake nights.

"I honestly don't think about it. Other people bring it up. I'm just doing what I enjoy doing."

Born and reared near West

Point, in Cornwall-on-the-Hudson, Knaggs gravitated towards maintenance work from an early age, "because I always liked to be outside."

She parlayed that interest into a rapidly ascending career.

After graduating from the turf management program at the University of Massachusetts in 1983, Knaggs worked on grounds crews at West Point, Eastward Ho! in Chatham, Mass., and Mt. Kisco Country Club in suburban New York.

She served as assistant superintendent at Echo Lake Country Club in Westfield, N.J., and The Country Club in Brookline, Mass. before taking the Westchester job.

With her move to the Midwest, there can be little doubt that Knaggs, now 37, occupies the most prestigious position of any female superintendent in the nation. Yet she doesn't fancy herself a trailblazer.

"I meet more and more of them all the time," said Knaggs after ticking off the names of a

few female superintendents in the New York area.

"I'll tell you this: They're all survivors. And I would trust that they're pretty competent people. That's a gross generalization, but the competition is tough out there."

Do women have to go that extra mile to earn respect commensurate with their male peers?

"I don't know if women have to be better. But I think they have to make people think they're a little better."

"Perception can be reality."

...

A month removed from that sweltering May morning, Knaggs' perception of Hazeltine hasn't wavered.

"Things are going really well," she said. "It's just a wonderful club because all they have is golf. They care about golf like it's a member of the family."

But reality has set in. "It snowed on Memorial Day," she reported.

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# Biogenetic researchers in quest of better disease resistance

Continued from page 1

"As extraordinary as it may seem, in fairly low frequencies, DNA becomes integrated into some of the target cells. If it confers a selective advantage on the tissue culture medium, grass cells with that advantage will grow," Day said.

Day's colleague, Dr. Lisa Lee, will use this technology in a three-year, USGA-funded study titled "Development of Improved Turfgrass with Herbicide Resistance Through Transformation."

Dr. William Vance Baird of

Clemson University also received funding for a project on "Low Temperature and Drought Regulated Gene Expression in Bermudagrass" as part of the USGA's \$4.15 million in 1993-97 research grants.

Others interested in genetic research include Turf Seed and Jacklin Seed, both reportedly studying biotechnological methods of introducing herbicide resistance. Japanese companies are also rumored to be spending millions of dollars in genetic research on turfgrass.

"The United States has had superiority in biological research for years. But the Japanese are catching up. If they put serious money into genetic turfgrass research, like they put money into VCRs, they could probably out-compete us," warned Jacklin Research Director Doug Brede.

Day said work at Rutgers has been successful in using endophytes to control insects in turfgrass.

Day believes that grasses resistant to broad-spectrum herbicides transferred into turfgrasses

would enable superintendents to treat weedy areas without killing the grass.

Presently, often the only choice is to re-sod a heavily weed-infested area, an expensive and time-consuming process sure to result in disgruntled golfers, Day explained.

If all goes well, genetically engineered, herbicide-resistant grasses could be on the market in four to five years, Day predicted.

The technology could be expanded to traits like drought resistance and shade tolerance. But

that could take longer, since identifying the genes responsible for those traits is more difficult than identifying the genetic material causing herbicide resistance, the Rutgers researcher said.

Baird's work on cold and drought tolerance is more preliminary than Day's, Baird said. Clemson researchers have done considerable work on broadleaf plants, mostly food crops, that Baird hopes may be applicable to turf.

Baird is scouring the country in search of the most cold-tolerant Bermudagrass germplasm available. He will use that material to try to understand cold hardiness at the genetic level.

That will be difficult because the trait is complex. It probably is not controlled by a single gene as is most herbicide resistance, he explained. The same is likely true of drought resistance, he added.

Baird hopes to have a positive identification of both traits by the end of the three-year USGA funding.

Introducing the genetic material to Bermudagrass tissue will not be difficult. Getting the turfgrass to regenerate from a few cells will, he predicted.

"Turfgrasses have been hurt by lack of research in the regeneration area," the Clemson professor said. "More work has been done on food crops because they are generally considered more important."

Scientists have identified a gene in halibut that stops the fish's blood from freezing in cold northern waters, Baird said. The gene is being tested in food crops, which could eventually benefit turf research, he added.

Turf Seed is supporting university work into genetically engineered herbicide resistance, according to company plant breeder Crystal Fricker. The Oregon-based firm is also working on marker genes that would help identify its grasses and make certain other companies did not infringe on its patents, she added.

As for herbicide resistance, because of the regeneration problem, "We're probably five years away from a biotechnically engineered grass," Fricker said. "And it would take another two years to register it."

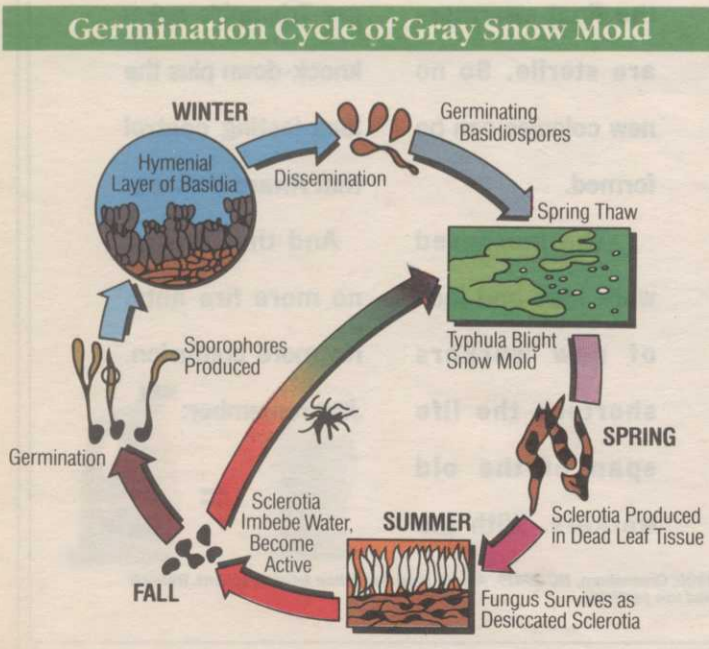
Brede predicted a genetically engineered, herbicide-resistant grass will be available in 10 years, with drought- and disease-resistant strains 20 to 30 years down the road.

Japanese companies, with whom Jacklin has already had some preliminary discussions, could get there sooner, Brede said. While the U.S. government stresses competition, the Japanese encourage two or three companies to cooperate and pool finances on research efforts.

"Sometimes that stops us from doing research as effectively as the Japanese," Brede said.

## 4 Reasons Why You Need TERRANE B SP

<h3>1 GRAY SNOW MOLD</h3> <p>Also known as Typhula Blight, Gray Snow Mold attacks most northern turfgrasses. The disease usually develops under a snow cover and is seen as the snow melts. Fungus development is favored by high soil moisture and temperatures between 32 and 40 F. Usually visible at the first spring thaw, it appears as circular dead areas up to 6 inches in diameter, but can grow to 2 feet or more and eventually kill large irregular areas of turf. Typhula Blight not only attacks foliage, but infects deep into the crown area, completely destroying the plant.</p>	<h3>2 PYTHIUM</h3> <p>Pythium attacks all cool season turfgrasses and Bermudagrass, especially grass seedlings, which will die (damping off), resulting in irregular dead patches in the turf. Normally, it is a high temperature, high humidity and wet weather disease. Mower movement will spread fungus from diseased areas to healthy areas, thereby quickly spreading the disease. Late stages of pythium can spread very quickly and can kill large, irregular sections of turf in 24 to 48 hours.</p>	<h3>3 BROWN PATCH</h3> <p>The most common turf disease, Brown Patch, can destroy a stand of bent-grass within a few days. Prevalent during extended periods of high temperature and humidity, the disease is also encouraged by poorly drained soil, lack of air circulation and excessive nitrogen. At first it appears as a circular area of light brown grass, ranging from a few inches to several feet long. The circular areas grow and turn brown.</p>	<h3>4 SCLEROTIUM BLIGHT</h3> <p>Also called Southern Blight, Sclerotium Blight attacks annual bluegrass, Kentucky bluegrass, ryegrass and bent-grass in all sections of the country. The fungus begins to spread from the soil and surrounding debris to the grass during hot, humid weather. In its early stages, the disease looks like a frog-eye, having small, circular dead areas with tufts or apparently non-diseased grass. The circles may grow up to three feet in diameter.</p>
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## Studies seek wider range

Continued from page 15  
people and wildlife.

The information on the fate of pesticides and nutrients applied to turfgrass is encouraging but somewhat limited.

"The downside of previous studies," Snow said in his report, "is that they were conducted under a limited set of conditions (i.e., climates, soils, irrigation, pesticides, turfgrass species, etc.), leaving much room for speculation."

The commissioned studies cover a wide range of management factors, climates, and sampling methods.

Alternative pest management studies will investigate biological control; nonchemical control including cultural and mechanical practices; allelopathy (concerning genes); selection and breeding for pest resistance; ecological balance of turfgrass species; and application of integrated turf management practices using integrated pest management and low cultural inputs.

The look into golf course benefits and influence includes studies concerning:

- biological diversity of flora and fauna in urban, urbanizing, and urban-agriculture fringe areas;
- local soil and climate regarding gaseous and particulate pollutants that affect air quality; temperature, humidity, and wind modification; soil stabilization and watershed management; and noise modification; and
- psychological and physical well-being of people, and the importance of landscape aesthetics to humans due to the interaction between people and plants.

Snow pointed to three publications that are forthcoming from funded projects that were not of three years duration.

"Golf Course Management and Construction: Environmental Issues," a 900-page review of scientific literature on this topic, was due out in June.

"Naturalizing the Human Landscape," due out late this year or in early 1993, details natural vegetation zones in the United States, including information on native plants and how to use them to benefit wildlife on golf courses.

"Quantification and Validation of the Beneficial Contributions of Golf Courses and Turfgrasses," also due out late this year or early in 1993, is a seminal article on the environmental benefits of golf courses. It will be submitted to a major, peer-reviewed, scientific journal and also be published in a "popular" form as an extension bulletin or similar format, Snow said.

GOLF COURSE NEWS

# Turfgrass research reportedly paying dividends

Continued from page 15

A&M's bentgrass breeding program for the past seven years.

Engelke reported to the USGA that two new golf courses have selected Cato for use on all new greens. One course is in Montgomery, Texas, just north of Houston and the second is just south of Dallas.

"Reselection, hybridization, and advanced screening programs resulted in the development of seven new polycross populations in 1991," Engelke reported. "These, in addition to the 14 populations generated during 1990, are being extensively evaluated for heat resistance, root growth characters, disease resistance and

leaf hydration response."

Snow was optimistic about research into buffalograsses.

He said the 609 variety should be readily available to golf courses this year, adding, "These native grasses use considerably less water than most other turf species and will significantly reduce water use on golf courses where they can be used to replace cool-season grasses."

The USGA's 10-year research effort, with support from the Golf Course Superintendents Association of America, is aimed at reducing water and pesticide use and maintenance costs. The major thrust has involved developing new grasses and

improved cultural maintenance practices that meet these objectives.

Snow said superintendents have "enthusiastically embraced the testing of potential new grasses, putting them to high stress conditions. Seed companies have just as enthusiastically cooperated with investigating scientists in testing and screening potential new introductions for seed yield and other desirable characteristics."

USGA Executive Director David Fay wrote in the 9th-year report: "Little the USGA does, or is likely to do, will have more effect on the future of golf than funding and monitoring turfgrass research."

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CIRCLE #120

# Curbing dollar spot blight a battle of changing weapons

Left unattended, the disease can wipe out a green or fairway quickly

## DOLLAR SPOT SYMPTOMS

- Light areas may progress to hourglass lesions
- Leaves may be girdled
- Dispersed bleached areas
- "Dollar-sized" straw colored spots
- Depressed areas
- White fungal masses on leaves
- Roots may degenerate

By PETER BLAIS

As late-summer days warm up and nights cool down, superintendents' dreams of lush, green fairways turn to nightmare visions of foliar yellow lesions that attack healthy stands of grass and turn them into round, sunken patches joining like some sickly Olympic symbol of blighted turf.

No silver medals are awarded to superintendents finishing second to dollar spot, just pink slips.

"It's a real problem up here as we get into the warm, damp days and cool nights of August and September," said Jim Diorio, superintendent at Purpoodock Club in Cape Elizabeth, Maine.

"It starts out about the size of a silver dollar. But it can wipe out an entire green or fairway pretty quickly if left untreated."

Cool-season, bentgrass courses are more likely to treat for dollar spot, the most persistent of all

fungus diseases in managed turf, according to Rhone-Poulenc Technological Development Manager Tom Vrabel.

Warm-season and transition-zone Bermudagrass courses can also suffer from the fungus, although brown patch and red thread are usually bigger problems.

Fortunately, fungicides that control brown patch also curb dollar spot. In fact, one of the saving graces about dollar spot is that most fungicides will tame it, temporarily.

"If caught in time, dollar spot is relatively easy to control," Vrabel said. "The problem is that it can become resistant to a certain fungicide fairly quickly."

"Dollar spot and pythium show the greatest tendency to become resistant to a certain class of fungicides. And once it becomes resistant it often stays that way, even if you come back with the same chemical 10 years later."

The biggest advance in dollar spot research in the past few years is the understanding that it cannot be controlled by a single product, Vrabel said. The best technique is to rotate the fungicide class by the treatment, month, or season.

Some application specialists even recommend mixing fungicides with two different modes of action in the same tank treatment, he added.

"Look for the rotation that best fits your area," Vrabel recommended. "Contact a local turfgrass specialist and find out the best program for your region. It's an evolving science."

A fungicide's effectiveness can be prolonged by using as little as possible as infrequently as possible, Vrabel added. Although preventive applications to stop dollar spot are frequently made, the fact it can be effectively beaten back after symptoms appear helps limit fungicide use.

Preventive applications for diseases like pythium or brown patch must be applied continually. Once the symptoms for those diseases appear, the turf is often lost, Vrabel said.

But the superintendent walks a fine line with dollar spot.

Wait too long to treat an infected area and poa annua, which germinates in late summer, can get a foothold in the diseased turf, Vrabel warned.

"Before you know it, you're well on your way to a green that's 50 percent or more annual bluegrass," he said.

Cultural controls that can help control dollar spot include deep, frequent irrigation; avoiding watering in late afternoon or evening; improving air flow across turf; minimizing thatch; and maintaining adequate nitrogen and potassium levels during summer.

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**Action:**  
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Systemic (S)  
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Company	Product	Active ingredients	Formulation	App. rate (oz/1,000 sq ft)	Application interval (days)	Cost/1,000 sq ft application	Action	Toxicity (LD-50)	States not registered in	Market area
<b>Ciba-Geigy</b> P.O. Box 18300 Greensboro, NC 27419 L. Douglas Houseworth 919-547-1152 <b>Circle #201</b>	Banner	Propiconazole	EC	0.5-2	7-28	N/A	S	Oral >1,310, Dermal >5,010	Calif.	Nat'l
<b>Cleary Chemical</b> 178 Rt. 522, Ste. A Dayton, N.J. 08810 Bron Zienkiewicz 800-524-1662 <b>Circle #202</b>	Cleary's 3336 Spotrete	Thiophanate Methyl Thiram	F & WP F & G	1-2 2.5-5	7-28 7-10	N/A N/A	S C	Oral 6,640, Dermal >10,000 Oral 780, Dermal NA	Calif. Calif.	Nat'l Nat'l
<b>Grace-Sierra</b> 1001 Yosemite Drive Milpitas, Calif. 95035 Mark Broxon 800-492-8255 <b>Circle #203</b>	Duosan Vorlan	Thiophamate methyl & mancozeb Vinclozolin	WP D & LF	3 1-2	10-14 28	\$2.30 \$1.50-3.00	C/S C/S	N/A N/A	None Calif.	Int'l Nat'l
<b>ISK Biotech</b> 5966 Heisley Rd. Mentor, Ohio 44060 Richard Garrett 216-255-5645 <b>Circle #204</b>	Daconil 2787 Flowable Daconil 2787 WDG	Chlorothalonil Chlorothalonil	L WDG	3-11 1.75-6.5	7-14 7-14	\$0.77-\$2.85 \$0.81-\$3.02	C C	Dermal >20,000 Dermal >10,000	None None	Int'l Int'l
<b>Lebanon Turf Products</b> 1600 E. Cumberland St. Lebanon, Pa. 17042 Amy Eisenhauer 717-273-1685 <b>Circle #205</b>	Turf Fungicide w/Bayleton Turf Fungicide w/Daconil 2787	Bayleton Daconil (Chlorothalonil)	G G	1.5-4 4	30 7-14	N/A N/A	S C	N/A N/A	None None	Nat'l Nat'l
<b>LESCO</b> 20005 Lake Rd. Rocky River, Ohio Steve Jedrzejek 216-333-9250 <b>Circle #206</b>	Touche Flowable Twosome Flowable	Vinclozolin Chlorothalonil & fenarimol	L L	1-2 3-4.5	14-28 14-21	\$1.63-3.26 \$0.85-1.71	C/LS C/S	Oral >5,000, Dermal >4,000 Oral 4,670, Dermal >2,020	Calif. Calif.	Nat'l Nat'l
<b>Miles Inc.</b> 8400 Hawthorn Rd. Kansas City, Mo Steve Chaney 816-242-2332 <b>Circle #207</b>	Bayleton 25 Ornamental Fung.	Triadimefon	DF	1-2	30	N/A	S	Oral 2,828, Dermal >5,000, Inhalation >10.8	None	Int'l
<b>O.M. Scott &amp; Sons</b> 14111 Scottslawn Rd. Marysville, Ohio 43041 Joe Bell 513-644-0011 <b>Circle #208</b>	Proturf Fluid Proturf Fungicide VII	Thiophanate-methyl & iprodione Triadimefon	L G	1.1 21.22	10-14 14	N/A N/A	C/S S	Oral >5,000, Dermal >2,000 Oral >5,000, Dermal >2,000	None None	Nat'l Nat'l
<b>Parkway Research</b> 13802 Chrisman Rd. Houston, Texas 77039 Cathy Bussa 713-442-9821 <b>Circle #209</b>	Consan Triple Action 20	Quaternary Amine	L	3-4	10-14	\$1.75	C	Oral >850	Calif.	Nat'l
<b>Regal Chemical Co.</b> 600 Branch Drive Alpharetta, Ga. 30201 Will King 800-621-5208 <b>Circle #210</b>	ConSyst Fungicide Systec 1998	Chlorothalonil & Thiophanate Thiophanate	WDG L & G	3 1	7-30 10-30	\$2.18 1.12	C/S S	Dermal Dermal >10,000 Dermal >7,500	Calif. Calif.	Nat'l Nat'l
<b>Rhone-Poulenc</b> 2 TW Alexander Dr. Research Triangle Park, NC 800-334-9745 <b>Circle #211</b>	Chipco 26019 Chipco 26019 Flo	Iprodione Iprodione	WP L	1-2 2-4	14-28 14-28	N/A N/A	LS LS	Oral >5,000, Dermal >2000 Oral >5,000, Dermal 2,000	None None	Int'l Int'l

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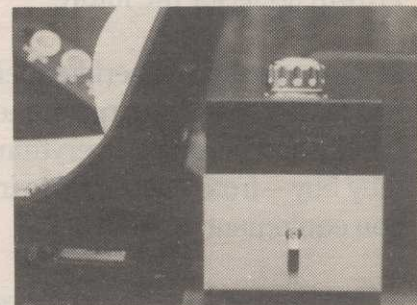
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CIRCLE #123

## Southeast

### PERCEIVE PEOPLE AS OPPORTUNITIES

The director of business and industry services for Valencia Community College told the Central Florida Golf Course Superintendents Association that effective leaders are people-oriented and task-focused.

Speaking at a recent meeting of the group, Steve Kinder added that a key to effective personnel management is providing leadership to subordinates.

Effective leaders, Kinder said, are able to spot strengths and weaknesses in subordinates and assign jobs accordingly, and ignite the flame of excellence in their employees.

He said characteristics of successful managers are knowing the value of time management; delegating work; using goals and objectives in employee motivation; providing constant feedback; and using planning to eliminate crisis management.

Successful managers spend 60 to 70 percent of their time developing employees and planning to meet company goals and objectives, Kinder said.

He said that unless superintendents, as managers, perceive people as opportunities and use them to their abilities, all other



managerial skills will be less effective.

## Mountains

### \$32,000 CONTRIBUTED

The board of directors of the Rocky Mountain Regional Turfgrass Association has voted to contribute \$32,000 to the Rocky Mountain Turfgrass Research Foundation.

The turfgrass foundation promotes research and education of turfgrass and provides scholarships for outstanding students in the field. RMRTA is able to make this annual contribution through proceeds from the annual turf conference and trade show.

RMRTA's 1992 conference is scheduled for Dec. 2-4 in Denver's Currigan Hall. The conference will feature hands-on workshops, educational seminars and exhibits for all facets of the turf industry.

### HUGHES INDUCTED INTO COLORADO HALL

The Colorado Golf Hall of Fame on June 15 inducted Henry B. Hughes, long-time superintendent and golf course architect in the Rocky Mountain area.

Hughes is a son of Henry T. Hughes, a construction superintendent for Donald Ross. When the elder Hughes built Cherry Hills Country Club for William S. Flynn in



1924 and remained as its greenskeeper, the younger Henry, then 16, served on his father's greenskeeping crew. In 1933 he took over as head greenskeeper.

He left in 1947 to build Club de Golf de Mexico for his brother Lawrence who, with another brother, Frank, worked for Ross. Returning to Denver in 1950, Henry spent the next 13 years as superintendent at Green Gables Golf Course and designed courses in the Rocky Mountain area.

By the mid-1960s Hughes was a full-time architect. He retired from design work in 1970 but remained in golf, operating a Denver course catering to senior play.

## West

### ASIAN GYPSY MOTHS TARGETED

State and federal agencies have joined in a cooperative plan to spray up to 9,600 acres in an effort to rid Oregon of the Asian gypsy moth which is a serious pest of shade trees and landscape plants.

Oregon Department of Agriculture authorities believe the Asian moth, first detected last August, may pose more of a threat than the European variety that arrived in the United States more than 100 years ago.

The Asian gypsy moths may spread much



more quickly and affect larger areas because its Asian females can fly from 24 to 60 miles, something the European females can not do.

The Oregon plan calls for aerial application of the naturally occurring *Bacillus thuringiensis* (Bt) in North Portland. The ODA used Bt, a bacteria that produces a caterpillar-specific toxin, successfully to eradicate the European variety.

Compared to the European variety, the Asian gypsy moth appears to feed more readily on a much broader range of plants and may establish more readily on conifers; and has a greater variability in its population, which may prove a problem in identification and control.

### CALIFORNIA GCSA ELECTS ORSBORN

PALM DESERT, Calif. — The board of directors of the California Golf Course Superintendents Association recently elected Dennis Orsborn as the group's president.

A vice president of Sunrise Co., a Palm Desert-based developer of country club communities, Orsborn oversees golf course maintenance operations for Sunrise's courses, including Palm Valley and Monterey country clubs, Palm Desert, and EastLake Country Club in Chula Vista. Orsborn is also involved with the design and planning of country clubs, such as Indian Ridge Country Club in Palm Desert.

Orsborn has more than 20 years experience in golf course operations and is a graduate of California Polytechnic University at Pomona, with a degree in parks administration. He joined Sunrise Co. in 1981.

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## Northeast

### NEGCSA BACKS RESEARCH

The Golf Course Superintendents Association of New England has donated \$18,247 to support four research projects.

The research committee approved grants of \$7,950 to Dr. Stanley Swier of the University of New Hampshire for research into forecasting black cutworm on golf greens and biological control; \$6,000 to Dr. Rob Wick of the University of Massachusetts for his study of nematodes; \$2,500 to Dr. Pat Vittum of UMass for her work on black turfgrass atenuis; and \$1,797 to Dr. Gail Schuman of UMass for a study of summer patch and necrotic ring spot.

The \$12,753 balance in the NEGCSA research fund will remain in the account until the committee reaches determinations on future proposals.

### FALMOUTH CC'S ROSS HONORED

Kevin Ross, superintendent of Falmouth Country Club, received the Distinguished Service Award at the 1992 Turfgrass Conference held in March by the Maine Golf Course Superintendents Association.

### DESIGN/CONSTRUCTION SEMINAR SET

A Golf Course Design/Construction and Golf Day will bring together agronomy experts and a golf course architect at the State University of New York — Delhi on Aug. 18.

The seminar will focus on greens construction from the design and soil-mix selection to construction.

David Oatis of the USGA Green Section's Northeast Region will discuss avoiding mistakes during greens construction.



Dr. Norman Hummel of Cornell University will update attendants on soil-mix specifications for greens.

Architect and agronomy expert Ferdinand Garbin will speak on design considerations for greens.

The event is being co-sponsored by the New York State Turfgrass Association and the Central New York, Finger Lakes, Hudson Valley, Long Island, Metropolitan and Northeastern golf course superintendents associations.

Proceeds will support the Delhi Turf Building Fund.

Registration is due by Aug. 10. For more information and to register, people may contact the NYSTA at P.O. Box 612, Latham, N.Y. 12110; 800-873-TURF. The cost is \$30 for members of sponsoring organizations, \$45 for non-members. Golf is optional for another \$10.

### TREE AND SCRUB PEST DIAGNOSIS

The New York State Arborists Association and Cornell University are co-sponsoring a three-day seminar on the diagnosis and identification of insects, diseases and the cultural maladies of trees and shrubs, Aug. 19-21 at Cornell in Ithaca, N.Y.

Hands-on field diagnosis of woody plant problems will be a feature of the program.

Drs. Warren Johnson and George Hudler will conduct the class, which is limited to 30 applicants. The cost is \$150 for NYSAA members and \$200 for non-members.

Further information is available by calling NYSAA at 518-783-1322.

### URI SETS TURF FIELD DAY

The 1992 Annual Turfgrass Field Day at the University of Rhode Island is scheduled for Wednesday, Aug. 19, at the research farm in Kingston.

Exhibits run from 8 a.m. to noon and the research plot tour from 1:30 to 4 p.m. A steak lunch will be available.

For more information, contact Dr. Noel Jackson at 401-792-2932 or Dr. Bridget Ruummele at 401-792-2481, or write to either person at the Department of Plant Sciences, Woodward Hall, University of Rhode Island, Kingston, R.I. 02881.

## South Central



### IHMS HEADS SOUTH TEXAS GCSA

Keith Ihms of Pine Forest Country Club has been elected president of the South Texas Golf Course Superintendents Association.

Ihms' vice president is Michael Wood of South Shore Harbour Country Club, while Don Cole of Greatwood Golf club is secretary/treasurer.

The new slate of directors includes Randy Broyles of Westwood Country Club, Mike Burris of Bay Oaks Country Club, David Denley of Lochinvar Golf Club, John Freeman of Deerwod Gold Club, Mike Link of The Woodlands, Brent Ratcliff of Turfco, Inc., and John Walker of Weston Lakes Country Club.

## North Central



### INDIANA PESTICIDE LAW PASSED

The Indiana State Lawn Care Association wrote, introduced and steered through passage a bill putting pesticide regulation solely in the hands of the Indiana Pesticide Review Board.

As soon as the U.S. Supreme Court ruled that local governments could enact their own pesticide use regulations, the Indiana

association set to work to introduce the measure.

Although some states have legislation establishing the state as the governing force behind pesticide use, only West Virginia law had clearly stated that municipalities cannot dictate pesticide usage.

The Indiana law states: "A political subdivision ... does not have authority to regulate by ordinance the use or application of pesticides..."

### PGMS CONCLAVE TAKES SHAPE

Registrations began arriving early for what promises to be the biggest and broadest annual grounds management conference program ever sponsored by the Professional Grounds Management Society.

Scheduled for Nov. 15-19 in Indianapolis, Ind., the program subjects were selected as a result of a survey taken last year of PGMS members.

"We have purposefully geared the conference to the stated needs of grounds managers, and have balanced the program to be of equal value to everyone, whether on staff or conducting one's own business," said PGMS President John Abernethy.

Practical application subjects range from those directly associated with plants and trees to other non-plant-related grounds maintenance considerations to general management concerns. Everything from ornamental grasses to bedding plants to trees will be covered. Other "non-green" grounds management concerns to be addressed directly include snow removal and maintenance and repair of asphalt.

The Green Industry Expo trade show will be held simultaneously in the Convention Center. The Expo is co-sponsored by the PLCAA, Associated Landscape Contractors of America and PGMS.

For further information contact PGMS headquarters at 10402 Ridgland Rd., Suite 4, Hunt Valley Md. 21030; 410-667-1833.

### Send us your news

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## EPA promises betterments with data on pesticide handlers

### 'Generic database' predicts exposure in particular jobs

The Environmental Protection Agency, Health and Welfare Canada and the National Agricultural Chemicals Association have developed a generic database to predict the pesticide exposure experienced by mixers, loaders and applicators of pesticides.

The Pesticide Handlers Exposure Database (PHED), contains exposure and related data on a large number of workers engaged in mixing, loading and applying pesticides.

With PHED, pesticide exposures to workers can be estimated for different combinations of factors such as field application method (e.g., airblast, groundboom, aerial), mixing/loading method (i.e., open or closed), level of protective clothing being worn, type of pesticide formulation used (e.g., emulsifiable concentrate, wettable powder, granule), type of cab used (e.g., open or closed), and others.

In developing the database, the task force determined that PHED could be used as an exposure assessment tool for a variety of pesticide-related activities including exposure assessments, pesticide registration and reregistration, risk management and research.

EPA said PHED promises to offer numerous advantages including:

- potential reduction in costs for meeting registration and reregistration requirements;
- greater certainty in pesticide exposure assessments because estimates are based on a larger data pool;
- consistency in exposure estimates; and
- assistance in guiding current and future exposure research efforts by identifying significant data gaps.

PHED costs \$250 and can be obtained by contacting Tim Leighton, Versar Inc., 6850 Versar Center, Springfield, Va. 22151; 800-283-7727.

## Palmer Management adds maintenance to services offered

ORLANDO, Fla. — Arnold Palmer Golf Management Co. has signed agreements with The Kildare Hotel and Country Club in Ireland and Formosa Country Club and Formosa Yang Mei Country Club in Taiwan to provide golf course maintenance services, APGMC Chief Operating Officer Robert Holzman announced.

Recently, APGMC began offering agronomy — golf course maintenance planning and services — a la carte. The agronomy unit, headed by Jim Ellison, works closely with Palmer Course Design Co.

Agronomy services include staff placement, national account programs, complete course grooming, tournament preparation and environmental turf management, including the proper use of water, fertilizer and chemicals.

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## Buffalograsses showing well

Dr. Terry Riordan of the University of Nebraska reported that new varieties of Buffalograss are showing unbelievable promise in that region of the country.

Riordan told a regional U.S. Golf Association conference that two specific varieties — Prairie and 809 — are displaying almost unlimited potential in many different turf situations. Buffalograss fairways are performing admirably at a cut of 5/8 of an inch, he said, and are consuming less water at this lower classification as a warm-season grass.

These varieties are showing excellent heat and cold tolerance, and may even rival Bermudagrass in its aggressive nature, he said.

## Bylaw changes subject of talks

Golf Course Superintendents Association of America officers and directors will speak at chapter meetings around the country to inform members about proposed changes to the organization's bylaws.

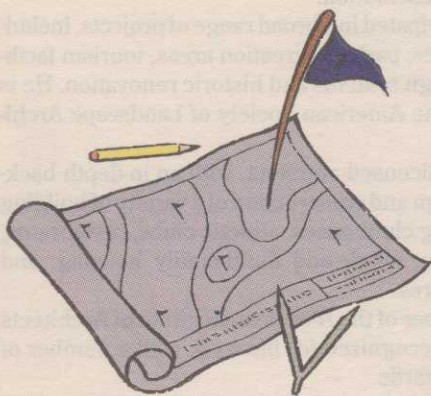
The proposal embodies recommendations of two committees addressing how GCSAA could best meet the future needs of the association, the profession and the industry.

Unanimously supported by the board of directors, the recommendations include instituting an individual voting system and giving the board the authority to determine membership classifications, requirements and dues structures.

Representatives are scheduled to talk Sept. 21 at the Iowa GCSA in Bettendorf; Oct. 5 at the Central Illinois GCSA in Champaign; Nov. 10 at the Mid-Atlantic Association of GCSA in Phoenix, Md.; Nov. 17 at the Carolinas GCSA in Myrtle Beach, S.C.; Jan. 6-7 at the Indiana GCSA in Indianapolis; and Jan. 12 at the Nebraska Turfgrass Foundation in Omaha.

# THROW A KILLER LAWN PARTY.

## BRIEFS



## LANDMARK GIVEN EXTENSION

CHARLESTON, S.C. — The federal district court here has extended Landmark Land Co.'s exclusivity period until Oct. 8, delaying any other company from filing reorganization plans for the troubled development firm until that date.

The court also gave Landmark until July 8 to file disclosure statements on its South Carolina and California properties. It is believed those disclosure statements will propose Landmark retain its "name" properties in South Carolina and California, while selling holdings in Florida, Oklahoma and Louisiana.

PGA West in La Quinta, Calif., and Kiawah Island, S.C., are among Landmark's properties and the firm has land available to build as many as six additional golf courses in the Coachella Valley of Southern California. But it can't proceed with any development until the court approves its reorganization.

Meanwhile, the court extended the filing date for a disclosure on Clocktower Place Investments Ltd., to July 23. A holding company, Clocktower has stock in all five Landmark subsidiaries. The Resolution Trust Corp. is a creditor of Clocktower.

## FREAM DESIGNING IN SIBERIA

Architect Ron Fream's firm Golfplan is designing a resort course and meeting center in Khabarovsk, Siberia. The 18-hole layout winds through a birch forest offering dramatic views.



Ron Fream

Golfplan is also involved with three Chinese projects — a 27-hole facility in Xiamen, an 18-hole course in Fuzhou and a 36-hole layout in Zhaoqing.

Six Fream designs are on the drawing board in Indonesia and another 63 golf holes in Morocco. Eighteen of Euro Disney's 27 Golfplan-designed holes are scheduled to open in August.

## DYE TO DESIGN YAMAGATA LAYOUT

Perry O. Dye Designs International, Inc., has signed a contract with Sumitomo Rubber Industries, Ltd. of Kobe, Japan, to design an 18-hole championship golf course in Japan's Yamagata Prefecture.

Additionally, Dye will provide other services including construction supervision, shaping, and a maintenance consultant beginning with grow-in.

The course will be named Yamagata Sakuranbo Country Club. Sakuranbo means "cherry" in Japanese. The Yamagata Prefecture is famous for its cherries.

Construction is anticipated to begin in September, with completion in approximately three years.

## ASGCA elects new members to association

Architects Weed, McCumber, Huntley, Commins, Harbottle and Fry join elite organization

By MARK LESLIE

Despite a competitive marketplace for their services, golf course designers must work closely together to overcome obstacles to development, according to one of the six new associate members of the American Society of Golf Course Architects.

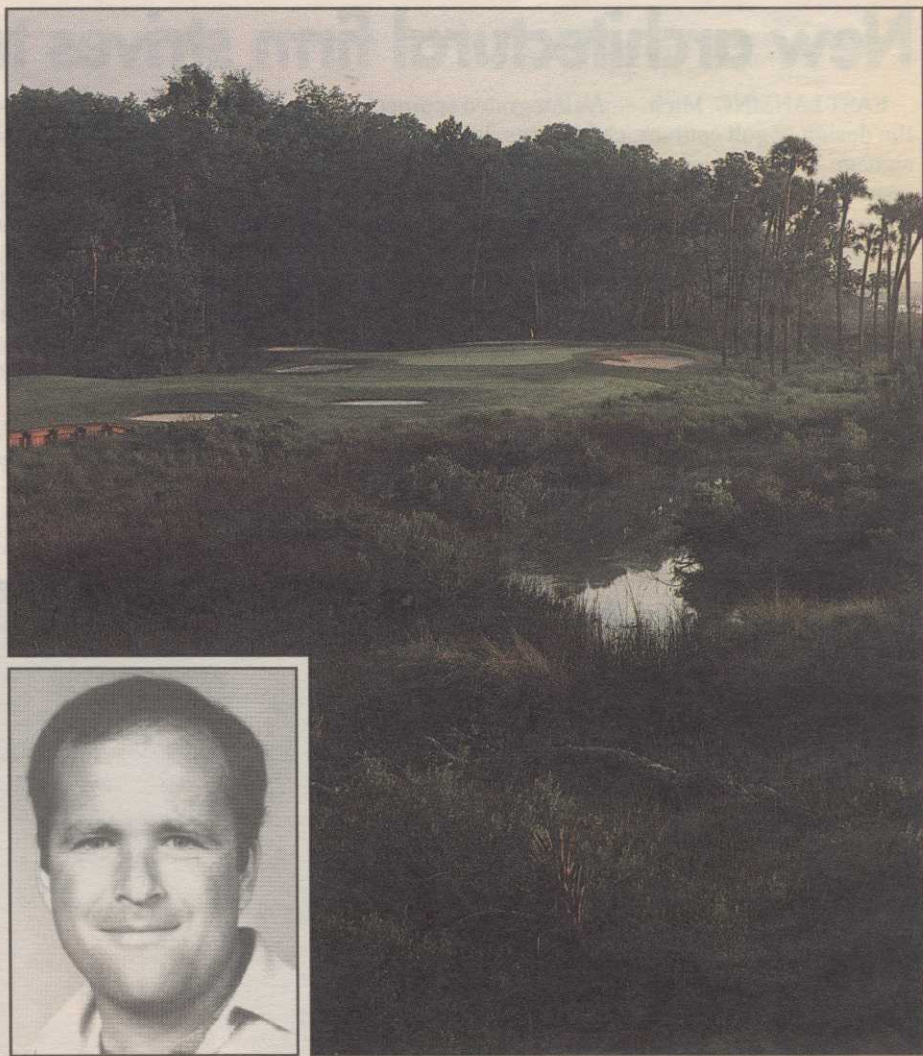
Robert Weed, chief architect for the PGA Tour's Design Services Inc. in Ponte Vedra, Fla., and a certified golf course superintendent, said: "Everyone involved in golf needs to become more allied to form a stronger group... Someone's got to take the lead role and I think the ASGCA can do it."

"We've got tremendous roadblocks ahead from environmental, development and regulatory standpoints that affect all of us. The only way we can address them is to be a group. There are a lot of lobbyists out there being heard. The squeaky wheel gets the oil."

Weed was speaking after being informed that ASGCA members had elected new associate members that included him; PGA Tour professional Mark McCumber and J. Christopher Commins of Orange Park, Fla.; Dana Fry of Hurdzan Design Group in Columbus, Ohio; John Harbottle III of Greenbrae, Calif.; and Brian Huntley of Toledo, Ohio.

Meanwhile, Jack Nicklaus, Jay Morrish and five other associate members were elected regular members. Others were Fred Bliss of Santa Rosa, Calif.; Bruce Charlton and Kyle Phillips of Robert Trent Jones II International in Palo Alto, Calif.; Ron Kern of Noblesville, Ind.; and Steve

Continued on page 36



The 13th hole at Queen's Harbour Yacht and Country Club, designed by Mark McCumber (inset). "The last few years I've been getting some terrific sites," McCumber said.

## Second touring pro joins ASGCA

By MARK LESLIE

Make no mistake: The newest famous member of the American Society of Golf Course Architects will not take the rap for signing his name to course designs on which he has not worked closely.

While so many touring pros are criticized for putting their monikers on courses without getting involved in the day-to-day operations of a golf course architect, Mark McCumber is among the hands-on play-

ers/designers like Jack Nicklaus, Tom Weiskopf and Ben Crenshaw.

Indeed, McCumber was designing golf courses before he joined the PGA Tour. Before McCumber was accepted as an ASGCA member in May, Nicklaus was the only touring pro in the society's ranks. Now McCumber is the first member of the 45-year-old organization to first learn the design trade, then win PGA tournaments.

Continued on page 37

## Harvard seminar focuses on successful course development

By PETER BLAIS

Helping developers avoid building inferior products, cost overruns, and lost revenues were the goals of a recent golf course development seminar at Harvard University in Boston.

The five instructors collectively possessed 70 years of development experience with more than 120 golf course projects.

They were Jim McLoughlin, principal in his own golf consulting firm; Thomas Boczar, a leading public finance lawyer; Richard Barber, former director of economic development for the state of New Hampshire and currently a land development consultant; Jerry Pierman, president of the Golf Course Builders Association of America and principal in his own golf construction



Jim McLoughlin

Continued on page 38

## GCBA to test and certify members

As many as 40 of the nation's leading contractors may become the world's first certified golf course builders this summer at the Golf Course Builders Association of America's summer meeting in St. Louis, Aug. 12-14.

Before a builder may use the designation "certified golf course builder," he first must complete an application packet and pass an examination of 100 questions covering 14 topics related to course construction.

The examination will be the final event in the three-day meeting, which will feature two days of educational programs and social events in conjunction with the PGA Championship at Bellerive Country Club.

Examination topics will include history of golf course design and layout, clearing, earthmoving, finish grading, drainage, green construction, trap construction, irrigation, fertilization, seeding, soil structure, regulations, building structures, cart paths, and grow-in.

Before taking the examination, a builder must:

- establish that he has been in the golf course construction business for at least five years and has completed three golf course projects within the last five years;

- provide references from individuals in five of the following categories: course owner/developer, golf course architect, engineer, irrigation designer, golf course superintendent, municipality, certified golf course builder;

- provide references from each of the following: financial institution, creditors, insurance company, bonding company.

To retain certification, a builder will have to attend at least one GCBA education session per year.

"Builders will have to re-certify periodically — at least every five years and maybe as often as every three years," said Phil Arnold, GCBA executive vice president. "The board hasn't set the term yet."

Education programs at the summer meeting will focus on the Allied Associations of Golf and technological developments in construction and golf course operations. Among the speakers lined up is Jim Snow, director of the United States Golf Association Green Section.

"The point of the certification program is to identify competent, trustworthy golf course builders," Arnold said. The examination shouldn't be considered like a bar

Continued on page 39

## New architectural firm strives to integrate course components

EAST LANSING, Mich. — An integrated approach to the design of golf courses, clubhouses, landscape, and signage is the aim of a new company formed by golf course designer W. Bruce Matthews III, landscape architect Victor Nelhiebel and building architect Howard DeWolf.

The founders of the firm, Design 3, said they will work closely with clients to merge needs, goals and ideas into an attractive finished product "by drawing on our background in golf course design, site planning, grading and drainage, agronomy, building construction and grounds maintenance."

The Design 3 staff believes stewardship of the land and protection of wetlands and wildlife are integral parts of any golf development.

"The natural features of a site are not obstacles to

overcome, but opportunities to design and shape a course which responds to and blends easily with its surroundings," they said.

Matthews is a third-generation course architect with lifelong exposure to all aspects of course operation and development.

He recently completed Railside Golf Club in Byron Center, Bird Creek Golf Club Port Austin, The Links of Novi and Sycamore Hills Golf Club in Mt. Clemens, while employed as senior designer at Matthews & Associates.

He is an associate member of the American Society of Golf Course Architects and is a certified golf course superintendent.

Nelhiebel is a registered landscape architect with 20 years of experience in land planning, landscape design

and graphic presentation.

He has participated in a broad range of projects, including golf facilities, parks, recreation areas, tourism facilities, outdoor sign systems and historic renovation. He is a member of the American Society of Landscape Architects.

DeWolf is a licensed architect, with an in-depth background in design and construction of a variety of building types, including clubhouses, athletic clubs, restaurants, park structures, single-and multi-family housing, and service structures.

He is a member of the American Institute of Architects and has been recognized for his work with a number of professional awards.

The company is located at 919 East Grand River, East Lansing, Mich. 48823; 517-336-5959.

## Richardson and Snyder to finish Coyote Lakes GC

PHOENIX, Ariz. - Golf Group Ltd., in association with golf course architects Arthur Jack Snyder and Forrest Richardson, has begun initial design on what is to become Coyote Lakes Golf Club.

The 6,000-yard, 18-hole layout was partially complete in 1983 and then abandoned for various financial reasons. Then called Brookview, the site west of Phoenix was never fully planted or opened to the public.

Lakepoint Development Corp., now in the process of planning and acquiring the site, expects a final set of plans may be ready for approvals within the next few months.

"We've inherited a good layout with very few problems," said Richardson. "It's amazing that the course has held up so well considering how long it and the irrigation system have been idle."

Among the changes being proposed to the original design is the extension of several holes and adding one stroke to the previous par of 70. In addition, selected turf areas are being tightened, enabling better water conservation and reinforcing the desert theme of the eventual landscaping.

## Cupp-designed Spanish Hills begins grassing

CAMARILLO, Calif. — Grassing has begun at Robert E. Cupp-designed Spanish Hills Golf and Country Club. The course will consist of 18 holes of par-71 golf.

The private, member-owned golf and country club community is being developed by Spanish Hills Development Co.

Spanish Hills consists of 430 acres, 45 minutes from both Los Angeles and Santa Barbara, and 18 miles from Malibu. The 7,000-yard course will offer a variety of challenges for all levels of players.



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## Snow says TRACS on verge of comeback

Turf Renovation and Construction Services (TRACS), the controversial U.S. Golf Association Green Section course construction consultancy service, could be launched late this year or early in 1993, according to Green Section National Director Jim Snow.

TRACS would employ Green Section agronomists to oversee building techniques and ensure quality construction. The Green Section agreed to temporarily shelve the idea earlier this year while it sought architects' and builders' input.

Some believed the program represented unfair competition. TRACS, they argued, would do much of the same work architects and build-

ers are paid to do.

The Green Section believed the service could prove valuable, especially to smaller architectural firms that lacked the Green Section's agronomic expertise.

"The architects and builders seem comfortable with it now," Snow said. "We're providing some TRACS services already through the Turf Advisory Service."

The start of TRACS will coincide with the new USGA greens specifications expected later this year as the result of Cornell University Extension Service researcher Dr. Norm Hummel's year-long study.

## Irwin hard at work in Colo.

LAFAYETTE, Colo. — A new 18-hole public golf course designed by Hale Irwin Golf Services, Inc. is under development here. The Jan. 10 groundbreaking set the stage for the \$4.25 million construction project called Lafayette Golf Course at Indian Peaks.

Irwin, a former Boulder County resident, said the golf course he envisions will be one that golfers of all skill levels can enjoy. "This is not going to be Colorado's most difficult golf course, that's not the intent," he said. "This won't be

unplayable. It should have enough variety to appeal to people of all abilities."

Richard M. Phelps, golf course architect for Hale Irwin Golf Services, Inc., said the Beauprez property lends itself well to the golf course project. The long views and excellent soil are especially beneficial.

According to Phelps, "What we don't have out here right now, we'll create," noting that many trees will be planted on the site.

"I've seen a number of golf course communities where it's obvious that they built a golf course and then decided to build homes all around it," said Bob Beauprez, who represents the landowners. "We want an integration of the two projects so they connect in a positive way."

## Young oversees \$4.5-million Georgia project

WATKINSVILLE, Ga. — Mike Young Designs has designed and is now overseeing construction of a new 18-hole project here.

Lane Creek Golf Course will be situated on 677 acres of undeveloped land in Oconee County with future plans for residential development. The course will be par 72 and measure 7,000 yards. Set on rolling land lending itself to a traditional golf, the course will feature water on several holes.

Paul Hawkins, an Atlanta attorney and president of Lane Creek Properties, Inc., said the entire project is expected to be in the \$4.5-million range, including a clubhouse of 3,500 square feet. Lane Creek Golf Course will be an up-scale daily-fee course with greens fees ranging from \$30 to \$35, including a cart.

The expected opening of the course is Sept. 15, 1992.

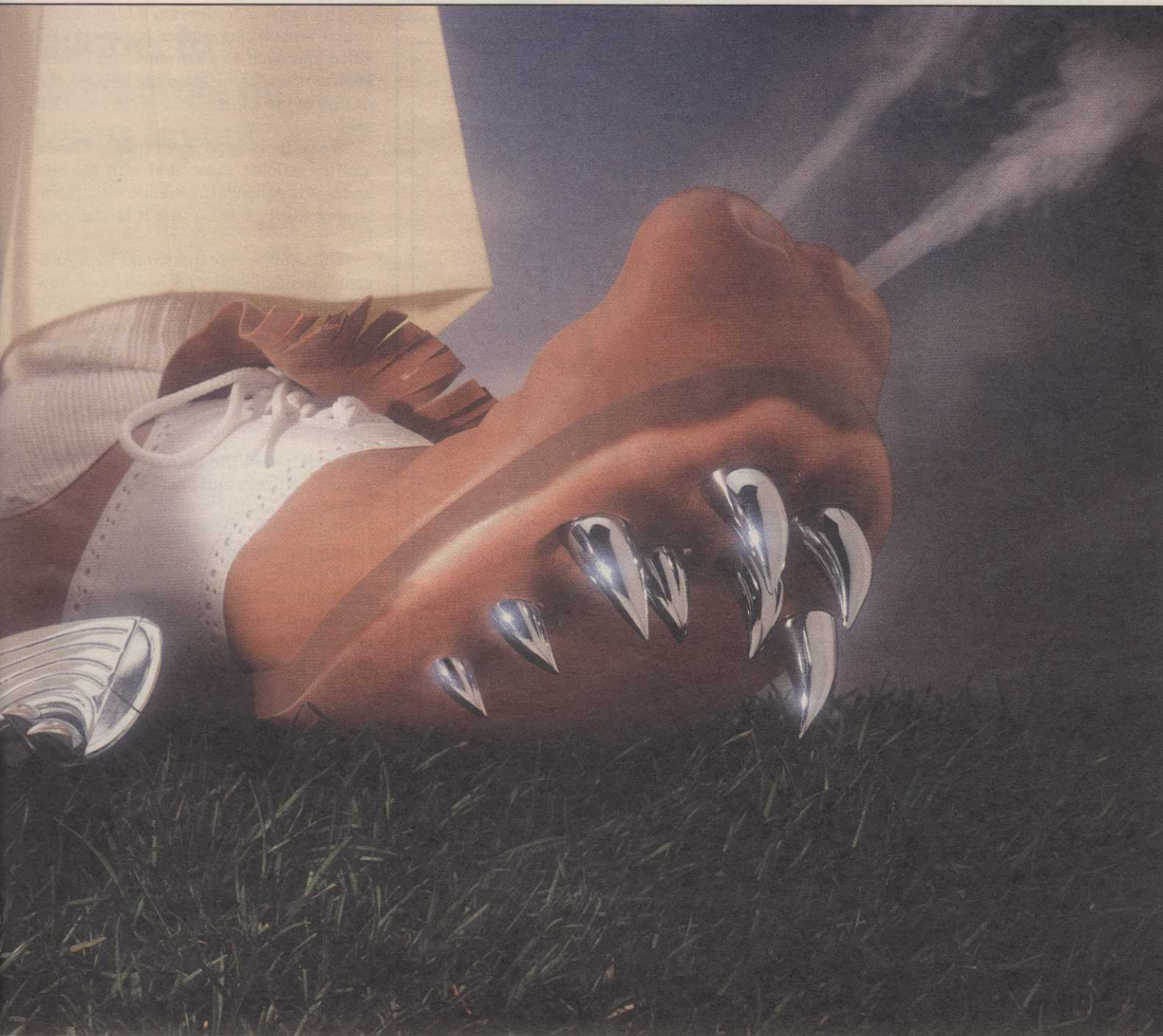
## Frei opens Wash. course

WOODINVILLE, Wash. — Nearby Echo Falls Country Club, a par-70, 6,006-yard course opened for public play May 28.

The 79-home, semi-private golf course community is being developed by Bellevue-based Steve Burnstead Construction Co.

PGA Golf Professional Scot Solomonson, head pro/golf director, and Lisa Rowe, special events director, will head up the Echo Falls' management team. Solomonson, formerly the acting pro at Northshore Golf and Country Club in Tacoma, comes to Echo Falls with 12 years pro experience.

The course was designed by local PGA professional and golf course architect Jack Frei.



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CIRCLE #128

# Clemson University to build course for handicapped

Continued from page 1

course which will be built to be accessible to physically challenged golfers.

Jeff Martin, director of conference and guest services at Clemson, said: "We will use the course for our golf team, plus we have a tremendous amount of academic work that will be done with it."

Anxious to work on the course are faculty and students in biology, agronomy, horticulture, parks and recreation and tourism management, and even engineering, where they are already modifying equipment like golf cars for the handicapped.

Dr. Lawrence Allen, head of the Department of Parks, Recreation and Tourism

Management, said: "We have all the players in line on campus and have support from various outside groups."

The National Center on Accessibility at Indiana University, National Amputee Golf Association, United States Golf Association, National Park Service and other organizations are interested and excited about the prospects of the project, Allen said.

Indeed, it might be all things for all people.

• Dr. Fran McGuire, a professor in the therapeutic recreation program, said he hopes the university will become "a national clearinghouse for the needs of the handicapped."

• Ron Kendall, director of wildlife toxicology, sees it as an exciting research opportunity that will lead to developing a model for future golf course design and construction.

Martin said he hopes the facility, which will include a \$4.5-million conference center, will gain final state approval by mid-July, builders will start moving dirt by September and "we'll be playing golf by next October or November."

Plans for an \$8.4-million hotel have been deferred, said Martin, who will operate the facility.

The conference center is being built with state bond funds. The golf course is being

backed as an investment by the university foundation, a private corporation.

"This will be a money-maker, especially the golf operation," Martin said. "The foundation is investing \$2.2 million, expecting a return with interest."

The course will cost \$3.7 million to build, he said, with \$2.2 million from the foundation and \$1.5 million from memberships.

## OUTDOOR CLASSROOM

While Martin already has more than 275 paid members in hand without a membership drive, others at the university are rubbing their hands in anticipation of a living classroom.

"The focus is to develop a high-quality course and playing surface but a very sensitive approach to environmental issues, such as what chemicals might be used, the design of the course, and so on," Kendall said.

"We're looking at water-quality issues and the wildlife associated with the site and how to enhance the wildlife while maintaining the course so that it is challenging."

"The wildlife research could be significant," Kendall said. "I'd like to see how wildlife uses the course for breeding, feeding... The key is to build our database so that we can enhance the game and at the same time encourage the natural environment. If managed properly, golf courses can be extremely valuable as wildlife habitats."

Kendall said the course will require some fertilizers and pesticides as it matures, and faculty would like to be directly involved in selecting and monitoring the chemicals.

"We are still learning so much about the environmental chemistry of pesticides and the influence of climate and turf conditions and many other factors that affect the movement and fate of pesticides."

A host of studies can be done, he said, including integrated pest management approaches using university expertise in entomology, plant pathology and other areas.

## MODEL FOR HANDICAPPED

Meanwhile, McGuire said the therapeutic recreation faculty wants to "expand the scope of the golf course beyond golf" and is proposing that it be "a demonstration site for physically challenged golfers."

Four proposals are:

• Incorporate design ideas necessary for physically challenged golfers. "We would like to act as a laboratory to try out those things," McGuire said.

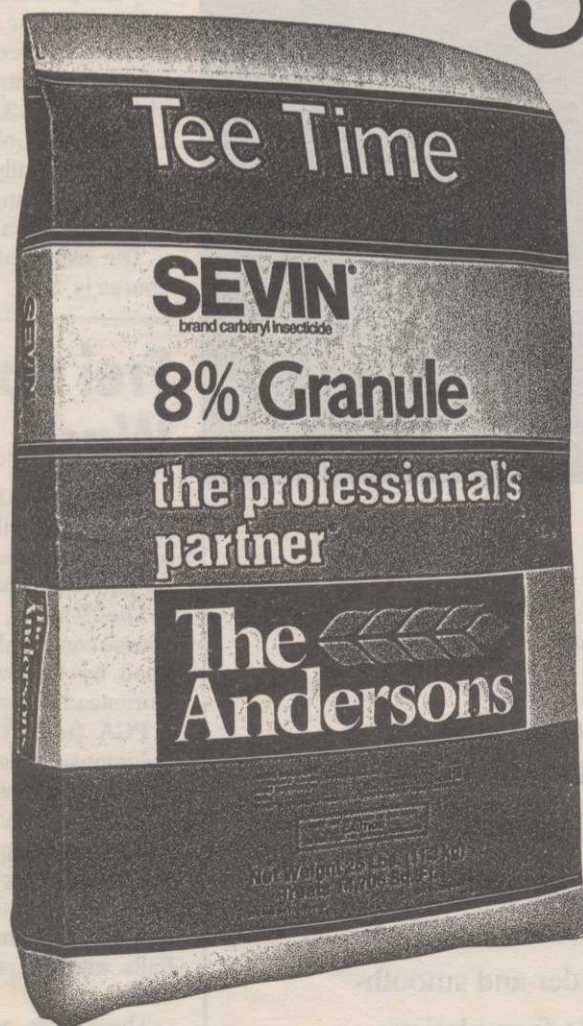
• Investigate changes that have been made to equipment and expand on them, such as the Engineering Department's work on golf cars.

• Develop "instructional, educational and advocacy strategies so that people with disabilities who don't golf can be introduced to the game, educated to its benefits and persuaded that it isn't hard to begin.

• Communicate with other golf courses that the physically challenged should be included.

"We're looking at the whole system of golf from the physical layout, which is why this project is so exciting to the advocacy role because we're at the ground floor, even before the design process," McGuire said.

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# Clemson researchers hope to develop a pesticide fate model

Research would be conducted on proposed university golf course

Clemson University researchers hope to develop a model that will "better predict" what happens to a chemical after application and its potential impact on wildlife, fish, birds and waterways.

Discussing proposed research at the planned Clemson golf course, wildlife toxicology director Ron Kendall said: "We have additional research underway to look at the environmental approach to golf course manage-

ment, integrating wildlife ecology, environmental chemistry, an assessment of chemicals used and their movement and fate."

Kendall said the research will combine with "ecological modeling and development of geographic information of golf courses."

"Then we can actually look at how courses change over time, model the influence of pesticides and their movement and fate, and

potential exposure and impact on the environment," he said. "We are trying to develop a more generic model that can be more widely applied."

"The opportunity to apply a lot of it to concept, development and ultimate management of a course (Clemson's) is a wonderful opportunity."

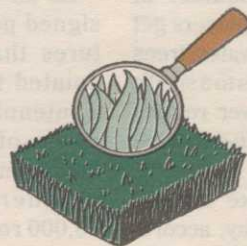
The scientist said people around the world are asking the question: "Can't we develop the kinds of im-

portant agriculture and recreational opportunities we desire without harming the environment?"

"If one approaches it with good sound science and data and information, the kinds we are currently acquiring, you can make those kinds of decisions and essentially plan for it," he said. "Golf courses of the future will be challenging from a physical standpoint, but will be

more environmentally sensitive in their development and maintenance.

"I think we will be seeking out these areas of the natural environment, we will be encouraging wildlife, and those who play the game in the future will enjoy not just the golf course challenge but the environment itself. I think that will enhance the game immensely."



## Quartet to collaborate on Texas layout

BAY CITY, Texas—A development team composed of Golf Services Group, Wadsworth Golf Construction Co., Whitley Development Corp. and Potomac Financial Group has been selected to finance, build and operate a municipal golf course here.

Golf Services Group of Houston will manage the design, construction and operations of the facility. Wadsworth, of Plainfield, Ill., will construct the course. Whitley, of North Palm Beach, Fla., will provide pre-development project management and development support. Potomac Financial Group is underwriting the project and managing funding through the issuance of bonds.

"These are not general obligation bonds," said David Arnsperger, president of Potomac. "We have created the financing structure so that the project is self-supporting, requiring no financial commitment from the sponsoring municipality. Additionally, we are working with development team partners that are second to none in terms of track record and experience."

"The municipality is very enthusiastic about our approach and qualifications. Our plan eliminates public risk and maximizes private sector resources. The end result is a high-quality, publicly owned golf facility."

The Bay City course will be built on city-owned land and should be ready for play in January 1993. The course has been designed by Gary Player Design Co.

## Lohmann moves to new headquarters

Lohmann Golf Designs Inc., has moved to new offices.

Architect Bob Lohmann's firm is now at 18250 Beck Road, Marengo, Ill. 60152; telephone 815-923-3400.

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CIRCLE #130

# Clark lists ways for golf courses to speed up play

The key to a successful public golf course is the number of rounds played. When players get hung up in tall grass, water, trees or sand, play often slows to a snail's pace, resulting in fewer rounds completed and less-than-expected revenues.

Architects can take several measures to speed play, according to Tom Clark, president of the American Society of Golf Course Architects.

"A well-designed, well-drained course with visible 'target areas,' properly placed bunkers and water hazards, and smaller greens will usually play fastest," said Clark.

"The key is to challenge the player without overwhelming him with hazards and slowing play considerably."

## BUNKERS AND BLIND SHOTS

Bunkers and blind shots play a critical role in the time it takes to complete a round.

"Getting out of the bunker may take two or three shots and then the player has to rake the area," said Clark. "To speed play, we are designing more grass depression bunkers instead of the traditional sand bunkers. Interestingly, pro players seem to have more problems with grass bunkers than the average player."

Clark also recommends holes be designed with only visible targets, eliminating blind shots, which often end up in the rough or out-of-bounds.

"A visible target enables the golfer to see the green or landing area," Clark said. "Seeing the target is 90 percent of speeding up play."

## GREENS AND WATER HAZARDS

Oversized greens and poorly maintained water hazards can also slow play.

"We used to design greens as large as 9,000 square feet," Clark said.

"Smaller greens, though still a challenge, usually require fewer putts and less time spent lining them up."

Water hazards also can be designed and maintained properly to speed play.

"The banks of water hazards should be bulkheaded or otherwise kept clean, without weeds or dense grass to hide a ball," Clark said. "If a golfer hits his ball near the water's edge, he's going to stop and look for it. A well-designed and maintained water hazard keeps the ball search shorter."

Time spent looking for balls slows play considerably. To remedy this situation Clark recommends clearing and maintaining wider landing areas. "Many courses save on maintenance by not mowing certain areas," he said. "But what they may save in maintenance, they lose in the number of rounds

played."

As an example of a well-designed public course with features that speed play, Clark pointed to the Herndon (Va.) Centennial Golf Course. Because of its design, maintenance and the benefit of good weather, Herndon hosted 70,000 rounds of golf last year.

## PROPER ETIQUETTE SPEEDS PLAY

Part of the responsibility for eliminating slow play rests on the players' shoulders. "Golfers

should practice course etiquette and know the rules of the game to speed play," Clark said. "For example, golf etiquette dictates a player is allowed no more than five minutes to look for a ball."

Golfers should also consider taking a provisional shot when necessary. "If a tee shot lands deep in the rough, a provisional shot should probably be taken before you start looking for the ball," said the ASGCA president. "That way, if you can't find the ball, you won't have to backtrack

to hit another shot."

## DEVELOPING LEARNING CENTERS

Architects also are designing learning centers to help golfers improve their ability and shorten playing time.

"Learning centers provide areas to practice putting, driving and chipping," said Clark. "As a general rule, the lower the handicap the faster the golfer can complete the round."

With this in mind, some elite courses require golfers to present

a handicap card before they tee off. "Requiring a handicap provides golfers with a compelling reason to improve their game," Clark said. "Improving their game offers golfers the opportunity to play the prestigious courses with less waiting, while hopefully shooting a lower score."

A brochure on master planning may be obtained by sending a stamped self-addressed business envelope to the American Society of Golf Course Architects, 221 N. LaSalle St., Chicago, Ill. 60601.

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## Art Hills signs on for new golf projects in Fla. and Mo.

ST. LOUIS, Mo. — Arthur Hills has been commissioned to design new layouts in Missouri and Florida.

The new 27-hole Pevely Farm Golf Club in St. Louis is scheduled to open here in the summer of 1994.

Arthur Kerckhoff, the Pevely Farm trustee overseeing development of the 700-acre residential community, announced that the club will be an upscale, semi-private facility.

"It's a once-in-a-lifetime

project for us," Kerckhoff said. "Arthur Hills is the man who can fulfill our expectations for the golf course. His design philosophy fits our goal to preserve the unique features of the site and to create a facility that everyone will find challenging and playable."

"Pevely Farm is blessed with abundant natural beauty," Hills said. "The site's heavily wooded bluffs, lakes and picturesque streams are the ingredients for a beautiful course. Our design intent will be to build a course that

is natural, that relates carefully to the land."

The residential community plans include approximately 137 one-acre homesites and 23 three-to five-acre parcels.

Hills has also been chosen to design The Sanctuary at Wulfert Point, a 465-acre residential community here.

The Hills' design will be a par-72, 6,724-yard layout with four sets of tees. It is scheduled to open next January. The Army Corps of Engineers has approved the ef-

forts of The Sanctuary developer, Wulfert Holdings, and its team, which includes Coastplan, Inc. and R.W. Stevens environmental consulting services.

The member-owned, private golf club is surrounded by a national wildlife preserve. Ecoventures Sanibel, one of Florida's largest real-estate developers who specialize in building near sensitive areas, will create 156 multi-family golf villas arranged in villages.

## LaFoy oversees rebuilding of Surf Golf & Beach Club

NORTH MYRTLE BEACH, S.C. — The Surf Golf and Beach Club is rebuilding all 18 of its greens plus the practice green this summer to meet United States Golf Association specifications and to restore George Cobb's original design.

Overseen by Cobb apprentice and golf course architect John LaFoy, the work should be complete and the course open in late September.

The greens reconstruction is part of a major capital improvement program that began in 1989 with renovation of and additions to the clubhouse.

Surf Club's board decided to rebuild the greens because over the past 30 years they have lost much of their original character and shape.

Landscapes Unlimited of Lincoln, Neb., is the contractor.

"In looking at the renovation of the Surf Club, I see my job not so much to redesign, but to enhance the already great character of this course," LaFoy said. "The renovated greens will have more well-defined bunkers, more putting surface, more green area definition and more potential pin placements.

"Putting the new greens will be a different challenge than that faced by golfers today. The finished product will add to the already tremendous appeal this course has to golfers of all handicaps."

The new greens will be grassed in Tifgreen 328 Bermudagrass. Surf Club decided not to switch to bentgrass because it has been tested only a short time along the Grand Strand. The hybrid Bermudagrasses used on the course's greens had begun to mutate back to their parent strains — a natural tendency in hybrids after years of stress.

## Cupp and Draper team up in B.C.

ATLANTA, Ga. — Al Draper and Associates has been selected as the contractor for Sea to Sky National Golf Club in Pemberton, British Columbia, Canada.

As designer of the course, Cupp Design, Inc. assisted developer Tom Lindsey of Balaclava Enterprises Ltd. in selection of the contractor. Construction has begun.

The public course will consist of 18 holes at par 72, and will have a driving range with a two-hole teaching academy.

Yardage from the back tees is 7,042. The course is scheduled to open in the spring of 1994.

UNFORTUNATELY, BLENDS JUST CAN'T MATCH OUR GREENS GRADES.

# Working together very important to new ASGCA members

Continued from page 29

Smyers of Tampa, Fla.

"I'm ecstatic," said Dana Fry, summing up the feelings of the new associate members.

Weed said: "The mere fact of being recognized by my peers is a great credit. I really appreciate being recognized by some of the noted architects out there. It's a great camaraderie."

Weed said that by bringing together world-renowned architects like Jack Nicklaus and the Jones, Fazio and Dye families, the ASGCA is "forming a group that can be heard" in professing the positive effects of golf.

"As data comes out on the effect of golf on a state-by-state level—when people realize the revenues that golf is producing and the dollars that are being spent in our industry—it should get some attention from the lobbyists. I think we have a great story to tell and we need to be more allied in getting that story out," he said.

Weed, who had an apprenticeship with Pete Dye from 1983 until he became the Tour's chief designer in 1988, said his goal in each design is to work with the site.

His recently completed TPC at Summerlin, in Las Vegas, he said, "is a very rocky, desert setting and the scale of the site was very large. So we built large fea-

tures: big-scale greens, bunkers, tees and fairways. You have tremendous climatic changes with strong winds. So you need to build a golf course to fit the conditions. Whereas in Connecticut (TPC at River Highlands in Cromwell) we had a cozy setting and I wanted to fit that style of design in there..."

"We have so many restrictions, it's difficult to take a trademark from golf course to golf course. I want my courses to be playable for all levels of golfer, to be maintainable and environmentally sensitive."

Weed is getting the opportunity to meet that challenge outside the PGA Tour projects as well, he said, by making himself available to other developers.

Fry gave credit to his first employer (Tom Fazio), the man who got him that job (Fazio project director Andy Banfield), his present employer (Michael Hurdzan) and Rees Jones ("who has guided me like a father").

"Without them, it would have been impossible," said Fry, who felt fortunate getting accepted into the ASGCA since he studied business in college rather than the normal landscape architecture and engineering normally associated with golf course architecture.

He added: "My wife's been the all-time saint. Without her I couldn't do it. Her



Devil's Pulpit near Toronto is one of the courses new ASGCA member Dana Fry has worked on.

support alone is invaluable."

Fry put the joy of designing golf courses as a career in perspective.

He said: "To this day my Mom is awed that I design golf courses for a living. 'Can

you get paid for that?' she asked.

"When we opened Devil's Pulpit (in Caledon, Ontario, Canada), my father saw and understood the difference between that and normal golf courses. Now he's proud."

## Palm Harbor GC closes for six months for repairs

PALM COAST, Fla. — Palm Coast's oldest golf course, Palm Harbor, is reconstructing its tees, greens and clubhouse.

The course closed June 1 and is scheduled to reopen Dec. 1, according to Fred Kleinfelder, director of golf maintenance for SunSport Recreation. The ITT Community Development subsidiary operates Palm Coast's four golf courses, tennis clubs, marina and restaurants. All SunSport facilities are open to the public.

Palm Harbor's approximately 550 members have been offered full member privileges at either Cypress Knoll or Matanzas Woods golf clubs until Palm Harbor construction is complete. Matanzas and Palm Coast's fourth golf course, Pine Lakes

Country Club, were designed by Arnold Palmer and Ed Seay, while Cypress Knoll is a Gary Player course.

The 6,572-yard Palm Harbor layout, designed by Bill Amick, opened its front nine in 1971 and back nine two years later.

Tifton Turf Farms, Inc., of Tifton, Ga., is rebuilding the tees and greens and restoring them to their original size. Kleinfelder said the work is necessary because hybrid Bermudagrass greens revert to unsuitable grasses after about 20 years, and tees and greens gradually lose their original shape and grade.

The Palm Harbor clubhouse expansion, being handled by ITT Community Construction, will put the pro shop, locker rooms and 19th Hole under one roof.

## Dye Designs changes name to reflect times

Dye Designs International, Inc. has changed its corporate name to Perry O. Dye Designs International, Inc.

The decision to add his full name to the 10-year-old corporate entity comes at a time when Perry Dye is concentrating fully on his golf course architecture.

The first new project to be signed by Perry Dye as Perry O. Dye Designs International Inc. is the Sakuranbo Country Club in Yamagata Prefecture, Japan

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# McCumber was a designer first, player second

Continued from page 29

"We have done a lot of product that I'm very proud of," he said. "The irony is that my design career started before I got on Tour. We started The Ravines early in 1978 while I was getting my card."

McCumber Landscape had worked with consulting architect Ron Garl on The Ravines and was making a shift from commercial landscaping into golf course construction in 1978. The company had built courses for Garl, Joe Lee, the Fazios, Art Hills and other architects.

"It's a nice feeling getting this recognition and getting voted in after working in the architectural side of the profession for so long," McCumber said. "I'm looking forward to working with (the ASGCA)."

McCumber said he was "really tickled that the two other architects of my firm are also members now." J. Chris Commins, who has been with McCumber for 16 years, was also inducted as an associate member in May. Seven-year employee Mike Beebe was the firm's first ASGCA member.

## A TASTE FOR CLASSICS

The three men are on "the exact same wave length" regarding design philosophy, added McCumber, a vocal critic of "contrived" designs.

"We like to keep things natural," McCumber said. "Being a Donald Ross fan and growing up on that kind of golf course (off the 14th hole at Hyde Park in Jacksonville, Fla.) was a great influence..."

"I like to accentuate what nature gave me — but not create it from nothing. Pine Valley is my favorite course in the world and it's severe. But it's naturally severe."

McCumber added: "Ten years from now we'll look back on a lot of courses built in the 1970s and 1980s and we'll view them like we do Nehru jackets, big-fin Cadillacs and art deco. I like to build the golf course that's more like the traditional home in the old neighborhood with the steep roof and classic crown molding."

"In other words, I think the great courses were built on nice pieces of land and the architects made things look natural. They looked for natural sites to cut the greens and for natural elevations to cut the tees. The Ravines is that way, that's why I'm so tickled with it."

Moving 2 million yards of dirt on a golf site "offends me," McCumber said. "If you have to do that, you've totally contrived the whole thing."

He decried the use of things that are not natural to the environment "whether it be certain types of wood like railroad ties, or bulkheading that doesn't exist on the land. I don't like to bring in rock or stone that isn't native to the land when you're working on bulkheads or streams. I like, as a rule, to carry slopes off

*Ten years from now we'll look back on a lot of courses built in the 1970s and 1980s and we'll view them like we do Nehru jackets, big-fin Cadillacs and art deco.'*

— Mark McCumber

of greens down into water without even using bulkheads unless you don't have the room to do it.

"Can you imagine playing 11, 12, 13, 15 and 16 at Augusta (National) with all bulkheaded greens? I can't fathom it because

it wouldn't be natural... There's nothing natural about that unless it's the Pacific Ocean."

Soft edges and subtleties are McCumber's trademarks.

"I think the game is a game of decisions," he said. "It's a game of

bouncing a 5-iron onto the green or carrying a 6-iron high and hard and stopping it. A lot of the golf in the 1970s and 1980s was target golf... I think that's absolutely abstract to the whole theory of golf.

"When I play the old great golf courses around the world you can play them in wind or calm, dry or wet. I want my golf courses to be such that you can play them in any season."

McCumber said future restrictions on water and chemical use will necessitate retraining golfers

to accept more natural conditions.

"If you live on a golf course in America now, they sell it as a beautiful greenbelt that's irrigated from property line to property line. We're going to have to change that thinking to, if it's dry season the course is going to be brown."

That change will, in turn, necessitate that courses be playable despite being fast. "Some courses you couldn't play if they were rock-hard and fast. You couldn't run the ball up on the greens; they're too severe," he said.

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# Master site plan said key to successful golf course project

Continued from page 29

firm; and Terry Trim, director of research for Van Kampen Merritt Advisory Corp.

## FEASIBILITY STUDIES

Most feasibility studies are flawed, McLoughlin said. They rely on an old National Golf Foundation formula that takes the number of potential golfers in an area multiplied by the average number of rounds they would play to determine the total capacity for golf. Subtract the existing capacity, and what is supposedly left is the capacity for new golf holes.

The problem with the old formula is that it does not take into account golfers' willingness to travel outside their immediate area nor their desire to play more than one course, McLoughlin explained.

Consequently, feasibility studies and financial projections are often too conservative, McLoughlin said.

"The best thing you can do for a client is be realistic. You can kill a good project by being too conservative," he said.

Probably more important than a general feasibility study, McLoughlin said, is a master site plan analyzing the potential of a golf course at a specific location.

"The master site plan can affect the feasibility study by 30 to 50 percent," making a general feasibility study almost worthless, McLoughlin said.

A master site plan ranges from \$10,000 to \$30,000. That might appear expensive for a low-budget project. But it should be viewed as an insurance policy that can save developers hundreds of thousands of dollars in miscalculations, McLoughlin said.

Practice facilities are often overlooked in the master site plan, McLoughlin noted. A well-designed practice facility can cost \$1 million, but return that much in annual profits.

A practice range is but one of eight potential profit centers in a well-designed golf course operation, McLoughlin explained. The others include a teaching academy, golf cars, short-play (3-to-5-hole) practice area, putting course, food and beverage operation, pro shop and the course itself.

"The bottom lines are attractive if you're hitting on all eight cylinders. The key is to properly manage them all. You're looking at as much as a 10-to-1 difference in profitability between a well managed and a poorly managed operation," McLoughlin said.

## REGULATORY/PERMITTING PROCESS

The first and most important step in the regulatory process is figuring out what government agencies, special interest groups and neighbors will be affected by a project, then getting them involved before a plan is put to pa-

per, Barber said.

The worst mistake a developer can make is not allowing those groups to take part in the process, he added.

Developing an environmental baseline that assesses the physical and environmental features of the land is the next step. Included is a listing of the physical features (slopes, woodlands, wetlands, easements, utilities, roads), ground water supplies, archaeological and historical artifacts, animal habitats, plant species and

aesthetic qualities.

The final goal, actually obtaining the permits, results from developing a project design acceptable to all parties through an ongoing dialogue between owner, designers, regulators and other interested parties, Barber said.

The actual steps in obtaining a permit include conducting preliminary meetings with all parties, preparing interim plans, conducting meetings on the interim plans, finalizing plans and submitting them to the agencies for

final permitting.

Hiring experienced professionals increases the chances of success, he said.

"Education is the key to overcoming any objections to a project," Barber said. "Don't force regulators into making a decision they aren't comfortable with. Give them the opportunity to make easy decisions."

## FINANCING

Capital has been difficult to raise in both the private and public sec-

tor for the past few years, Boczar said.

With funds limited, reputation and experience have been increasingly important in the private sector. A builder with a track record of developing successful golf projects can get his equity requirements down in the 10-percent area, while less experienced developers are struggling to come up with 30 to 50 percent of project costs, Boczar said.

As for individual investors, they compare golf course projects with

Continued on page 39



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# Golden Bear involved throughout Pacific Rim

Golden Bear International has formed a venture with Fil-Estate, Inc., whereby all golf courses Fil-Estate develops in the Philippines will be designed by Jack Nicklaus and his organization. As part of the agreement, Nicklaus will design only Fil-Estate courses in the country.

"The natural terrain of the island country and the tropical climate provide a great opportunity for quality golf course design," said Nicklaus. "We are excited to play a part in the rapid



Jack Nicklaus

a 36-hole project under construction outside the country's capitol. Manila Southwoods will host the 1992 and 1993 Philippine Open as well as the 1994 Johnny Walker

growth of the game in the Philippines."

Nicklaus has already designed the first course, Manila Southwoods,

Classic.

"Phil-Estate plans to build eight golf course facilities in the next five to 10 years, making the company the premier golf course developer in the Philippines," said Mark Hesemann, vice president of GBI and general manager of Jack Nicklaus Golf Services.

Nicklaus will also design a golf course on Bintan Island in Indonesia. The Nicklaus design will be the first golf course built for Bintan Lagoon Beach & Golf Resort.

"We are excited to be the first

to build a golf course on such a rare and beautiful piece of island property," said Nicklaus. "This resort promises to be one of the best in the Far East."

The property is part of the 19,000-hectare Bintan Beach International Resort. SAFE Bintan Resort signed a letter of intent last September to lease 240 hectares on the northern coast of Pulau Bintan. Nicklaus will design the first of three championship courses. Construction will begin in the fall.

## GCBAA testing

Continued from page 29

exam. A competent, experienced golf course builder should have no trouble passing it."

The questions will be drawn from a pool of 300 gathered by a committee whose members sought advice from scientists, engineers, superintendents, developers and architects.

"Some of the best questions came from our own members," Arnold said.

The certification program comes on the heels of the successful launch of the charter membership program designed for companies that wish to support the GCBAA programs.

Less than a month after the directors approved the new membership category, five companies had paid the one-time charter fee (minimum \$5,000): Perry O. Dye Designs International, Inc.; Dye Construction of California; Wadsworth Golf Construction Co.; Jacklin Seed Co.; and Irrigation Supply Co.

Arnold announced that the GCBAA has agreed to continue the tradition of conducting its summer meeting in conjunction with the PGA Championship for at least the next three years.

## Harvard seminar

Continued from page 38

what they could get by investing in the stock market. Consequently, they want returns on investment of 25 to 30 percent. They also want a strong cash flow to cover any debt, he added.

With interest rates below 7 percent, their lowest point in years, municipalities are finding revenue bonds a more attractive way to finance golf course projects, Trim said. More than 85,000 government bodies can issue tax-free bonds.

### CONSTRUCTION

The first question developers always ask is, 'How much does a course cost?', Pierman said.

"It's the same as asking how much it costs to buy a car. It depends on what you want," Pierman said.



Jerry Pierman

What generally stays the same are the cost percentages. In general, the make-up of a final construction bill looks like this:

Clearing and earthwork — 30 percent

Shaping — 15 percent

Irrigation — 15 percent

Greens materials — 10 percent

Drainage — 10 percent

Grassing — 10 percent

Cart paths — 10 percent

"But a good golf course is never really finished," Pierman said.

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Subdue + WSP, with its water-  
soluble packaging, not only  
outperforms other Pythium  
preventives, but leaves them  
in their dust.



# Golf courses newly approved in the United States

*Golf Course News* is publishing these lists monthly from our sources and with the assistance of Forecast Golf Marketing & Financial Systems, Inc. of Richmond, Va.

They include courses that have been approved around the country in the past month (in chart at right), and those that have been announced as planned in the last month (in chart below).

When the planned courses win final approval for construction, they will be listed again in the "Courses newly approved in the U.S." chart.

We would appreciate your help in updating this section. To contact us call 207-846-0600 or write *Golf Course News*,

P.O. Box 997, Yarmouth, Maine 04096.

Under "Type" — D= Daily Fee; P= Private; and M= Municipal.

Under "Class" — R= Regulation; E= Executive; P= Par 3.

Under "Work" — N= New; R= Renovation.

Location	Course Name	Type	Class	Work	Contact
<b>California</b>					
Apple Valley	Jess Ranch	N/A	R	N	David Rainville
Petaluma	To Be Announced	D	R	N	
<b>Florida</b>					
Naples	Sanctuary at Wulfert Point	P	R	N	Arthur Hills
Naples	Southampton	P	R	N	Gene Bates & Associates
<b>Georgia</b>					
Albany	Twisted Pines GC	D	R	N	Donald Cottle
Claxton	Evans Heights GC	D	R	A	Donald Cottle
<b>Illinois</b>					
Carlyle	To Be Announced	D	R	N	
<b>Iowa</b>					
Colo	Twin Anchors Golf & Country Club	M	R	N	Earl Moore
<b>Nebraska</b>					
Kearney	Kearney Municipal GC	M	R	N	
Lincoln	Iron Horse GC	D	R	N	Jerry Fisher
Lincoln	Iron Horse GC (Executive)	D	E	N	Jerry Fisher
<b>Nevada</b>					
Reno	Lightning W Ranch	N/A		N	Robert Weise
<b>New York</b>					
Putnam Valley	To Be Announced	D	R	N	Ronald M Garl
<b>Ohio</b>					
Bellefontaine	Bellefontaine CC	D	R	A	Barry Sarafin
Cincinnati	Glenview Municipal Golf Course	M	R	A	Ron Chase, Recreation Director
<b>Pennsylvania</b>					
Chester County	Stonewall	P	R	N	Tom Doak
<b>Wisconsin</b>					
Saint Germain	To Be Announced	M	R	N	

# Golf courses newly planned across U.S. and Japan

City	Type	Work	Contact/Telephone
<b>Alabama</b>			
Huntsville	D	N	David Rainville
<b>Arizona</b>			
Phoenix	P	R	Keith Foster
Sun City West	N/A	N	
<b>California</b>			
Dixon	M	N	Richard Brians, Mayor
Palm Springs	D	N	
Sacramento	N/A	N	
Thousand Oaks	M	N	
<b>Florida</b>			
Fort Myers	N/A	N	Robert Trent Jones
Fort Myers	N/A	N	
Fort Myers	D	N	
Fort Myers	N/A	N	
Lake Jem	D	R	Bob Walker
Manatee County	N/A	N	
North Fort Myers	P	N	
Port St. Lucie	M	N	Donald Cooper, City Manager
St. Petersburg	P	R	Robert C. Walker
Stuart	N/A	N	William Matthews, Public Works Director
<b>Georgia</b>			
Albany	D	N	Robert C. Walker
<b>Hawaii</b>			
Hilo	D	N	Cal Olson
Kohala Coast	D	N	
<b>Idaho</b>			
Pocatello	M	N	
<b>Illinois</b>			
Carbondale	P	N	
Hamel	M	N	Richard Boeker, Mayor
Peotone	N/A	N	Richard LeBarbara
<b>Iowa</b>			
State Center	D	A	Mikel Eckhardt, Treasurer/515-483-2054
<b>Kansas</b>			
Paola	P	A	Allan Silver, Greens chair/913-294-2910

City	Type	Work	Contact/Telephone
<b>Massachusetts</b>			
Topeka	D	N	
Stoneham	M	N	
<b>Minnesota</b>			
Janesville	D	N	Terry Pooley, President/913-381-9537
<b>New Jersey</b>			
Bernards	N/A	N	Gary Player
Galloway Twp.	N/A	N	
Vernon	D	N	
<b>New York</b>			
Lysander	D	N	
Putnam Valley	M	N	
Thompson Ridge	N/A	N	
<b>North Carolina</b>			
Carolina Beach	D	N	Hubert Vincent, Mayor
<b>Ohio</b>			
Lebanon	M	N	
<b>Oregon</b>			
Rogue River	D	N	
<b>Pennsylvania</b>			
Berwick	N/A	N	
Franklin Park	N/A	N	Gary Player
<b>Tennessee</b>			
Anderson County	N/A	N/A	
<b>Texas</b>			
San Antonio	D	N	Keith Foster
<b>Vermont</b>			
Williston	N/A	N	
<b>Washington</b>			
Seattle	D	N	Keith Foster
<b>Japan</b>			
Hokkaido	R	N	Robert C. Walker
Osaka	R	N	Robert C. Walker

## Hills signs on to design third 18 at Bonita Bay

BONITA BAY, Fla. — Bonita Bay plans to offer its members 54 holes of golf, building its reputation along with Bay Island, a third championship golf course built using nine holes of the existing Marsh course.

The Marsh, opened in January 1985, will be split, with nine new holes added to the back nine to create Bay Island, and nine new front holes built to recreate The Marsh.

Construction of the new course should begin in the spring of 1993, and Arthur

Hills, who designed the other two courses, has already begun the design for the 18-hole course.

Like The Marsh and Creekside, the new course will complement the natural features of the Bonita Bay property. A wetlands slough will frame many of the new holes and a few holes may have views of Estero Bay.

"There will be a nice balance of lengths among the courses," said Hills.

## Graham-Panks busy in Indonesia

PHOENIX, Ariz. - Former U.S. Open and PGA champion David Graham, along with Scottsdale golf course architect Gary Panks, have announced Scottsdale-based Graham/Panks International has been retained to design a championship 18-hole layout in Indonesia.

Located 24 miles southwest of the country's capitol city of Jakarta in the foothills of the Puncak Mountains, the Royal Jakarta Golf Club "will bring a whole new

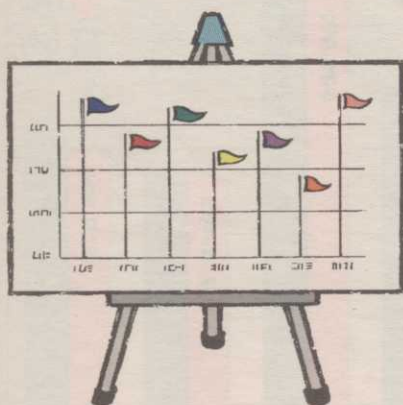
standard of golf course design to Indonesia," said Graham, a 20-year veteran of the PGA Tour.

"Indonesia has not seen much new golf course activity in the past decade," he said, "certainly not of this caliber. We see a new trend developing."

"Indonesia is right on the heels of Thailand as far as its own golf boom is concerned. It will be the country to watch in the 1990s."



## BRIEFS



## PALMER TAKES OVER AT STARR PASS

ORLANDO, Fla. — Arnold Palmer Golf Management Company assumed management of Starr Pass Golf Course in Tucson on June 1, according to Robert Holzman, APGMC chief executive officer. The agreement was signed with Starr Pass Development Corporation. Starr Pass is an 18-hole course designed by Robert Cupp of Golfcorp.

In other news, APGMC was appointed receiver for Hidden Hills Country Club on May 1, by the Circuit Court of Duval County, Jacksonville, Fla. Hidden Hills, a private 18-hole facility located in Jacksonville, had been remodeled by APMGC's sister firm, Palmer Course Design Company of Ponte Vedra.

## J.C. RESORTS TO MANAGE MT. WOODSON

LAJOLLA, Calif. — The LaJolla-based JC Resorts company has been named by Davidson Communities of San Diego to provide management services for Davidson's Mt. Woodson Country Club in North San Diego County. With the 18-hole Mt. Woodson track and the 18-hole Twin Oaks course in San Marcos scheduled to open in December, 1992, JC Resorts will own and/or operate 108 holes of golf in Southern California, including the 45 holes at the Rancho Bernardo Inn of San Diego, and the 27 holes at the Temecula Creek Inn, Temecula. All of the above courses are daily fee.

## CUNNINGHAM JOINS DEERING BAY

MIAMI — Cindy Cunningham has been named membership director of Deering Bay Yacht and Country Club, a new residential and recreational community on Biscayne Bay. Cunningham brings to her position 11 years of experience in real estate and business development. Most recently she functioned as real estate manager of the Tribune Company in Chicago; then as manager of its Eastern Division in Fort Lauderdale. Deering Bay is located directly on Biscayne Bay and features an Arnold Palmer-designed golf course.

## IRWIN MANAGING DEER LAKE

Deer Lake Golf Club, located in Springfield, Mo., is the newest facility to be managed by Hale Irwin Golf Services, Inc. Nestled in the Ozark's rolling hills, Deer Lake features a picturesque golf course and several executive conference rooms designed for seminars and private gatherings. Hale Irwin Golf Services is an international golf course design, development and management company based in St. Louis, Mo.

## Fledgling club association wins fight against taxation

By HAL PHILLIPS

HARTFORD, Conn. — Two years ago, representatives of several Connecticut golf clubs kicked around the idea of forming a statewide organization. But for one reason or another, the time wasn't right.

In 1991, the recession-wracked state passed a six-percent sales tax on sports and recreational clubs dues. That encumbrance was levied on top of the existing 10 percent excise tax already paid by such clubs — making the effective state tax a whopping 16 percent.

Suddenly, Connecticut club owners and managers had all the incentive they needed.

The Connecticut Club Association was born early in 1992, having filed a certificate of incorporation in February. Five months later, the six percent tack-on tax was repealed.

"We really didn't get off the ground that first year," recalls CCA President Paul Mersereau, who also serves as president at Hartford Golf Club. "Then the six

Continued on page 42

## Hinckley assumes helm of newly reorganized Club Resorts

DALLAS — Things have changed at Club Resorts Inc., the hospitality division of ClubCorp that operates Pinehurst Resort and Country Club, among others.

James M. Hinckley has been named president and the company has reformulated its growth strategy to include aggressive pursuit of management contracts, international projects and development of a new membership product.

Hinckley is a 23-year veteran of Club Corporation International (ClubCorp), the parent company of Club Resorts. He has served in numerous capacities within ClubCorp, including overseeing all operations, new club development and new business development of Club Resorts' sister company, Club Corporation of America.

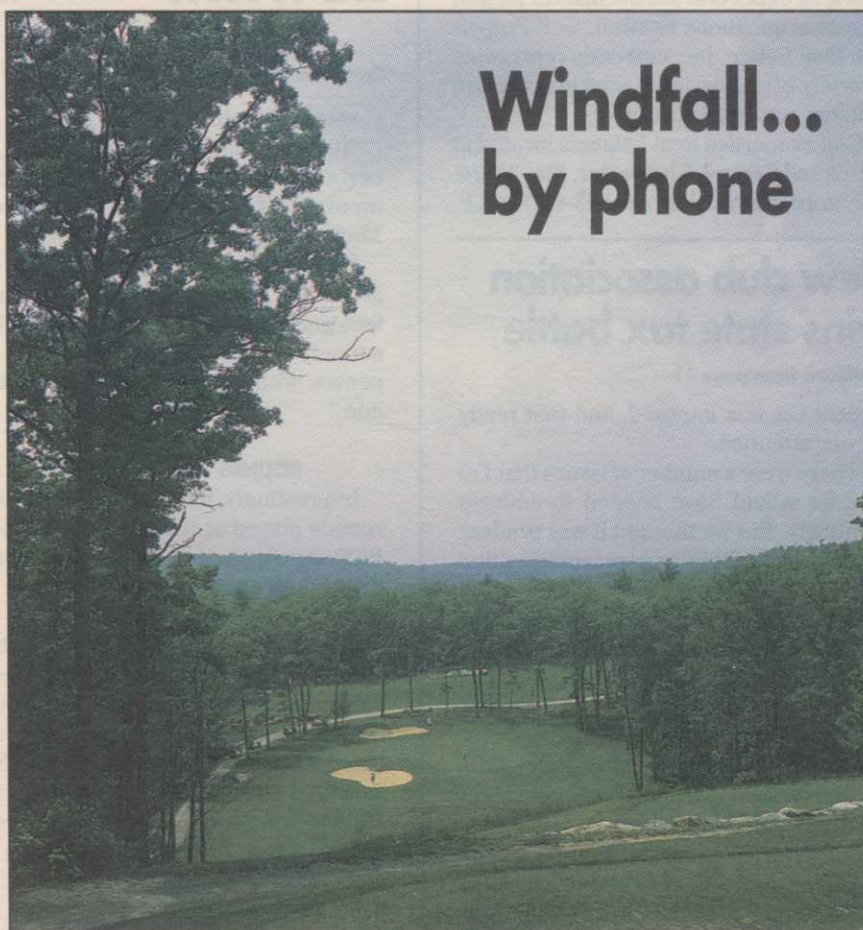
Hinckley is also director of overseas operations for GolfCorp — the public-golf arm of ClubCorp — and ClubCorp Realty, a real estate development subsidiary.

"Jim has solid dealmaking, hospitality and private club experience, which is the perfect mix to lead Club Resorts into its new endeavors," said Robert H. Hedman, ClubCorp chairman.

Just what are those "endeavors"? Namely, placing less emphasis on turning around poorly managed clubs.

When established in the mid-1980s, Club Resorts focused on growth through acquiring troubled properties that displayed strong turn-around potential. Yet during the past year — by building off its success in operating Palmas Del Mar Resort (Humacao, Puerto Rico) and Barton Creek (Austin, Texas) — the company has refocused its efforts to include manage-

Continued on page 43



The par-3 11th hole at Shaker Hills Golf Club in Harvard, Mass.

## Automatic tee time reservation systems a boon for club managers, not just players

By HAL PHILLIPS

When automated tee-time reservation systems burst on the scene a few years ago, many industry observers viewed the development as a convenience exclusive to players... and why not? The ease of 24-hour reservations by credit card, no more busy signals while phoning the pro shop, and prime tee times for those who plan ahead.

However, automated reservation systems are beginning to prove their worth on the management side, as well. There are drawbacks, but daily fee club managers and golf directors recognize the advantages of arranging their tee schedules by computer, by phone.

"When I first came on in April of 1991 and talked to the owner, we thought it would be a great service to the golfer — and it is," said Peter Dupuis, director of

golf at Shaker Hills Golf Club in Harvard, Mass. "But as it turns out, it's been a tremendous convenience for me and my staff."

Shaker Hills, an upscale daily-fee operation, has used Xeta Reservation Systems Inc. since the course opened in July 1991. The Tulsa-based firm currently serves 65 courses in 12 states, and Dupuis is happy with the results.

"Plain and simple, it takes the place of some staff," Dupuis explained. "There's no comparison. It frees up time for personal attention in the pro shop."

In a survey of its 39 clients nationwide, another manufacturer of automated tee-time software — Fairway Systems of Englewood, Colo. — found the computer reservation service decreased calls to the pro shop by 15 percent.

Continued on page 43

## AGC deals with lease problems in Oceanside

OCEANSIDE, Calif. — Residents and city officials in cash-strapped Oceanside continue to seek changes in their existing lease with American Golf Corp., which operates Oceanside Municipal Golf Course. AGC is looking to change the lease, as well.

The Oceanside City Council, which has been negotiating alterations in the lease for more than a year, is looking for fee increases and a higher percentage of revenue sent the city's way.

Under the current agreement, which expires in 2002, the city of 135,000 receives 12 percent of gross revenues from the course. AGC netted \$782,000 in 1991, while Oceanside received less than \$200,000.

Yet, AGC isn't particularly happy with the lease either. "We are looking for some fee increases," said Gail Goodrich, AGC vice president. "We haven't had any fee increases in four years."

## Byrd creates Golf Course Properties, Inc. to specialize in acquisitions and sales

CLEARWATER, Fla. — Bobby Byrd, president of Bobby Byrd Real Estate, has established a new company called Golf Properties Real Estate, Inc. to specialize in golf course acquisitions and sales in Florida and across the nation.

Byrd and his partner in the venture, Robert McGrath — president and chairman of Golf Car Systems, Inc. — have named Richard Farrell president of the new organization.

Farrell has extensive expertise in the

golf course industry. Most recently he served as senior vice president of Nicklaus/Sierra Development Corporation. He also presided over P.G.I., Inc., developers of golf properties in Florida.

On a more local level, Farrell was president of Bardmoor Properties, developer of Bardmoor Country Club in Seminole, Fla. There he was responsible for all marketing and operational aspects of the country club, in addition to the development of more than 1,800 residences.

According to Byrd, with the reduction in golf course construction over the next few years, he expects to see the market for golf course acquisitions to swell. Golf Properties Real Estate, Inc. currently represents a variety of groups interested in acquiring courses across the nation.

Golf Properties Real Estate is located at 710 Grand Central, Clearwater, Fla., 34616. For more information, call 813-447-GOLF.

## New club association wins state tax battle

Continued from page 41

percent tax was imposed, and that really got our attention.

"There were a number of issues that I'm sure we would have needed to address eventually. But we thought it was prudent to not get caught in a vulnerable position again."

Now 50 members strong, the CCA has drawn membership from all sectors of the Connecticut club community: golf clubs (private, semi-private, daily fee, municipal), yacht clubs, downtown eating clubs, the Connecticut State Golf Association, the Connecticut PGA, and the Connecticut Women's Golf Association.

These varied organizations all joined the CCA — and the tax fight — because, in Mersereau's words: "Everybody got nicked."

"This state, like many, has got a big deficit," he explained. "They're looking for money everywhere. For instance, we've never had an income tax. Now we have one, and it went down like cod liver oil."

However, the extra six percent tax — on "amusement and recreational services," as the law reads — didn't stay down long.

After a successful lobbying effort by the CCA, the tax has been repealed. After receiving favorable recommendations from the Senate and House finance committees in late May, the bill of repeal received support from the full Legislature on June 1.

With Gov. Lowell Weicker's signature in mid-June, the six percent tack-on tax ceased to be law, effective June 30, 1992.

"Everything worked out much better than expected," said Mersereau. "If everything clicked, we expected a repeal effective Jan. 1, 1993. But we got lucky."

The ill-fated levy would have augmented state coffers by approximately \$15 million annually. At Hartford Golf Club, for example, 800 members each pay \$300 in yearly dues, Mersereau said.

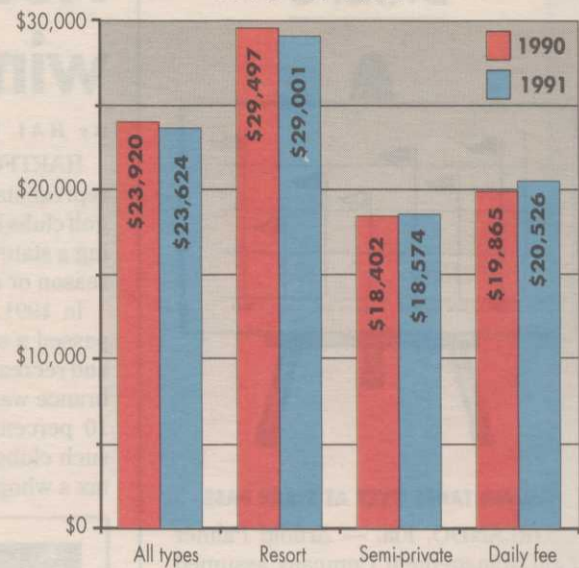
At 10 percent, the annual tax payment is \$24,000.

At 16 percent, it would have been \$38,400. That's an extra \$14,400 per club, per year — and it was levied without representation.

No more.

## Report indicates expenses are up, while rounds played down...

Average maintenance expense per hole 1990 vs. 1991



Continued from page 1

vate club industry.

"It shows that public golf is strong, but certainly not recession-proof," commented NGOCA Executive Director Michael Hughes.

"There are a lot of discounting programs and promotional activities of green fees going on out there. And owners are actively monitoring maintenance expenses with an eye toward the bottom line."

### ROUNDS PLAYED INCREASE

Interestingly, the 11.2-percent jump in rounds played at the 100 courses in the PKF survey contradicts recent National Golf Foundation figures showing a 4.6-percent drop in rounds played.

"Two things might be responsible," Hughes said. "First, NGF interviewed consumers and we interviewed course owners. Second, our survey was dominated by higher-end courses, while NGF surveyed all consumers, including those making less than \$35,000. That income group is where the biggest drop occurred."

Semi-private courses showed the biggest increase in rounds played, 26.7 percent, followed by daily-fee, 12.9 percent, and resort, 2.4 percent.

Regionally, the South Atlantic led the way with a 24.9 percent increase in rounds played. The Mid-Atlantic rose 9 percent and North Central, 5.9 percent. The Mountain/Pacific area fell 0.4 percent.

### REVENUES STEADY

Despite the double-digit increase in rounds, green fees increased just 1.9 percent, reflecting the discounting and promotions Hughes mentioned.

Semi-private courses saw the largest leap in green fees, up 7.9 percent. Daily-fee courses rose 6.7 percent and resort courses 2.3 percent.

The South Atlantic, 5.9 percent, North Central, 4 percent, and Mountain Pacific, 0.6 percent, enjoyed the biggest increases, while Mid-Atlantic green fees fell back 6.9 percent.

Mixed results prevailed in other revenue-generating areas. Overall, cart fees rose 13.2 percent and food and beverage 28.4 percent.

Retail sales fell 2.8 percent as discount stores continued to eat into pro shop profits, a trend Hughes believes daily-fee courses can reverse by joining together to make group purchases of retail items, just as individual NGOCA members in some areas save on course maintenance supplies by banding together to make

volume purchases.

### MAINTENANCE COSTS DROP

Superintendents at daily-fee courses tightened their financial belts last year, knocking 1.2 percent off their maintenance budgets down to an average \$23,264 per hole.

Compare that to private clubs, where maintenance costs climbed 9.8 percent to \$30,870 per hole, according to the "Clubs in Town & Country Report" survey of 250 country clubs.

"Private courses aren't run for profit," noted Director of PKF Counseling John Crow. "They don't have the drive to the bottom line that daily-fee courses do."

"Private courses simply meet expenses and try to set aside some money for future capital expenditures. Daily-fee courses have to make money and show a return on investment. One way to do that is cut costs."

Salaries (\$9,325 per hole) and payroll taxes/benefits (\$1,955) made up almost half the maintenance budget (47.8 percent) for all daily-fee courses, making it a logical place to look for cuts or at least hold the line in tough economic times.

Salaries overall rose just 0.7 percent and payroll taxes/benefits fell 2.2 percent in 1991. Other per-hole expense items were supplies \$3,878 (up 2.7 percent), repairs \$2,296 (down 7.6 percent), uniforms \$204 (up 0.5 percent), energy \$859 (down 4.2 percent) and other \$5,107 (down 3.6 percent).

Resort courses had the largest per-hole maintenance costs at \$29,001 (down 1.7 percent) followed by daily-fee at \$20,526 (up 3.3 percent) and semi-private at \$18,574 (up 0.9 percent).

The Mid-Atlantic had the highest regional costs at \$27,882 (up 2.8 percent). The South Atlantic was \$24,277 (down 11.6 percent), Mountain/Pacific \$22,976 (down 1.6 percent), and North Central \$21,858 (up 10.4 percent).

### PUBLICATION AVAILABLE

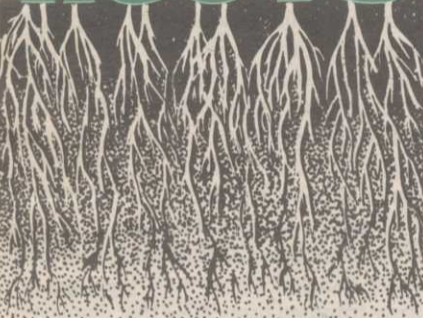
The "Trends in Resort and Daily Fee Golf" required participating course owners to share financial information, a break from their close-to-the-vest tradition, Crow said.

"We felt it was important for owners to have reliable information so they could compare their operations with others in their regions," Hughes noted.

The report costs \$50 for NGOCA members and \$75 for non-members. It is available from the NGOCA, 14 Exchange St., P.O. Box 1061, Charleston, S.C. 29402; telephone 803-577-5239.

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## Tee times

Continued from page 41

"The rush of calls we had when we opened the tee time window, if you will, has dropped off considerably," said Reed Pryor, golf administrator for the 12 courses operated by the Indianapolis Department of Parks and Recreation. "Overall, the staff has more time to concentrate on sales in the pro shop, or what have you. The system is working very, very well."

Handling tee times by phone does require an adjustment, and the process is not without its potentially negative developments. For example, Pryor said some of his pros felt the new system meant a certain loss of control — particularly with regard to twilight leagues.

Furthermore, Fairway System clients — Pryor among them — reported a six percent drop in food & beverage sales. This makes sense: Players with reserved tee times don't put their names on a list and sit in the bar for 90 minutes.

"Nobody can deny the potential for that is there," said Pryor. "But I think so many people are conscious of their time nowadays, milling about the pro shop and having a few hot dogs isn't what they want to do."

To compensate for no-shows, most courses with computer reservation systems require golfers to arrive 30 to 40 minutes in advance. In theory, this leaves time for a quick morsel and libation. Besides, Dupuis believes, "food & beverage sales are more a function of atmosphere than hanging around waiting for a tee time."

On the other hand, two Xeta customers have found the system has cleaned out the clubhouse, which has bolstered F&B business. "People used to see big crowds at the turn, and they wouldn't go in the clubhouse," said Xeta's Gary Crews.

For the golf course owner, the question of automated reservation systems is more black and white: Computerized tee times appear to be money-makers.

The Fairway Systems survey reported net income increases of \$12,500 at its 39 member courses. Xeta reports similar numbers.

Both firms indicated that nearly all client courses issue a reservation card with an annual fee of \$10 to \$50; or they charge a reservation fee of \$.50 to \$4 per golfer per tee time. Multiply that by the number of rounds handled by computer and you've created significant new income.

Shaker Hills, for one, does not charge a fee, while the 12 Indianapolis courses on Pryor's watch have incorporated a reservation charge into greens fees.

"We're all new at this, and so are the golfers," explained Pryor. "So we're all learning and changing things as we go along. But from what I've seen, the pros outweigh the cons."

## New NGCOA chapter in Florida

The Central Florida Chapter of the National Golf Course Owners Association was formed May 18 by owners and operators of golf courses in and around the Orlando area.

Bill Stine, the owner and operator of Kissimmee Bay Golf Course, was elected president.

Stine said the chapter's mission is "to organize the

owners into an industrial force in the central Florida area. We want to work towards solving mutual problems and promoting the game of golf in our state."

He said the chapter is looking forward to a close relationship with the national association in which all could benefit from the knowledge and expertise of owners from across the nation.

## Hinckley to run Club Resorts

Continued from page 41

ment of properties which are owned by fiscally sound establishments.

"Club Resorts is uniquely positioned in the marketplace," said Hinckley, "because we are the only hospitality company that offers proven experience in all the companies — hotel, recreation, real estate and club operations — needed to effectively manage a resort.

"In fact, the demand is so high

for quality resort management that in just the past few months, our focused efforts have produced numerous opportunities for us."

Club Resorts is also targeting international expansion by dovetailing off ClubCorp's decade of involvement and recent joint ventures in Europe and Asia.

Further, according to Hinckley, Club Resorts is only months away from unveiling its newest product: a hybrid of club membership and second-home options.

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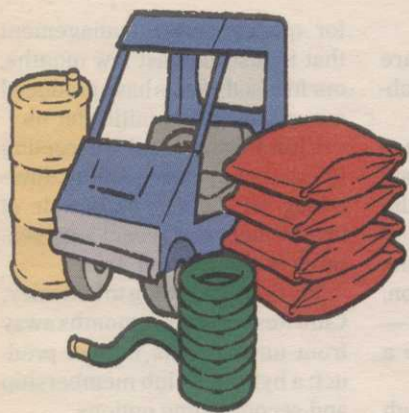
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BRIEFS



**CENTURY RAIN, BANKS SUPPLY MERGE**

Two of Florida's largest irrigation suppliers, Century Rain Aid and the irrigation division of Banks Supply have merged their Florida operations, creating a network of 10 branches across the west coast of Florida. The newly merged Banks outlets are now called Century Rain Aid (Banks Irrigation Division). Century operates 22 branches in seven states, supplying irrigation equipment, pumps, landscape lighting, fountains, and drainage products to the golf market.

**NAME CHANGE FOR BLOCK SYSTEMS**

MINNEAPOLIS — Block Systems, Inc., creator and licensor of Diamond, Windsor Stone, Aztech and Sahara Stone retaining wall systems, has officially changed its name to Anchor Wall Systems, Inc.

In addition, American Masonry Products, the current Minneapolis office, has merged with Anchor Wall Systems, thus joining the corporate headquarters. The merger means a comprehensive base of services offered to Anchor's customers nationwide. National divisions will include licensing, commercial, DIY/Retail, specifying, research and development, and marketing.

**WHEELER JOINS ROOTSINC**

Bruce Wheeler has been hired as the western region salesman for ROOTSinc, a division of LISA Product Corporation. Wheeler is responsible for the distribution and sales of the company's ROOTS, ironROOTS and NorburN brand products in California, Oregon, Washington, Nevada, Utah, Arizona, Idaho and New Mexico. Wheeler comes to LPC from the Cameron Company in Palm Springs, where he spent two years servicing the desert golf and landscape markets. He's a licensed pest control advisor and qualified applicator.



Bruce Wheeler

**PARKWAY ADDS CONSAN LINE**

Parkway Research Corporation has announced the addition of the Consan product line to its operations. Acquired by Parkway in November of 1991, the Consan line includes Triple Action 20, the triple quaternary amine formula, EPA-approved for greenhouse disinfecting applications and for direct application to ornamental plants, grasses and trees. For more information on Houston-based Parkway Research Corporation and the complete Consan product line, call 1-800-256-3668.



After the bunkers at Scioto Country Club were totally renovated, The Placer installed sand at an initial six-inch depth on the bottoms and two to three inches on the slopes with minimal handwork.

**The Placer: Bunker work made easy**

By TERRY BUCHEN

Bunker sand replenishing or replacement is now less daunting a task for superintendents in the Midwest and Mid-Atlantic states as an innovative dump truck has been built by the Kurtz Brothers of Cleveland.

The Placer is a material-placement system designed and patented to help use time/motion efficiency and to greatly reduce labor costs during bunker renovation. Mark A. Yoder of Scioto Country Club in Columbus, Ohio, just renovated all of his greenside sand bunkers with The Placer. It was done while the regulation greens were closed for renovation from last August to April 30.

Yoder had the new greenside bunker sand stockpiled in a remote corner of the member/guest parking lot, and the sand purveyor brought a large, articulated self-leveling front-end loader to fill The Placer dump truck.

The Placer was driven to Scioto with

normal street tires. Then the extremely wide, high-flotation tires were fitted for use while driving on the golf course rough areas.

After each bunker was completely restored to its original Donald Ross design — and drainage was added and completely sodded around — sand was added via the 17-foot conveyor.

The conveyor rotates back and forth up to 180 degrees. The dump truck holds 14 cubic yards of material. The system reportedly worked fast and efficiently.

The Placer can also be used to backfill drainage or irrigation trenches; top dress washouts on newly built golf course projects; place critical materials during USGA greens construction such as pea gravel, choker layer, sand/peat rootzone mix, and any other bulk materials used in course maintenance/construction.

Kurtz Brothers, Inc., is located at 4700 East 49th St., Cleveland, Ohio 44125; 1-800-223-7645 or 216-641-9999.

**Toro puts safety tips on video**

MINNEAPOLIS — The Toro Company and the St. Paul Fire and Marine Insurance Company have developed the nation's first comprehensive operator safety education program for the commercial turf maintenance industry.

Specifically designed for golf course employees, the three-pronged program — video, audio and written — responds to the significant number of injuries related to turf maintenance activities. In 1989, for example, more than 75,000 turf maintenance-related accident victims were admitted to hospital emergency rooms.

In addition to human injury, the economic loss can be devastating, said Mike Billings, vice president of the St. Paul Fire and Marine's Risk Management Services Division. More than 25 percent of workers' compensation claims by golf course maintenance employees are mower related, said Billings, who noted this results in an average cost of \$3,600 per claim.

"We're addressing the need for an easy-to-understand yet thorough safety program that stresses how critical it is to routinely follow safety measures when operating turf



equipment," said Billings.

Added Jim Seifert, senior attorney for Toro: "The ultimate goal for both companies is to see a drop in the number of accidents associated with cutting equipment. We want to correct the 'It-can't-happen-to-me' attitude."

The Turf Maintenance Equipment Safety Education Program addresses 28 different safety areas related to commercial cutting equipment. Covered are procedures to follow before and during operation, as well as when merely working around operating equipment.

The information is delivered in a simple-language, multiple-format style which incorporates a video tape, audio tape, written

Continued on page 47

**Government grant backs AgriDyne on pyrethrin study**

SALT LAKE CITY — The United States Department of Commerce has approved a \$1.2 million grant for AgriDyne Technologies Inc. to research an innovative new process for developing pyrethrin, a botanical insecticide.

AgriDyne will match the Advanced Technology Program grant, spending more than \$3 million over the next three years to formulate a method to increase domestic pyrethrin supplies.

Pyrethrin, an insecticide found in chrysanthemum-type flowers, is believed to kill insects on contact, have low toxicity for mammals, and degrade shortly after application. It is not known to produce harmful residues.

Utah-based AgriDyne proposes to use genetic engineering to develop a key active intermediate product normally generated in the flower. This intermediate product — which would then be converted to yield an almost unlimited supply of pyrethrin — is also important in the manufacturing of synthetic pyrethroid.

"Being selected as an Advanced Technology Program recipient represents outside confirmation of our pyrethrin technology," said Eric Hale, president and chief executive officer at AgriDyne. "The grant shows that our molecular biology techniques for producing the active ingredient in a natural insecticide — pyrethrin

Continued on page 47

*'Being selected... represents outside confirmation of our pyrethrin technology.'*  
— Eric Hale  
AgriDyne  
president

**EPA considering emission controls for maintenance equipment — mowers included**

By PETER BLAIS

The Environmental Protection Agency could recommend emission control regulations for construction equipment this September and smaller motorized golf course maintenance equipment next spring, according to an EPA official.

The federal agency will decide by September whether to propose regulations for tractors and bulldozers, according to Michael Scott, public liaison officer for golf course issues. No such regulations presently exist.

The EPA is testing equipment at its Ann Arbor, Mich., facility to determine if such regulations are necessary. If the agency believes they are, the EPA will invite public comment for 30 to 90 days before making any final recommendations, Scott said.

Manufacturers could be greatly

Continued on page 46

## Liability insurance, collection help offered through Irrigation Assoc.

The Irrigation Association (IA) has retained the nationwide collection agency, Kaplan and Kaplan, Inc., to better assist organization members.

Kaplan and Kaplan fees are negotiable and the firm can generally close an account in 90 days, according to Gene Piscitelli, owner of Kaplan and Kaplan. However, Piscitelli said there are no easy answers when it comes to success rates on receivables.

"There is an array of variables one must factor into the equation," he said. "Generally speaking, the success rate for all good agencies will depend on the age of the account."

According to the Commercial Law League of America, the typical success rates for receivables are as follows: For an account 30 days old, the success rate is 93.8 percent; 90 days old, 73.6 percent; 180 days, 57.8 percent; one year, 26.6 percent; and two years, 13.6 percent.

Headquartered in Crofton, Md., Kaplan and Kaplan represents more than 3,500 clients nationwide. Of some 6,000 national collection agencies, Kaplan and Kaplan is one of 75 certified members of the Commercial Law League of America.

To receive further information about the firm or about its services, get in touch with the IA office at 703-524-1200 or contact Kaplan's Bud Waters at 1-800-638-5630.

•••

The FAMEX/Liability Business Insurance Program, sponsored by the IA, is now available to qualified contractors, dealers and designers who assemble, distribute, in-

## IRRIGATION UPDATE

stall and/or design systems incorporating chemigation capability.

Coverage can apply as long as the irrigation contractor has no ownership interest in the chemigation system; is not operating systems nor applying chemicals; nor is advising operators about the types or uses of chemicals.

For more information about the IA Insurance Program, contact the FAMEX Connection at 1-800-772-3381, or contact the sponsoring agent, Thomas Tumilowicz, with the PDO Group at 1-800-666-4005.

•••

In other IA news, James A Borneman, a 20-year veteran of the irrigation industry, has joined the Irrigation Association as director of education and technical services. Borneman will be responsible for overseeing the association's educational programs, building the membership base and enhancing membership programs.

A former district sales manager for Rain Bird, Borneman spent the last 10 years with Automatic Rain Company of Menlo Park, Calif., serving in a variety of positions including operations/marketing manager, sales manager and, most recently, director of training.

## Reregistration costs too high for Dyrene

Continued from page 1

How expensive? Robb estimated that reregistration would have cost Miles "in excess of \$6 million... And that made it a pretty easy decision."

According to the EPA's Lois Rossi, there were also questions as to the long-term toxicity of Dyrene products. The EPA asked that Miles reconstitute certain studies, but Miles declined, she said.

Dyrene is the fifth product Miles has dropped since the advent of EPA reregistration laws in 1988. It's Miles' second fungicide (Lesan was the other) and third turf product (remember Basanit?) to bite the dust.

The Dyrene example exhibits a foreboding trend in the chemical industry, where once-viable products are abandoned due to the trouble and expense of federal reregistration.

"It's extremely unfortunate," said the EPA's Al Heier, who predicted that a good many fungicide producers won't reregister their products in the future. "If you work in the turf industry or grow a minor crop in this country, there's a good chance you're going to lose a lot of your fungicides."

"If you're a manufacturer, you have to look at the bottom line. You not only have to come up with the data for registration, you have a maintenance fee to keep it registered, and you have reregistration costs."

There are basically two reasons why a company would decide against reregistration, Heier explained: 1) They have evidence the product is not going to make the grade; or 2) the costs are too high and they can't justify it.

"More and more these days it's No. 2," he said.

"We had no reason to believe Dyrene would not have passed muster," said Dr. Wayne Carlson, manager of product information and regional development at Miles. "It was frustrating because, originally, we planned to go through with the process. But we continued to receive further requests for information (from the EPA).

"Regulations do change, but eventually we decided it wasn't worth it."

•••

Before 1972, companies merely registered their products with the EPA and paid annual maintenance fees, said Heier. But the 1972 Congress planted the seeds of reregistration.

"At the time, we didn't even know what reregistration meant," said Heier. "There were no standards for it. We've had to develop them over the years."

That process culminated in 1988 when Congress passed amendments to the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

These amendments required all products registered before Nov. 1, 1984 to be reregistered by the close of 1997. Products would be reapproved, if you will, only if they met current standards.

When a food-related product like Dyrene is reregistered, the firm must pay a one-time fee of \$150,000, according to Rossi. Companies must also pay an annual maintenance fee of \$1,100 per product. Furthermore, accumulating the data for reregistration is time-consuming and extremely expensive. Heier offered the following example:

The EPA requires that cancer studies be conducted on both the male and female in two different species; and the testing must be conducted using high, medium and low doses of the product. That's 12 separate tests, all of which must be conducted over the life history of each animal.

"There are 10 to 15 major studies like this one for each product," said Heier. "That's when the dollars flash fast."

This is what Miles faced when Dyrene came up for reregistration — and the decision was a 'no-brainer.'

"I can understand the EPA's role as a regulatory agency," said Robb. "Its role is environmental protection. Our role in the industry is to provide a product which in turn provides a service."

"But when we can't make money, it's gone."

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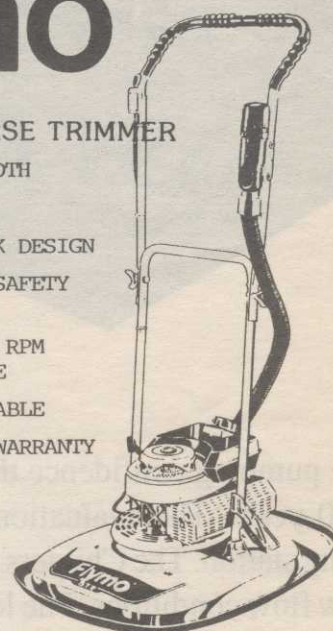
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## Deere Lawn & Grounds Division at home in N.C.

RALEIGH, N.C. — The complete Lawn & Grounds Care Division of John Deere — established in 1991 as a separate operating division of the company — is now operating from its new division offices in Raleigh, N.C.

The Lawn & Grounds Care Sales Branch had been operating out of Raleigh for more than a year. However, the entire division moved to North Carolina effective June 1, with Jeffrey Gredvig as general manager of division administration. The branch office works with the dealer network. The new Division Administration office coordinates activities of sales branches and Lawn & Grounds Care Division factories. It also

provides such support services as product development, marketing, public relations, sales and administration.

"We've located the Division office in Raleigh because this city is centrally located for close support of our major markets," Gredvig explained. "We'll more effectively focus our efforts to take full advantage of sales and marketing opportunities. We're encouraged by our growth in the lawn and turf equipment industry and expect to build on a solid foundation through the 1990s and into the next century."

The Lawn & Grounds Care Division can now be reached at this number: 919-954-6420.

## TOCA elects '92-93 officers; awards \$1,000 scholarship

COLUMBUS, Ohio — Bob Tracinski, public relations manager for John Deere, was elected president of the Turf and Ornamental Communicators Association at the group's recent meeting here.

Also elected to the TOCA executive board were Vice President Dale F. Keller Jr. of Public Relations Management Inc.; Secretary/Treasurer Jose Milan of Ciba-Geigy Turf and Ornamental

Products; and Directors Bruce Shank of Adams Publishing Corp. and Julie DeYoung of Fleishman-Hillard, Inc. Jerry Roche of Advanstar Communications will continue to serve on the board as past president.

•••

COLUMBUS, Ohio — **Michele M. Thomas** of Shawnee Hills was awarded a \$1,000 scholarship by the Turf and Ornamental Communicators Association at the group's recent meeting here. Thomas is a horticulture major at Ohio State University.

Funding for the scholarship was made possible through donations by GIE Publishing and Advanstar Communications.

"One of TOCA's purposes is to encourage people of ability to consider green industry journalism as a career," said TOCA President Bob Tracinski of John Deere. "Our scholarship fund is an excellent way to fulfill that goal."

Two additional scholarship sponsors — Johnson Hill Press and Adams Communications Co. — will allow TOCA to offer two \$1,000 awards in 1993.

# PUMPING WITH CONFIDENCE



## Jacobsen teams with Mile High

RACINE, Wis. — Jacobsen Textron has announced an agreement with Mile High Turf Equipment, Inc. to distribute the company's professional turf care equipment in Colorado. Mile High is located at 1901-C Leroy Drive in Northglenn. The phone number is 303-280-2272.

In other news at Jacobsen, **John Busuttill** has been named field service specialist. Busuttill will provide technical support and product training for Jacobsen distributors in the midwestern United States, plus Manitoba and Quebec.

## EPA emissions

Continued from page 44

affected by any new regulations, Scott said. New laws could also affect golf course superintendents if EPA determines existing vehicles need retrofitting with pollution control devices. Scott said any new regulations would likely involve only new vehicles, however.

Research on smaller equipment — including golf cars, mowers and trimming equipment — should be complete by December, Scott said.

If emission control regulations are again deemed necessary, a public comment period would follow. That means regulations could be in place for smaller, motorized equipment next spring, Scott explained.

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## Harness the wind

FRESNO — Because most superintendents don't have access to helicopters, Tempest Technology Corp. recently introduced a new gasoline-powered blower for golf courses.

Tempest offers four different models ranging from the 24-inch, blade-size unit — available in five-horsepower Tecumseh or nine-horsepower Honda engine — to a 27-inch unit, available in a 10-horsepower Tecumseh or 13-horsepower Honda.

The blower features a dependable shroud with front and rear grills to ensure safety. For more information and a free demonstration, golf course personnel may call 800-346-2143.

CIRCLE# 212



The Tempest portable power blower

## One-hand mower control

Excel introduced the dual-path, hydrostatic steering mower in 1965. Twenty-seven years later, the one-hand, twin-lever control — which has become a recognizable feature of all Hustler commercial mowers — has been replaced by a new, single-lever control called Trim Steering.

The Trim Steering bar features a moulded grip that can be operated with either hand. Turning requires only a slight twist of the wrist.

In tight quarters, the system automatically counter-rotates the drive tires, avoiding turf damage.

Contact Excel at 316-327-4911 for more details.

CIRCLE# 213

## Double-tine spiker from Terracare

Terracare has developed a double-tine spiker that will fit on all Terra aerators.

The blade is 4 1/2 inches long and spaced 1 3/4 inches by 3 inches. The tine is free swinging and has a rubber turf hold-down.

The double-tine spiker is designed to allow uninterrupted play, even after green-aeration.

For more information, call 606-429-3402.

CIRCLE# 214

## AgriDyne receives government grant

Continued from page 44

extract — is a unique and viable technology.

"That's good news for AgriDyne and for the U.S. in becoming self sufficient in the supply of an environmentally-friendly pesticide."

Because the current supply of natural pyrethrin extract is concentrated in eastern Africa, supplies are variable and production is not increasing. AgriDyne representatives believe the current worldwide demand for pyrethrin is four times the supply.

The AgriDyne grant was one of 27 doled out by the Department of Commerce. Of the recipients, AgriDyne represents the only agricultural firm.

The Advanced Tehnology Program is a new effort of the commerce Department's Technology Administration and executed by its National Institute of Standards and Technology. The program is designed to assist business in carrying out research and development on pre-competitive, generic technologies.

## Toro safety video

Continued from page 44

manual and follow-up tests. The package is offered in English and Spanish.

Though program information was distributed at the '92 GCSAA Show in New Orleans, it is also available through Toro distributors. St. Paul Fire and Marine will also provide the program through its independent agents.

The Toro Commerical Products Division has produced several operator videos for its own customers. The tapes, which vary from 11 to 30 minutes in length, cover safety procedures, general product familiarization, pre-operational checks, correct operating instructions, how-to cutting techniques, and proper care/cleaning. The information is provided in English, followed by a shorter Spanish version.

Toro operator videos are available for the Groundmaster 220, Greensmaster 3000 and 3000-D, Greensmaster 1000, and Reelmaster models 450-D, 335-D, 223-D and 216.

For more information on the Toro/St. Paul Fire and Marine safety education program, contact the Toro Company, Commercial Marketing Services Dept., 8111 Lyndale Ave. South, Minneapolis, Minn. 55420-1196; or the St. Paul Fire and Marine Insurance Company, Eagle 3, RMSD, 385 Washington St., St. Paul, Minn. 55102.

## THE TERRA TOPPER A New Concept in Topdressing



### Look At These Advantages

- FAST:** Does not lay the topdressing on top of the grass. No brushing is necessary.
- SAVE:** With a light topdressing 18 greens can be done in less than 2 hours with only 3 passes for average green.
- CLEAN:** Very little or no sand pick up when mowing.
- QUALITY:** Cut your greens longer and still maintain fast putting surface.
- RESULT:** Best putting surface available.

## THE TERRA T200



### Greens - Tees - Approaches

The Terra 200 will give you a fast, quality job with a minimum of maintenance cost. It will do 1 1/2 acres per hour - 10 minutes per green.

This is the ideal machine to use for spiking. The new double 4" spiking blade does the job so smooth the golfer will never know you've been on the green. It will leave 400 spiking holes in a 3 foot width.

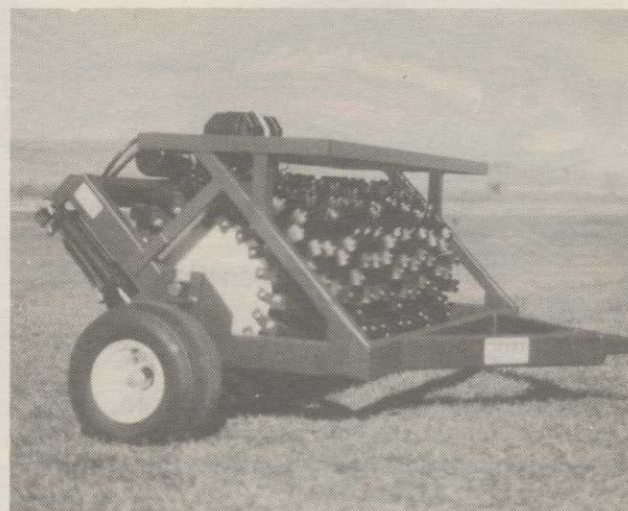
## TERRA SOFT BROOM



For brushing in topdressing or windrowing aerating cores: Do it with the Terra Soft Tender Rotary Broom.

One pass over -- 4 or 5 passes is not necessary as with a dragmat or barn brooms.

## THE TERRA T320



Get the job done before the golfer knows you've started. Designed for fairways and large turf areas, the Terra 320 can aerate 3 acres per hour with 3 1/2" X 4" hole spacing. High production combined with low maintenance and initial cost make it the cheapest way by far to put holes in the ground.

Get the work done when the ground is ready to aerate and end up with a clean quality job.

## TERRACARE PRODUCTS CO. INC.

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Pardeeville, WI 53954  
608/429-3402 FAX: 608/429-2889

## Have backhoe, will travel

The 2000 Series Truckhoe, new from Darby Industries Inc., is a full-sized backhoe that mounts on a three-quarter or one-ton truck: pick-up, flat-bed or dumptruck.

The Truckhoe has a 16-foot reach, 180-degree swing, and will dig to depths of 11 feet. It's powered by a 20-horsepower, cast-iron, two-cylinder Kohler engine coupled with an 18-gallon-per-minute pump to provide plenty of digging power and speed. Designed to feature a strong swing for backfilling and grading, the Truckhoe can lift up to 2,000 pounds and can reach up 18 feet above the ground.

For more information on the Truckhoe, call Tom Darby at 1-800-344-2472.

CIRCLE# 215



The Truckhoe from Darby Industries.

## Easy-mixing fungicide

The granular formulation and packaging of new Curulan DF (dry flowable) fungicide are designed to make mixing and handling more convenient for turf managers. Curulan DF offers the efficacy of vinclozolin, and is designed to combat and control eight turf diseases, including dollar spot, leaf spot, pink patch, and pink and grey snow mold.

Through its free-flowing action, Curulan DF is designed to allow easier pouring while reducing the risk of chemical splashing. The container allows direct pouring into tanks. A calibration strip on the side of the container shows how much product has been added, as well as application rates for various turf diseases.

For more information on Curulan DF, call 1-800-669-1770.

CIRCLE# 216

## Nitrogen: Potash — 1:1

LEBANON, Pa. — Lebanon Turf Products has introduced Country Club 18-3-18, a new homogenous fertilizer designed to provide a 1:1 ratio of nitrogen to potash on fairways and other large turf areas.

Formulated with 6.0 units of WIN and micro nutrients, Country Club 18-3-18 contains slow-release methylene urea nitrogen, recommended where efficient fertilizer usage is required.

At suggested rates, a 50-pound bag of Country Club 18-3-18 will cover up to 18,000 sq. feet.

For more information on 18-3-18 and other Lebanon products, call 1-800-233-0628.

CIRCLE# 217

## Computer cart maintenance

E-Z-GO Textron has introduced a personal computer-based vehicle maintenance system designed specifically for golf cars and utility vehicles.

The E-Z-GO Maintenance Information Management System (MIMS) was developed in a joint effort by E-Z-GO and IBM. It's designed to make effective fleet management less time-consuming and eliminate much of the paperwork associated with vehicle management.

MIMS monitors virtually every aspect of fleet operations. The course operator simply inputs daily car usage information plus data on any maintenance performed.

E-Z-GO provides the computer and all the software needed to run the program. In addition, E-Z-GO installs the system, trains the course personnel and maintains the system. For more information, contact your nearest E-Z-GO representative or call 1-800-241-5855.

CIRCLE# 218

## Solar-powered locomotion

Houston-based Solar Savings, a pioneer in photo-voltaics, has made solar-powered golf carts a reality with the introduction of Cartmaster, a solar-powered recharging system for golf carts.

According to Solar Savings' Patrick Coveney, "Our Cartmaster charges carts while they're in use, adding significantly to the income producing potential for a club's fleet."

Solar Savings will arrange a demonstration for interested organizations, risk-free. For more information or to set up a demonstration, call 713-469-7934.

CIRCLE# 219

**WITH EXHIBIT,  
YOU NO LONGER  
HAVE TO BE AFRAID  
OF THE WATER.**

Because of a heightened sense of concern about our environment

It's in these areas you should use Exhibit.™

While harmless

the nematodes in Exhibit are driven to seek out these harmful pest larvae.

They infect the pest with a deadly bacteria, feed on the remains, then reproduce.

The offspring continue to hunt down pest larvae.

Once successfully eliminated, the nematodes simply

die off. So what you're left with is healthier turf.

Not to mention peace of mind.

To learn more about our natural larvicide, just call your

distributor, or call Ciba-Geigy Turf & Ornamental Department at 1-800-934-CIBA.

**EXHIBIT**

Due to their parasitic nature,

to wildlife and beneficial insects that thrive on your course, the beneficial nematodes in Exhibit are quite deadly to the cutworms, billbugs, and sod webworms that destroy it.

these days, you're probably leery of using certain pest control products near water or wooded areas.

©1992 CIBA-GEIGY Corporation, Turf and Ornamental Products, Box 18300, Greensboro, NC 27419.  
Always read and follow label directions.



# Golf Course Marketplace

To reserve space in this section, call Simone Marsteller, 813-576-7077

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 Add-on per 1/4": \$13.75 \$12.50 \$10.00  
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- Prepayment is required.

Send prepayment and ad copy to:  
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 St. Petersburg, FL 33702  
 813-576-7077 • Fax 813-579-9788

## EMPLOYMENT

### WANTED

Golf Course Construction company wants experienced supervisors, shapers & operators. Fax resume to:

404-992-9677

### POSITION AVAILABLE

Experienced Green Industry Sales Representative sought for Mid-Atlantic region. Must be experienced in Golf Course Sales with a strong agronomic background. Qualified applicants please respond with resume to **Box M-792, c/o Golf Course News, 7901 4th St. N., #311, St. Petersburg, FL 33702.**

### CONSTRUCTION SUPERVISORS & SHAPERS

International golf course architect seeking internationally - experienced construction personnel. Send resume to **Golfplan, P.O. Box 1823, Santa Rosa, CA, 95402-1823, Attn: Mr. Rick Kroeger.**

## POSITIONS WANTED

### POSITION WANTED

College senior graduating in December with a B.S. in Ornamental Horticulture & Landscape Design seeks entry-level position with a golf course design/construction firm.

(615) 573-2915.

## BUSINESS OPPORTUNITIES

**Seeking competent & knowledgeable associate.** On-site worker. Golf course management. 18-hole PGA course. '92 est. min. 28,000 rounds. 500 acre South Carolina mountain foothills development. Initial investment negotiable. Will consider selling. Complete resume required. **P.O. Box 663, White Rock, SC, 29177.**

## REQUEST FOR PROPOSALS

### REQUEST FOR PROPOSALS NO. Y2-608: GOLF COURSE MARKET DEMAND & FINANCIAL FEASIBILITY STUDIES.

The Board of County Commissioners, Orange County, FL, invites interested firms or individuals to submit proposals no later than 2:00 p.m., July 28, 1992, to provide golf course market demand & financial feasibility studies for the Orange County Parks & Recreation Dept. Proposals will be accepted at, & copies of the Request for Proposals may be obtained from, the Orange County Purchasing & Contracts Dept., 201 S. Rosalind Ave., 3rd Floor, Orlando, FL 32801, (407) 836-5635. A pre-proposal conference will be held at 9:00 a.m., July 13, 1992, at the Orange County Purchasing & Contracts Dept.

## REAL ESTATE

### GOLF COURSE FOR SALE

Pine Valley Country Club, Elizabethtown, KY. 18-hole championship golf course, swimming pools, tennis courts, village hall. Excellent location. Price \$3.2M. Incl. 34 developed lots & 50+ undeveloped acres. Contact **L.A. Medley, (502) 737-8300.**

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### GOLF COURSES WANTED

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Call **Dick Campbell at (505) 898-0960**

### GREEN FAIRWAYS FOR SALE THROUGHOUT U.S.

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 (803) 785-9155  
 (708) 289-5633

## GOLF COURSES FOR SALE

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**Golf Properties Real Estate, Inc.**  
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 Clearwater, FL 34616  
 (813) 447-4653

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 \*\*\*\*\*

## BUSINESS SERVICES



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Manchester, TN 37355  
 Phone (615) 728-0583

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### WHY HASSLE WITH SEVERAL VENDORS?

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We do it all. Laser measure & installation (same day) of **custom metal yardage markers** for all types of sprinkler heads. Warranty included. Also tee to green measurements, granite fairway markers. Sprinkler yardage markers may be purchased separately. Contact Nick for samples & references. **Fairway Designs of Florida, 800-36-TAGIT.**

## Jones Trail immortalized for tourists

Billed as the largest golf construction project in the history of the game, the \$100 million seven-course Robert Trent Jones-designed state golf trail is the showpiece of a free 45-page golf guide available from the Alabama Bureau of Tourism and Travel.

Titled "Golf/Alabama," the slick publication highlights the yet-to-be played trail designed by renowned golf architect Jones. It also includes a directory of every other public course in Alabama.

The Retirement Systems of Alabama is financing the ambitious trail complex, comprising four 54-hole and two 36-hole facilities under construction in Auburn/Opelika, Birmingham, Calhoun County, Dothan, Greenville, Huntsville and Mobile.

All are scheduled to open within the year.

From the colorful cover capturing the water at Lagoon Park in Montgomery, to a biography of golf legend Jones by editor Kenneth Mullinax, to entertaining contributions by writers Ray Ford and Lynn Fulman, the magazine packs much useful information, including interesting capsules of the new courses. Referring to Alabama as "The State of Surprises," the authors may not be far off the mark. Golf activity there has received little attention nationally. A project spanning the state with a hefty price tag catches a reader's eye.

It states boldly that there is more to "ZBama than the Red Tide football teams of Coach Bear Bryant vintage.

CIRCLE# 220

## PGMS publishes membership list

The 1992 Professional Grounds Management Society membership directory is now available, free to members and \$25 to others.

The 92-page book lists all 1,500-plus members of the society, comprising a combined market with annual budgets totaling more than \$100 million.

Also included in separate lists are the PGMS bylaws, officers, board of directors, 16 branches, past presidents since 1910, sustaining member organizations, certified grounds managers, and past Gold Medal recipients. The general membership listing is broken down alphabetically and by state.

Interested people should contact PGMS at 10402 Ridgland Road, Suite 4, Hunt Valley, Md. 21030; 410-667-1833. The manual has chapters on tools and equipment; pesticides; vehicle, equipment and tool maintenance; personnel; and grounds maintenance practices for turf, trees and shrubs.

CIRCLE# 221

## Dobereiner returns

Peter Dobereiner's latest book, "Golf A La Carte," incorporates recent work of the writer and columnist.

His special brand of humor spices thoughts on the game professionals and others less and far less skilled players.

Cartoons illustrate the 192 pages. Price is \$19.95. Credits of the British resident include "The Book of Golf Disasters" and "Preferred Lies about Golf."

Publishers are Lyons & Burford, 31 West 21 St., New York, N. Y. 10010.

CIRCLE# 222

# Golf Course Marketplace

To reserve space in this section, call Simone Marsteller, 813-576-7077

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CIRCLE #167

# Golf Course Marketplace

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## July

- 7 — Focus on Wetland Plants seminar in Seattle. Contact 206-685-8033.
- 15 — Annual Nursery Field Day in Virginia Beach, Va. Contact 804-363-3900.
- 23-25 — American Sod Producers Association Summer Convention & Field Days in Chicago. Contact 708-705-8347.
- 23-27 — American Association of Nurserymen Annual Convention and Nursery Industry Trade Show in Columbus, Ohio.
- 26-28 — International Lawn, Garden and Power Equipment Expo '92 in Louisville, Ky. Contact 800-558-8767.
- 26-28 — International Lawn, Garden and Power Equipment Expo in Louisville, Ky. Contact 800-558-8767.
- 30 — Turfgrass Management for Athletic Fields, Golf Courses and Landscapes seminar in Stillwater, N.Y. Contact 518-783-1229.

## August

- 2-4 — Georgia Golf Course Superintendents Association summer conference at Pine Mountain. Contact 404-769-4076.
- 3 — West Texas GCSA meeting in Canyon. Contact Pam Deeds at 806-354-8447.
- 4-6 — Turfgrass Field Diagnostic Course for Golf Course Managers at Cornell University in Ithaca, N.Y. Contact Joann Gruttadaurio at 607-255-1792.
- 6 — New Jersey Turfgrass Research Field Day in North Brunswick.
- 9-12 — Cornell Compost Management Symposium for Professionals in Ithaca, N.Y. Contact Ken Cobb at 607-255-1185.
- 9-12 — 47th Annual Soil & Water Conservation Society Meeting in Baltimore. Contact 515-289-2331.
- 17-19 — Golf East Expo in Orlando, Fla. Contact 800-443-8318.
- 18 — Golf Course Design/Construction and Golf Day in Delhi, N.Y. Contact 800-873-TURF.
- 19 — Rhode Island Annual Turfgrass Field Day in Kingston. Contact Dr. Noel Jackson at 401-792-2932.

- 19-21 — Field Diagnosis: Insects and Diseases of Trees and Shrubs seminar in Ithaca, N.Y. Contact 518-783-1322.
- 20 — Michigan State University Turfgrass Field Day in East Lansing. Contact Frank Rossi at 517-353-0860.
- 22 — PGA of America's National Golf Day. Contact Julius Mason at 407-624-8444.
- 26 — Landscaping for Wildlife seminar in Cook College in New Brunswick, N.J. Contact 908-932-9271.
- 28-30 — Golfing '92 Indonesia in Jakarta. Contact 62 21 420-4300.

## September

- 10-13 — Asian Golf Course '92 — Asian Golf Course Conference & Exhibition in Kuala Lumpur, Malaysia. Contact in Singapore 65 4473680.
- 20-23 — Florida Turfgrass Association annual conference and trade show in Jacksonville. Contact 800-882-6712.
- 23 — Oklahoma State University Turfgrass Field Day in Stillwater, Okla. Contact Dennis Martin at 405-744-5419.

## October

- 3-6 — Golf '92 International Golf Trade Fair in Dusseldorf, Germany. Contact 312-781-5180.
- 4-6 — Marketing to Golf Facilities Seminar

Continued on page 52



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CIRCLE #168

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CIRCLE #170

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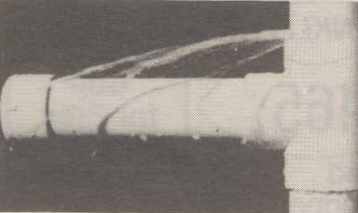
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CIRCLE #175



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**Nutley, NJ 07110**

CIRCLE #174

Continued from page 51

in Oak Brook, Ill. Contact Rebecca Quinlan, Golf Course News at 207-846-0600.

5-7 — International Golf & Resort Development Show in Acapulco, Mexico. Contact 800-285-2332.

15-19 — Congress for Recreation and Parks in Cincinnati. Contact Pat Phillips at 703-820-4940.

21-23 — National Golf Foundation Golf Summit in Orlando, Fla. Contact NGF at 407-744-6006.

November

1-3 — Public Golf '92 for Public Golf Facility Managers in Oak Brook, Ill. Contact Rebecca Quinlan, Golf Course News at 207-846-0600.

1-3 — Georgia Golf Course Superintendents Association annual meeting on St. Simons Island. Contact 404-769-4076.

1-4 — International Irrigation Exposition and Technical Conference in New Orleans. Contact 703-524-1200.

4-5 — Annual Oklahoma Turfgrass Conference in Tulsa. Contact Dennis Martin at 405-744-5419.

10-13 — New York State Turfgrass Association annual Turf and Grounds Exposition in Rochester. Contact 800-873-TURF.

12-14 — Golf Course Europe '92 and International Golf Development and Investment Conference '92 in Monte Carlo. Contact Charles Duff at 415-453-1184.

15-19 — Professional Grounds Management Society Annual Conference in Indianapolis. Contact 401-667-1833.

29-Dec. 2 — Canadian Turf Grass Convention and Trade Show in Halifax, Nova Scotia. Contact Chuck Desveaux at 416-602-8873.

December

2-3 — Pacific Coast Turf & Landscape Conference & Trade Show in Seattle. Contact Scott White at 800-275-9198.

2-4 — Rocky Mountain Regional Turfgrass Association Annual Conference and Show in Denver. Contact 303-688-3440.

15-17 — Missouri Lawn & Turf Conference & Trade Show in Columbia. Contact 314-882-1953.

1993

January

11-15 — Cornell Cooperative Extension Turfgrass Short Course at Cornell University, Ithaca, N.Y. Contact Joann Gruttadauro at 607-255-1792.

14-16 — Mid-America Horticultural Trade Show in Chicago. Contact Donn Sanford at 708-526-2010.

March

15-21 — Pacific Rim Golf Course Conference and Show in Singapore. Contact 913-841-2240.

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\* — For more information or to register, contact Betsy Evans, education coordinator, 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. One-day seminars cost \$100 for GCSAA members and \$120 for non-members; two-day seminars cost \$180 for members and \$210 for non-members.

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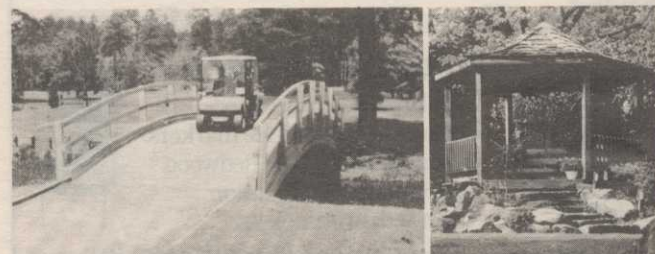
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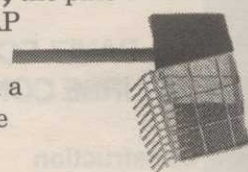
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CIRCLE #183

# Golf Course Marketplace

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ON THE GREEN

## Mission possible

Continued from page 54

the newly enlarged greens.

Petersan could not begin employment full-time until last Oct. 1, so he flew to Baltimore each weekend during September to coordinate and implement the renovation process. As the frequent flyer miles improved, so did the greens.

"We used the Verti-Drain three times, using solid tines so the undesirable subsoil would not be brought to the surface. The holes were filled with straight sand along with the thatch layer after the sod was removed," Petersan said. "We did not remove the sod at Prairie Dunes, but did at BCC, proving that each club's renovation must adapt to their local condition."

Factors in the decision include:

- The amount of thatch. If there is a lot, the sod usually should be stripped.
- The feeling by some superintendents that stripping sod will change green contours.
- The "gut feeling" of club members.

Seeding rates with Pennlinks were three-fourths pound pure live seed in two directions per 1,000 square feet. Petersan had the luxury of closing the course as his members played on the other 18-hole layout.

### ONE MORE SUCCESS STORY

Mark A. Yoder of Scioto Country Club in Columbus, Ohio, recently renovated his greens with another unique set of circumstances. Scioto was designed by Ross in 1916 and was remodeled in the early 1960s by Dick Wilson, who fully restored the bunkers and putting surfaces to their original design.

In the last 30 years, the greens had become about 80 percent poa annua. The other 20 percent was Old Orchard creeping bentgrass that was stolized. The greens had to be hand-watered in the heat of the day and seed head production during the spring and fall provided inconsistent playing conditions.

Yoder took advantage of having the greens closed during renovation by restoring all the greenside sand bunkers. He stripped the sod, found the "original" sand/topsoil delineation, repaired and/or added drainage pipe, and then re-sodded the sand bunker banks and in between the greens and bunkers with bluegrass.

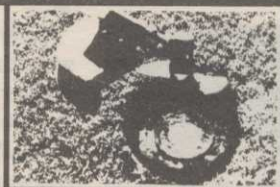
Meanwhile, he built temporary greens, from scratch, on the par-3s that did not already have bentgrass fairways, and then sodded them. The 150-yard markers were relocated in relation to the temporary green locations; the temporary course was laser-measured for scorecards; the course was played from one set of tee markers instead of the customary three sets; the ladies still teed off from their respective markers; and the membership was kept happy.

Yoder closed the regulation greens the third week of August 1991 and chose not to strip the sod off. His procedure was similar to the other clubs in that he used methyl bromide. Deep-aerification, accomplished the two previous falls, was repeated before re-seeding with Pennlinks. A pythium preventive application of a granular Subdue was applied for added insurance.

The green contours were not changed, another advantage of doing this type of renovation to maintain the original character of the course design.

The Pennlinks seed was pre-germinated before seeding in three directions at a combined rate of 1-1/2 pounds pure live seed per 1,000 square feet, as the seed was blended with fine grade Milorganite for consistency.

"The greens were opened on May 1, and the members said it was definitely worth all the time and effort involved," Yoder said.



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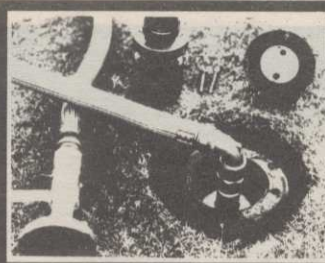
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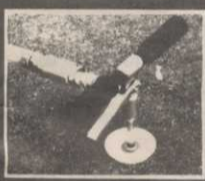
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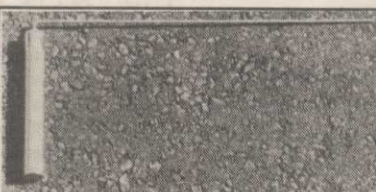
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CIRCLE #189

# Supers find mission possible with methyl bromide

By TERRY BUCHEN

The pioneering efforts of a team of agronomists in 1980 have led to discovery of a whole new world of inventive problem-solving in greens renovation.

Back in 1980, Dr. Joseph Duich was called to Butler National Golf Club in Oak Brook, Ill., which was suffering from Toronto C-15 Bacterial Wilt Infection.

Facing the problem of renovating all 18 greens without going through a costly, time-consuming total re-do of each green, Butler decided to totally renovate the surface of each green using recommendations from the team of Duich, Edward W. Fischer, Robert M. Williams, Arthur W. Benson, Dr. John Wehner and officials of the Golf Course Superintendents Association of America.

They decided to:

- 1) Mow the greens many times, as closely as possible.
- 2) Aerify them twice with 5/8-inch tines, and remove all plugs.
- 3) Have Hendrix & Dail, Inc. fumigate all greens with methyl bromide and cover them with a plastic tarpaulin. After 48 hours, the tarp was removed to let the soil breathe for 48 hours.
- 4) Strip the dead sod, leaving about one-quarter inch of thatch.
- 5) Top dress the surface heavily, filling the aerifier holes and providing a "cushion" effect mixing the thatch with the sand.
- 6) Seed with Penneagle creeping bentgrass "foundation seed" at one-half pound pure live seed in two different directions.
- 7) Apply a starter fertilizer.
- 8) Spray on a soil-set surface sealer.
- 9) Saturate the seed for 24 hours to swell the seed. Water about every two hours to keep the seed moist at all times, thereafter.

Seeding began immediately after the Labor Day weekend. Germination occurred in three days, with the first mowing at one-quarter inch in 14 days.

Temporary greens were phased in about



A crew installs a plastic tarpaulin on a newly renovated green surface after applying methyl bromide.

*'We did not want to totally rebuild our small, undulating greens.'*

—Thomas Walker



*'The members said it was definitely worth all of the time and effort involved.'*

—Mark Yoder

two months before the renovation work and were in great shape by Labor Day. The new greens were opened on May 1, 1981, to rave reviews.

### SUCCESS BREEDS SUCCESS

Other pioneering superintendents followed, successfully restoring their greens at minimal cost and down time to rid the C-15 decline.

Since the results were so good, a new variation of the renovation process evolved to rid older courses of poa annua.

At Inverness Club in Toledo, Ohio, superintendent Thomas F. Walker said: "We did not want to totally rebuild our small, undulating greens because of the dreaded poa annua that was in dominance in the original South German creeping bentgrass."

Being a strong supporter of the United States Golf Association Green Section's Turfgrass Advisory Service, Walker brought in Stanley J. Zontek from the USGA's Mid-Atlantic Region.

Also collaborating at the Donald Ross-designed course were Dr. Joseph Vargas of Michigan State University, who helped the club with disease situations over the years, and Duich, who developed and recommended Pennlinks creeping bentgrass.

Walker and the Green Committee decided to go with Pennlinks because of its aggressive rooting capabilities, fine texture, low affinity for scalping, and pleasing color.

The Green Committee discussed re-grassing all 18 greens — nine one year and nine the next — or having a trial re-grassing on two greens. The trial was selected and a turf nursery was established for experimentation purposes.

In August 1987 the trial greens were renovated with great success.

In October, a timetable was set for work on the remaining greens. The green contours would be kept in their original design except for two greens that received only minor contour changes. Re-grassing was the only other change.

Temporary greens were mowed into fairways in late September even though they would not be used until August 1988.

In April 1988 and again just prior to re-grassing in August, a Verti-Drain was rented as an existing "soil" was a push-up variety with little or no drainage tile installed. This deep-tine aerifier has proven itself often per-

forming a renovation process almost as good as totally rebuilding a green substructure.

After deep-aerifying, the process was similar to Butler National's, except Inverness stripped the sod before applying methyl bromide. Then the seedbed preparation began by verticutting in four directions into the thatch layer.

"You couldn't buy the excellent 'cushion' effect that the thatch provides at any cost," Duich said.

Seeding was done with a drop seeder, in two directions, at 5/8ths of a pound pure live seed in each direction. Turf covers were ordered to the specific size of each green and used as erosion control during seed establishment. Germination was in three days. The covers were removed in five days and would be used only with the threat of a gully washer.

In November, the covers were again used to guard against winter desiccation.

Inverness Club members were pleased with the results and greatly appreciated Walker's communication prior to, during, and after the renovation.

Another "Top 100" club needing its greens renovated was Prairie Dunes Country Club in Hutchinson, Kansas. Superintendent Douglas Petersan, like Walker, did extensive research and members gave him a two-year lead time to deep-aerify his greens before the renovation began.

Petersan recommended to the board of directors that with Prairie Dunes' set of agronomic circumstances, it was not necessary to remove the sod. After each extensive deep-aerifying, the plugs were removed and the holes were filled with straight sand. The final result was that the substructure was rebuilt without the time and expense of literally starting from scratch.

Methyl bromide was applied. Then, during September 1989, the greens were overseeded with Pennlinks and opened for play April 1, 1990.

### HARD WORK PAYS OFF

Petersan was then offered and accepted the golf course manager's position at Baltimore Country Club last September. The club had already approved a renovation process to the Five Farms Course's greens before Petersan was hired, so work could begin immediately.

Five Farms was designed by A.W. Tillinghast in 1926 and, like the other "Top 100" clubs, its members did not want to do a total rebuild of their greens. They wanted their original architectural greens contours kept intact.

They hired course architect Brian Silva to restore the greens to their original size as the square footage had shrunk over the years. The putting surfaces averaged 5,100 square feet before renovation and, once restored to their original size, averaged 7,000 square feet.

Petersan installed new greens irrigation as the existing heads would not properly water

Continued on page 53

## Breeding success

A partial listing of superintendents who have totally renovated all 18 greens using the methyl bromide method:

- Oscar L. Miles and Edward L. Fischer, while at Butler National GC, Oak Brook, Ill.
- Thomas F. Walker, at Inverness Club, Toledo, Ohio.
- Douglas Petersan, while at Prairie Dunes CC, Hutchinson, Kan., and recently at Baltimore (Md.) CC.
- Mark Yoder, at Scioto CC, Columbus, Ohio.
- Robert M. Randquist, at Southern Hills CC, Tulsa, Okla.
- David H. Kroll, while at Wilmington CC, Montchanin, Del.
- Don B. Sweda, at Beechmont CC, Cleveland, Ohio.
- D.J. Pakkala, while at Medina (Ill.) CC.
- Scott A. Azinger, at Davenport CC, Pleasant Valley, Iowa.
- Timothy Kelly, at Village Links of Glen Ellyn (Ill.).
- Brian Chalifoux, while at Olympia Fields (Ill.) CC.
- Douglas G. Myers, at Youche CC, Crown Point, Ind.
- Julius D. Albaugh, at Westmoreland CC, Skokie, Ill.
- Peter V. Leuzinger, at St. Charles (Ill.) CC.
- Stephen L. Frazier, while at Meridian Hills CC, Indianapolis, Ind.
- Chris L. Hague, at Hazeltine National GC, Chaska, Minn.
- Charlie Hutson, while at Muirfield Village GC, Dublin, Ohio.

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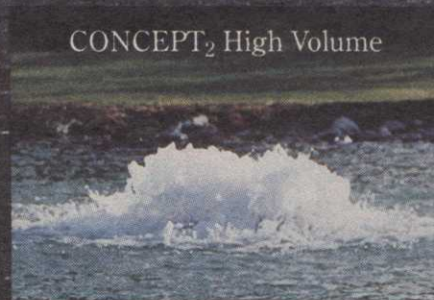
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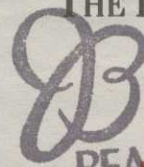
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