

GOLF COURSE NEWS

THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY

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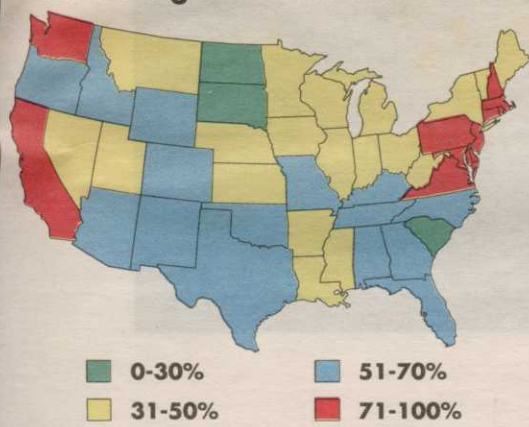
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N.Y. AG attacks industry's chemical use

By Peter Blais

The Golf Course Superintendents Association of America has labeled as "unsupported by fact, inaccurate and misleading" a report that golf course pesticides are jeopardizing ground water on New York's Long Island.

But state Attorney General Robert Abrams' office stands by his office's report.

Spokeswoman Leslie Gersing said the study is not meant as an attack on

the golf industry. Instead it should be viewed as a way to begin reducing pesticide use on golf courses, which use far more of the chemicals than lawn care companies or agriculture, she added.

"We found that golf courses used chemicals with the greatest ability to leach into ground water," she said. "There are ways to use healthier pesticides that are less harmful to ground water."

Information for the report, titled Toxic

Fairways: Risking Groundwater Contamination From Pesticides on Long Island Golf Courses, was voluntarily supplied by 52 of 107 Long Island courses contacted. Long Island was chosen because its porous and permeable soil makes its ground water particularly vulnerable to hazardous substances from the surface, according to Abrams. Ground water is the sole source of drinking water for the area's 3 million

Continued on page 17

GCSAA starts development department

By Peter Blais

Funding new research and scholarship programs will be the focus of a new department created by the Golf Course Superintendents Association of America.

Director of Communications Pat Jones has been appointed director of development for the department, which will attempt to raise \$1 million to permanently capitalize the association's scholarship programs and additional funds to finance research projects complementing the U.S. Golf

Continued on page 42



Golfers enjoy the fifth, and newest, municipal course in Rockford, Ill. The course is named after retired businessman Norris Aldeen, who donated \$2 million in land and trees. For more on the Aldeen course, see page 31.

Oregon extinguishing seed growers' burns

By Bob Spiwak

Field burning of turfgrass in Oregon will be a thing of the past by the turn of the century.

On Aug. 7, on a hill overlooking Willamette Valley, Gov. Barbara Roberts signed into law a measure that will gradually decrease the number of acres of fields that can be burned.

The bill also increases fees growers will pay to burn, and provides \$500,000 a year from state coffers to finance research into alternatives to setting the fields afire.

Burning has long been done to remove straw and thatch from turf fields, with an added benefit of limiting diseases. With more than 400,000 acres of turf seed in cultivation in the valley, the smoke produced has long been a source of controversy.

Two decades ago, a move was made to eliminate the fires, but never came to pass. In 1975, a limit of 250,000 acres allowed to be burned was established.

The new law decreased field burning to 180,000 acres this year, down to 40,000 by 1998 and an ultimate ban two years

later.

Propane flaming was restricted to 75,000 acres, with a ban on that method after 1998 unless federal and state pollution standards are met.

According to Dave Nelson, executive director of the Oregon Seed Council, burning with propane produces a smaller volume of smoke than open burning, while ridding the fields of crown stubble and disease.

There is a tradeoff. Whereas a hundred acres can be purged in a half hour

Continued on page 35

Mobay appeals \$4.75M EPA fine

PHILADELPHIA — A \$4.75-million penalty, the largest ever for a new chemical violation, has been assessed against Mobay Corp. of Pittsburgh, for violations of the Toxic Substance Control Act.

The U.S. Environmental Protection Agency issued administrative complaints against Mobay and fellow major chemical company Allied Colloids, Inc. of Suffolk, Va. The Allied Colloids fine was \$2 million.

A Mobay spokesman said the firm contends that it had complied with the law, and plans to appeal.

Penalties against Mobay and Allied Colloids were determined by applying an en-

Continued on page 36

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Coastal Comm. appeals Pebble Beach tee time policy

Pact with Monterey's Board of Supervisors brought into doubt

SAN FRANCISCO, Calif. — Pebble Beach GolfLinks owners and the Monterey County Board of Supervisors thought they had reached pleasant agreement over starting time policy for the general public, but they reckoned without the California Coastal Commission.

The Coastal Commission has stepped to the tee with an appeal of that agreement, on behalf of a Monterey resident who claims the

reservations pact will hinder public access on the golf course.

Three coastal commissioners have joined in the appeal.

Branding the appeal "frivolous," the Ben Hogan group Aug. 7 requested a Writ of Prohibition against the Coastal Commission. The writ asks the Court to enjoin the commission from proceeding with the appeal. Hogan attorney Joseph E. Petrillo said the commission clearly had no jurisdiction in this matter.

The appeal claims the plan constitutes a change in the land use and should be considered "development."

Countered Petrillo, "The county's decision was thoroughly studied and debated. The

County has the authority to determine whether the advance reservation policy has an impact on coastal development permit requirements under the California Coastal Act and Local Coastal Program. They determined it did not. The agreement provides for the continued availability of starting times at Pebble Beach for the general public, and includes the future members of the Pebble Beach National club within advance reservations policies.

"Although anyone can continue to book a tee time at any time 24 hours in advance, based on availability, the new plan sets aside a guaranteed one-hour block of time for public reservations," Petrillo noted.

Earth First! group vandalizes course

TELLURIDE, Colo. — Vandals operating as members of the Earth First! environmentalist group switched sabotage tactics to a new golf course here.

They used a chemical to write messages on 11 greens and several tees. The course, now closed indefinitely, was built on wetlands and opened in June as part of a development on a mountain above Telluride.

Tree-spiking has been the principal destructive target of the "earth destroyers."

Monte Carlo draws scrutiny of resort industry

MONTE CARLO, Monaco — Golf and resort industry authorities from three continents will highlight the Monte Carlo Golf Developers and Investors Conference at this French Riviera resort retreat Nov. 5-6.

Experts from the U. S., Japan and Europe will address conference delegates on every aspect of golf development, from course design and construction to golf property marketing and sales — resort or golf hotels. Designed to provide Europeans an opportunity to join the growing worldwide golf industry, the conference has been booked at the International Conference Centre.

Key speakers include Yukuo Takenaka, chairman, The Takenaka Group, Los Angeles, Calif.; Robert von Hagge, president, Von Hagge Design Associates, Spring, Tex.; Michael Redd, Team Plan, West Palm Beach, Fla.; Dennis Hillier, Hillier, Wanless & Cherry, West Palm Beach, Fla.; Michael Hurdzan, president, Hurdzan Golf Course Design Inc., Columbus, Ohio; Mike Stein, Arthur Anderson & Co., Miami, Fla.; Jim Fazio, president, Jim Fazio Golf Design Inc., Juno Beach, Fla., and Joe O'Brien, senior developer, Marriott Golf, Washington, D. C.

For more information, contact Executive Conferences and Seminars, Inc., 875 4th St., 2nd floor, San Rafael, Calif., 94901. (800) 873-9137, or Trevor Jackson, Golf Marketing International, P., O. Box 13090, North Palm Beach, Fla. 33408. (407) 848-9052.

Palm Springs takes move toward new \$1 billion resort

PALM SPRINGS, Calif. — After an 18-month struggle involving developers, Palm Springs mayor and proponent Sonny Bono and City Council member and critic Deyna Hodges, council members have taken the first step toward approving a \$1-billion country club resort.

In addition to an 18-hole golf course designed by Jack Nicklaus, there would be a 350-room all-suites hotel, 50-room health spa and tennis complex.

Last April, the council approved a \$500-million, 35-year tax rebate on the Canyon project. Hodges threatened a law suit, but councilors approved the rebate a second time on a 4-1 vote. Hodges again opposed.

In the latest development, she didn't oppose council project blessing.



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Hawaiian land use panel OKs \$500M golf resort

HILO, Hawaii — The state Land Use Commission has approved a \$500-million golf course and resort community near Waikoloa Village in West Hawaii.

Nansay Hawaii, a Japanese developer, plans six golf courses in the Big Island's South Kohala district.

The Puako Hawaii Properties' project spread over 1,060 acres of currently barren lava fields initially will embrace two championship golf courses, 970 multi-family units priced between \$200,000 to

\$450,000, 580 single-family lots from 15,000 to 20,000 square feet each priced between \$175,000 and \$375,000, and a commercial center.

Puako also plans to develop houses and four other golf courses in an adjoining 2,000 acres acquired last year.

The development still needs Hawaii County golf permits as well as rezoning.

Nansay also is developing a golf course at Ouli, a 458-acre site between Waimea and Kawaihae and Kohalaiki Resort near Keahole Airport.

Alabama busting with golf projects

Judge rules Muscle Shoals pact legal

One Alabama golf course has received the legal green light to continue construction, while several others are in progress or planning stages.

Pride Tompkins, Colbert County circuit judge, recently ruled that an agreement between Muscle Shoals and Shotop Investment Inc. to construct the Oaks Golf Course is legal.

The city will use \$2.75 million

from a bond issue to build the course. Shotop is responsible for repaying the bond money over a 20-year period, at which time title will be transferred to Shotop.

A citizens' group had protested the transaction and questioned its legality.

Meanwhile, the Anniston-Gadsden area is being targeted for an \$8-million to \$12-million golf complex.

This area was included in original plans for the Robert Trent Jones Trail of Golf now being built with \$60 million from the Retirement

Systems of Alabama.

The 216 holes being prepared at four sites are believed part of the largest single golf construction project ever. About 200 construction workers are laboring on courses in Birmingham, Huntsville, Auburn-Opelika and Mobile.

Bob Barrett, formerly golf pro at Shoal Creek and now with projects director Sunbelt Golf Inc., hopes construction time from start to finish will be 18 months.

Work is scheduled to start this fall on golf complexes in Greenville and Dothan.

Baltimore County facility garners national honors

BALTIMORE, Md. — Baltimore County Department of Recreation and Parks and Daft-McCune-Walker, Inc., recently won two prestigious awards for the Baltimore County Golf Course Master Plan.

They were the National Association of Counties Achievement Award for addressing a significant concern in Baltimore County and the American Society of Landscape Architects Merit Award in recognition of outstanding professional achievement.

The plan addressed a county market and demand analysis for public golf courses, a blueprint for development of public golf courses through the year 2000, and an evaluation of specific sites for their suitability as public golfing facilities.

The comprehensive 205-page document substantiates the demand for and methods of accomplishing additional golf facilities and additional revenues for Baltimore County.

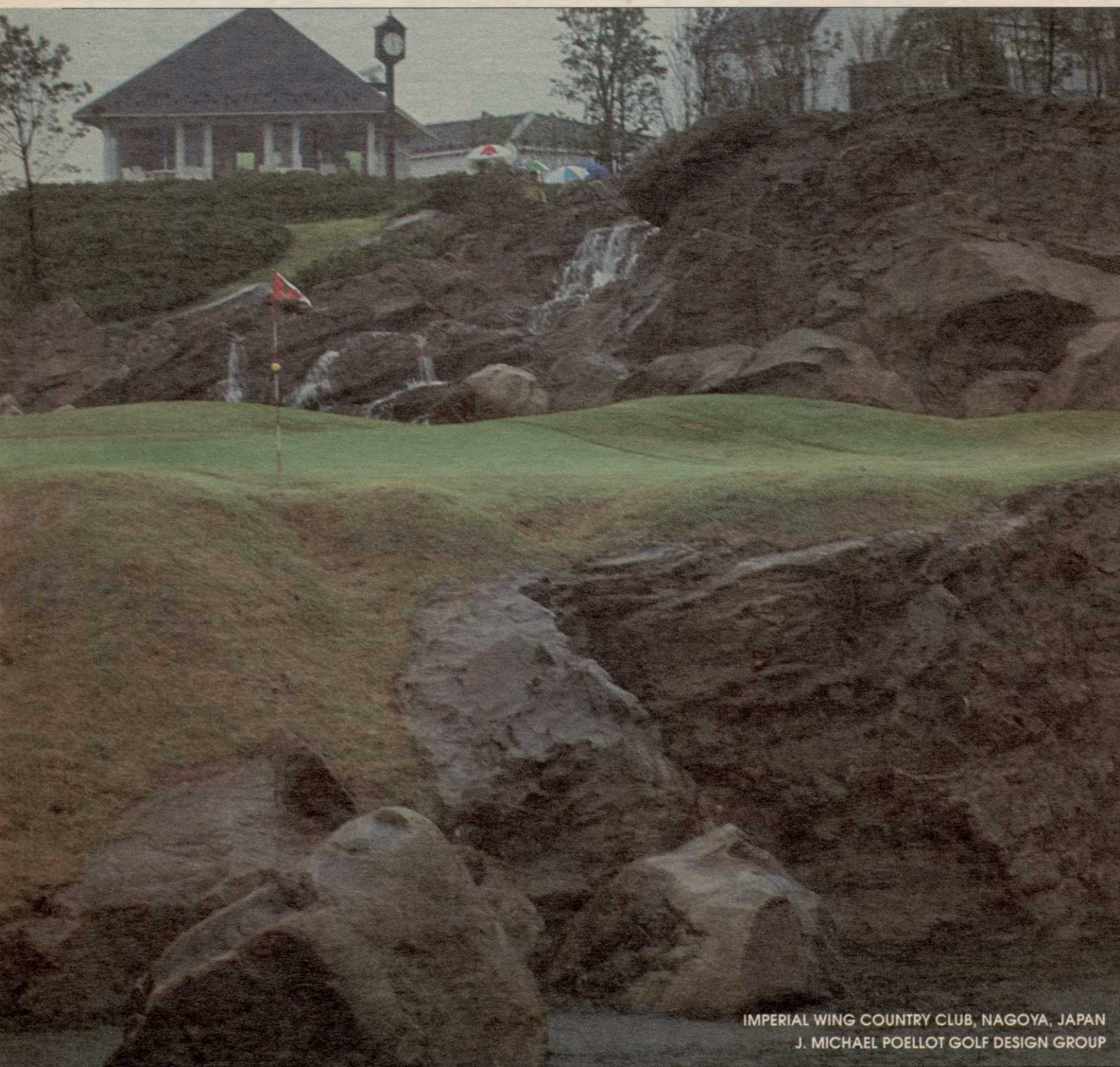
The plan indicates a tremendous demand for golf in the county and a loss of approximately \$5 million annually in greens fees and golf expenditures currently going to other metropolitan counties and York County, Pa.

Baltimore County would need to develop ten additional golf courses to meet current demand, the plan noted.

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di Giacomo

Iowa supers use flood to improve courses

Duck Creek, Palmer Hills, Davenport CC recover, improve

DAVENPORT, Iowa — Flash floods last June battered, but didn't knock out for good three area golf courses.

All adjusted to the damage, and in some cases improvement was marked.

Duck Creek, a public course in Davenport; Palmer Hills in Bettendorf and Davenport Country Club were hard-hit. Damage at the three courses may have exceeded \$1 million, not including lost revenue.

A year later, however, the courses

are fully operational with noticeable changes.

Davenport underwent an extensive facelift. A new double-row irrigation system sent water into the rough. New bunkers were added, and others moved and mounded to modernize the course.

Superintendent Scott Azinger said: "Golf technology had changed so much in the last 15 to 20 years that some of our traps had been taken out of play."

Azinger also gained a new main-

tenance building.

Duck Creek lost all back nine holes from June 16 until opening day this season. It reopened with a 13th hole rebuilt basically from bare ground. A bridge washed out was moved by a truck back to the course and rebuilt. Drainage tiles were renovated.

Palmer Hills is nearly back to normal after bridge damage and ruined fairways and greens.

Sand bunkers and grass mounds were added on No. 5, and the 18th green was improved.

Domed golf center planners given go-ahead in Michigan

CANTON, Mich. — Canton Township planners have approved zoning to allow a proposed \$3.75-million domed golf center at the northeast corner of Beck Road.

Planners also set a public hearing Aug. 19 for a second proposal for a \$5-million family golf and entertainment center at the northwest corner of Canton Center Road.

GolfDome Investments of Mount Clemens proposes an 18-acre development with three inflated domes housing an indoor driving

range and an 18-hole course. A separate outdoor nine-hole course also is part of the plan.

Doug and Bob Rahaim of Grosse Pointe Shores propose a family-golf entertainment center on 32 acres. This facility would embrace go-carts, batting cages, indoor and outdoor driving range, a 36-hole outdoor miniature golf course, 18-hole indoor miniature golf course, and indoor arcade with a restaurant.

That plan calls for an inflatable dome.

Protests meet plan for \$2B Texas project

Plans for a \$2.5-billion complex of golf courses, hotels and condos on South Padre Island near Port Mansfield, Texas, prompted protests from environmentalists and may have hastened state coastal management plans.

State Land Commissioner Garry Mauro has submitted plan outlines to the U.S. Department of Commerce.

If Texas complies with the federal Coastal Zone Management Act, it would receive \$2 million per year in federal funds. Part of this sum would help homeowners relocate when their beach homes are wrecked by storms, and provide protection for 220 miles of eroding shore line.

Environmentalists claimed the South Padre Island project of the American General Corp. of Houston, threatened seven endangered species of birds and turtles, plus the breeding grounds for almost half the seafood harvested in Texas.

Planner takes extra measures to save N.J. lake

MANCHESTER, N.J. — If Manchester permits an 18-hole golf course on its massive Heritage Minerals Inc., lake, something drastic may be needed to keep the lake pure.

Planner Gary Sawhill has a novel and controversial proposal — build a recharge system patterned after Nature's ways.

Sawhill would route all runoff with its attendant fertilizers and pesticides into shallow ponds near the course. The ponds would clean the water naturally with vegetation and algae, then allow it to flow into the lake.

Sawhill said a similar plan is working for a pond in Smithville near a shopping center.

State officials have accepted another pond/marsh plan in a construction program for the Due Process golf course in Colt's Neck, Sawhill added.

Town officials have said the zoning under which the Heritage site falls would allow a golf course to be built.

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Architects form task force to address problems

CHICAGO, Ill. — Increasing environmental awareness and identifying creative financing opportunities are key factors affecting the golf industry, according to Tom Clark, president of the American Society of Golf Course Architects.

"The ASGCA has formed task forces to work with governmental agencies to expedite the permitting process, as well as identifying unique financing sources and programs," said Clark. "Developing sound environmental and financing programs continues to be critical not only to ASGCA members, but the entire golf industry."

To speed the lengthy permitting process, the Society will distribute a document providing information on all facets of golf course development and maintenance, from ground water to wildlife. The information will be available to federal, state and local agencies involved in the permitting procedure.

The ASGCA also has developed an environmental data base to provide architects with critical information.

"Members monitor what's happening in their area and collect data that can be used by the entire Society," Clark said. "For example, if one of our members has dealt with woodpeckers or desert tortoises, he can provide that information to another member facing a similar situation."

Continued interest in golf course development is spawning unique financing opportunities, according to Clark.

He noted the Sun Belt golf project being financed by Alabama state employees, who are investing their retirement funds in the construction of golf courses throughout the state, and the public-private venture, California Muni Golf, financing public course development using tax-free bonds supported by private investors.

Free copies of a brochure on master planning may be obtained from the American Society of Golf Course Architects, 221 N. LaSalle St., Chicago, Ill. 60601.

Suits don't stop Carillon project

ROMEDEVILLE, Ill. — Though developers of the Carillon community here are reeling under legal claims from subcontractors totaling more than \$1.3 million, 18 holes of a planned 27-hole golf course recently opened.

Construction at Carillon, an 1,800-acre development at Weber Road and Interstate 55 northwest of Romeoville, has ground to a halt in the wake of a continuing cash crunch.

Harry W. Kuhn, an earth-moving company, recently filed a lawsuit seeking \$546,262.

One proposal among prospective buyers would put the project back in the hands of its original lender.

PGA Tour using dried-up waterway for project

JACKSONVILLE, Fla. — A PGA Tour resort complex will be the beneficiary of a 110-mile waterway project that dried up 21 years ago because of complaints by environmentalists.

This city will get \$4.3 million as first payment of money counties put up as far back as the 1930s for

the defunct Cross-Florida Barge Canal project.

Jacksonville will put up the \$4.3 million from the canal and the St. Johns River Water Management will put up \$3.7 million for the purchase of 1,800 acres of environmentally sensitive land on the peninsula. PGA Tour Investments will buy the re-

maining 2,700 acres.

On its 2,700 acres, the PGA Tour will build a resort complex that will include the PGA Tour Hall of Fame, national headquarters for PGA Tour Productions, a hotel and two golf courses.

Completion of that phase of the development is planned for 1994.

Sod farm to undergo \$30M metamorphosis

ST. CHARLES, Ill. — A local sod farm soon will be the base for a \$30-million 18-hole par 72 golf course and housing development.

Owner Thomas Thornton and partner James Follensbee plan to start construction this fall.

The sod farm includes 50 acres

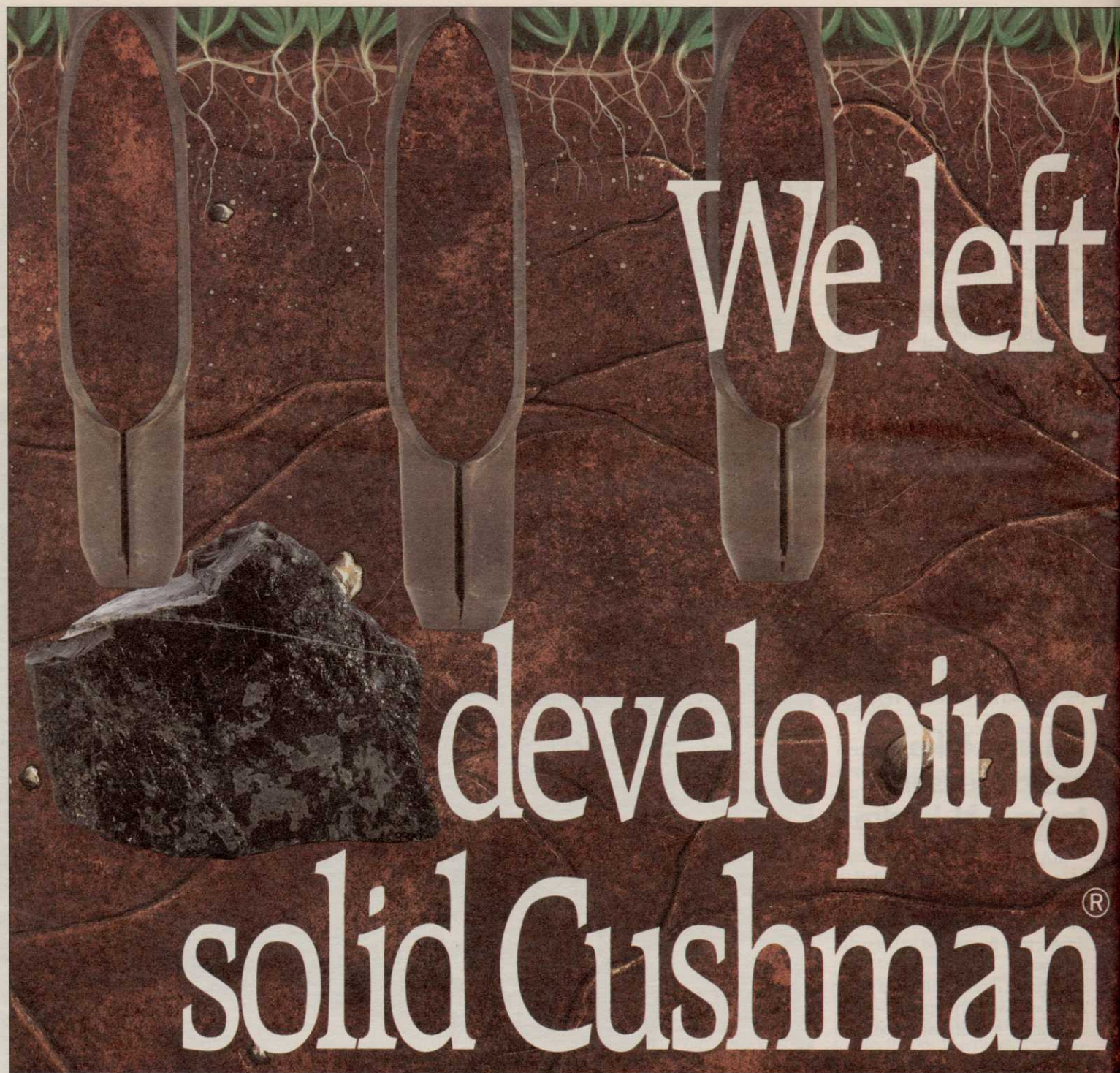
of wetlands and wooded areas. The wetlands will be preserved.

The course will start as a semi-private club, but will go private.

10-course resort meets criteria set by Canadians

EDMONTON, Alberta, Canada — Japanese promoters of a multi-golf course resort have agreed to government terms that set out project responsibilities for Createm International Alberta Corp. and the province.

Createm plans to build up to 10 golf courses and 2,000 resort homes, a ski hill, hotel, convention center and equestrian facilities on the former Cormie ranch 70 kilometers west of Edmonton. The company paid \$6 million for the land.



Membership trader loses big

GGS Co., Japan's largest trader of golf memberships, has filed for reorganization, listing debts of more than \$2 billion.

GGS, through its hotel holdings in Dallas, and investments subsidiary in Portland, Ore., owns the Rancho Mirage Country Club in Palm Springs, Calif., Chase Oaks Golf Club in Dallas and Sophie's Island near Portland.

TPC-River Highlands passes test of Greater Hartford Open

CROMWELL, Conn. — The recent Canon-Greater Hartford Open, the state's largest spectator event, passed golf's acid test.

PGA Tour players generally tipped their caps at condition of the course which a year earlier was being torn up for the purpose of building a new 18-hole layout.

The Tournament Players Club

became the TPC-River Highlands, a par 70 with 6,820 yards of green, smooth terrain embracing 127 sand traps, four ponds and an attractive Connecticut River view.

The seven holes remaining from the old course had new greens and tees.

Five holes were built on previously unused land, closer to the

Connecticut River.

Architect Bobby Weed created the new course.

Course superintendent Jay Reagan, assistant Todd Overgaard and staff were cited for their course contributions and devotion to the project.

Twelve-hour days without a weekend off were the rule since

July, 1990.

Howard Twitty, 1980 Greater Hartford Open champion, and fellow tour pro Roger Maltbie were part of the design team.

Cost of the project, which expanded from the normal maintenance staff of 27 to 75-100 with contractor workers, put a gaping hole in the budget.

Nicklaus puts his touch to championship putting course in Vail

VAIL, Colo. — The first championship putting course in Colorado, and one of the first in the United States, now is playable by

residents and guests of Arrowhead.

Residents may step out of their back door and onto The Greens of

Arrowhead.

The 18-hole course was designed by Jack Nicklaus. Landscaping includes lakes, streams, boulders,

wildflower beds and trees.

Arrowhead is located 12 miles west of Vail and two miles west of Beaver Creek.

Judge nixes tax assessments on assumptions

GARDEN CITY, N.J. — A county may not assess a golf course on the assumption it might one day be sold for residential developments.

In *New Country Club of Garden City v. Board of Assessors*, Justice Frank S. Rossetti wrote, "It appears unfair and inequitable to tax property according to value it does not have..."

This test case could result in Nassau County having to repay at least \$10 million in property taxes to the 34 private golf courses there.

New Country Club, a 130-acre parcel improved with clubhouse, tennis courts, practice range and other amenities, was chosen as a representative club. A trial on its tax challenge was held in 1989 as a test case intended to set a pattern for settlement of the other golf courses' claims.

The county had based its reassessment of New Country Club's property on the assumption that the golf course was merely an interim use and that it had the potential to be developed into a residential community of 285 homes.

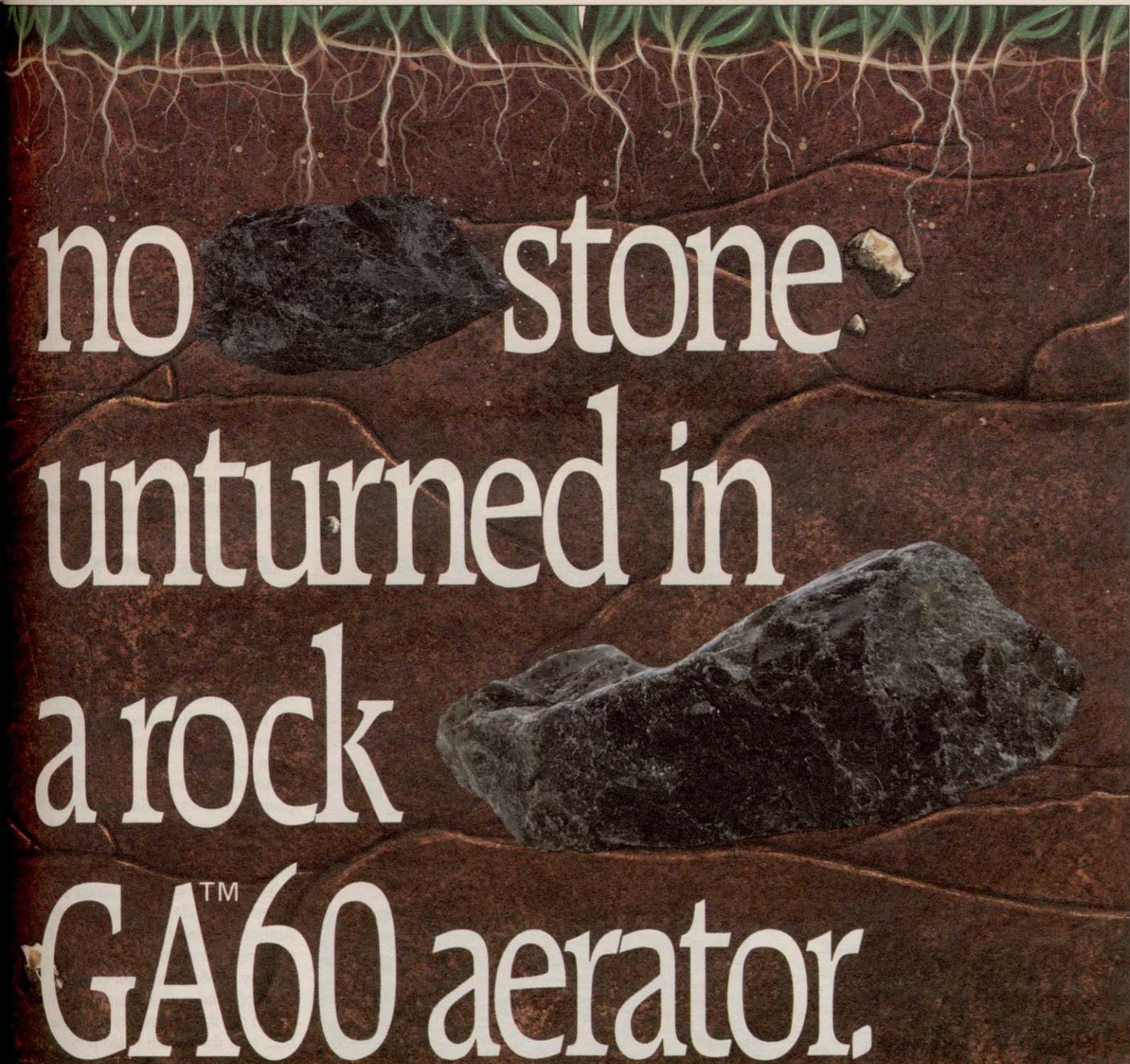
DEP questions town's land sale for golf project

ROCKAWAY, N.J. — The proposed Copperas Ridge development, which would include two golf courses and 304 houses on a 1,700-acre tract off Green Pond Road, has hit a snag.

The state Department of Environmental Protection thinks the township may have improperly sold in the mid-1980s 150 acres that could figure in golf course operation.

Charles Lombardo, Rockaway Township mayor, said the land in question actually is about 60 acres. The acreage traverses the proposed site of Copperas Ridge's northern course. The southern course is scheduled to be designed as a "championship-caliber" links by Arnold Palmer.

DEP spokesman James Staples said, "It would be a mess if they had to buy back the middle of that golf course."



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City proposing 'admissions' tax

FAIRFIELD, Conn. — An admissions tax is being proposed for play at Rancho Solano Golf Course.

The Fairfield City Council informally agreed 3-1 to charge a \$5 admissions tax for all golfers, plus \$2 more for non-resident players. This includes Suisun City residents.

"I think the golf course should be self-supporting," said Councilman Garry Ichikawa. "We should not be paying a subsidy to the golf course. The most bang for the buck is through a tax instead of a fee increase."

Iowa community bumping up fees by mere pennies

COUNCIL BLUFFS, Iowa — In these days of \$100 green fees, a charge of \$4.30 for nine holes and \$6 for 18 is startling.

These proposed boosts in fees for city-owned Westwood Park Golf Course from \$4.20 and \$5.75,

scheduled to take effect March 15, 1991, and designed to generate \$23,000, didn't cause a raised eyebrow among course users.

Similarly, there was little fuss at slight rate hikes at a second municipal layout, Dodge Park Golf

Course. The new fee for 18 holes would be \$11, up from \$10.50.

The \$7 tab for nine holes would remain unchanged. Senior rates would be \$6, up from \$5.25, and league rates \$7, up from \$6.50.

Omaha, Neb., golfers, just

across the river from Council Bluffs and a five-to-10-minute drive from Dodge Park, favor Dodge Park for several reasons. Omaha courses can be crowded, Dodge Park is quickly accessible, and the price is right.

Course opening after gas leak forced three-year closure

GLENDALE, Calif. — Closed for nearly three years because of a methane gas leak, Glendale's public course at Scholl Canyon soon may be rebuilt.

The City Council will seek proposals from private companies to rebuild the site.

From 15 to 20 inquiries have been received from developers interested

in rebuilding and operating the course.

Estimated cost of developing a course on the site is at least \$3 million.

The city has constructed a new, enhanced methane gas collection system and improved the site by placing six feet of fill over the landfill.

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\$250M project will encompass three nine-holers

LOCKPORT, Ill. — Broken Arrow, the biggest single development ever broached here, will include three nine-hole golf courses and a 120-room hotel and convention center.

The \$250-million venture, which will take up to 10 years to complete, will embrace 1,500 housing units.

Vincent Solano Jr. said Robin Hill Development Co., which he heads with Ron Berns, will spend \$40 million to build the hotel and convention center, the golf course and make other improvements to Broken Arrow. The other \$200 million will come from other builders, developers and homebuyers, he said.

'Landfill' course moves closer to reality in Pa.

BALACYNWYD, Pa. — Another major step toward construction of an 18-hole golf course over a portion of Western Berks Landfill has been taken.

According to a feasibility study, project cost was estimated at \$4.9 million. By using land-fill labor and equipment, that figure was trimmed \$700,000.

The facility will be built on 170 acres of Western Berks Refuse Authority property. Between 60 and 80 acres contain buried waste.

Jerry D. Mobley, senior vice president of Chase Golf Management which did the preliminary investigation, said the terrain could prove a challenge, and that a large amount of top soil probably would be needed.

Bond to finance Arizona facility

ELOY, Ariz. — Preliminary planning and design has been initiated for an 18-hole par 72 golf course and practice facility here.

Overall master planning and design is being coordinated by Richard Emik Associates in conjunction with architect Forrest Richardson of Golf Group Ltd., Phoenix.

Construction, expected to begin next January, will be funded through a bond program.

Citizens raise funds, then oversee building of course

PETERSBURG, Ind. — A Pike County citizens' group interested in building a golf course since 1980 but stymied by lack of money took several fund-raising approaches.

As a result, they are supervising the building of a nine-hole public course surrounding the 90-acre Prides' Creek Lake.

Construction may be finished in September and may open in late June 1992.

The citizens' committee raised

\$160,000 in corporate and private individual donations, \$100,000 from the Department of Natural Resources and \$20,000 from the county.

Land for the 3,000-yard-long course was leased from Parks and Recreation.

Gress Construction Co. and architects Dave Henson and Dave Wilson provided the early spadework.

The clubhouse will be the former Atheists' Museum.

Glenmaura will ease lack of playing time

Pennsylvanians look forward to new 18 designed by Hurdzan outside Scranton

Pennsylvania golfers frustrated by lack of playing facilities soon may be swinging freely without extensive travel time.

The Glenmaura National Golf Club near Scranton is taking shape on a 210-acre Montage Mountain layout. Fourteen holes have been

cleared, as well as an area for a driving range.

Five holes will feature the natural backdrop of waterfalls, streams and massive rock ledges.

Each hole will have five tee boxes, and the course will play from 5,000 to 7,000 yards.

Michael Hurdzan of Columbus, Ohio, is the designer.

Southern Pennsylvanians may be prominent participants in the new Oakmont Green Golf Club.

It is situated 25 miles southwest of York and 12 miles south of Hanover in Carroll County in

Maryland.

The 310-acre tract of land, just off Route 30 near Hampstead, Md., will become a par 72 course scheduled to open for the 1992 Memorial Day weekend.

Construction, begun early in May, is 50 percent complete.

Clubhouse construction is due this winter.

The course was designed by Morris Ritchie Engineering of Baltimore.

Developer Lynn Snyder said the course is more directed to trade from northern Maryland.

Landowner gives in, sells crucial one-third acre

NORTH AUGUSTA, Ga. — Augusta Golf Planning & Development Co. may be shy about public disclosure of its officials, but local developer and company representative Mark Bennett made his presence known three times to Alberta Scott in the most forceful way.

Bennett made three offers to Scott for her one-third acre of land on the North Augusta Riverfront, where an 18-hole golf course is planned.

After rejecting offers of \$10,000 and \$20,000 for her property, she accepted \$25,000.

The developers now own a continuous stretch of 185 acres along the riverfront. Cost was estimated at \$1.5 million.

Moon Chul Kim, the only partner listed in corporation papers, is not listed in the Atlanta telephone directory. Mail addressed to him is listed in care of Wilford Lau.

Mike Graybill, chairman of the Columbia County Board of Commissioners who sold 5.3 acres of riverfront property to the company for \$133,586 in May, said, "From what I have been told, they are Japanese investors."

Shakespeare chain club nears completion in Ga.

FLOWERY BRANCH, Ga. — An 810-acre country club development here, part of a chain of upscale golf course communities called Shakespeare Country Clubs, is in an advanced stage.

A preliminary site plan approved by the Hall County Commission includes a nine-hole public golf course and a 19-hole private course.

Atlanta-based Cooke & Andrews Investments Inc., a division of Japan Systems Engineering, will develop and manage the property.

The 19-hole course — a trademark of Shakespeare developments — will be designed by Lee Trevino-William Graves Design Inc. of Dallas. The 19th hole, usually a par 3, is used as a playoff hole.

Ground-breaking ceremonies are due in late spring 1992.

GOLF COURSE NEWS

SG-170

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Wa. developers eye land for \$91M project

ANACORTES, Wash. — A \$91-million development near Anacortes Airport that would include an 18-hole golf course and about 300 upscale homes is the goal of developers J. Scott Lipton of Bellingham, and Bob Taylor of Kirkland.

They're trying to buy more than 200 acres east of the airport, the last major area in the city still available for development. They anticipate breaking ground by next spring.

"We'll probably be playing golf by 1994," said Taylor.

Their InterPacific Golf Associates is spending \$8 million to build an 18-hole golf course and \$4 million for a clubhouse.

"This is probably the finest piece of golf course land in the Pacific Northwest," Lipton said.

West Palm Beach club boasts three Golden Bear courses

WEST PALM BEACH, Fla. — Poised to be among the finest private fitness and social gathering places in the area, Ibis Golf & Country Club's Bath and Tennis Club complex plans opening this fall.

On display will be such attrac-

tions as a stately members' club and three golf courses designed by Golden Bear Design Associates.

Ibis boasts the only pair of golf courses designed by Jack Nicklaus, and one by son Jack II. The third course was designed by Tom

Pearson, senior design associate with Golden Bear.

The grill, an indoor/outdoor dining room, offers long vistas of the 10th and 18th holes of the Jack Nicklaus II-designed Heritage course.

City sues over county ruling

At odds over development with Nicklaus course

LIVERMORE, Calif. — Livermore has filed a lawsuit challenging Alameda County's unanimous approval of a luxury development featuring a Jack Nicklaus-designed golf course, but neighboring Pleasanton's City Council has postponed debate on possible similar action until all members are present.

Two members were on vacation during a planned discussion of the Ruby Hill project. Pleasanton is considering annexing most of the

development into the city limits.

The Livermore action seeks a court order halting the project on the grounds that its environmental impact report was inadequate and that it violates the state's Environmental Quality Act.

The 850-home development includes 280 acres of vineyards, two restored wineries and an inn.

Jim Ghielmetti, developer president, said of the project which took about three years to win approval, "Environmental reports covered all issues. The lawsuit could be a waste of taxpayers' money."

UNebraska will perform research at new course

LINCOLN, Neb. — A research park project in the Highlands area in northwest Lincoln area is on hold, but an 18-hole research golf course project next to the proposed 97-acre research tract has moved to the fore.

Consultants have begun to design it, and the Lincoln City Council has discussed it.

The University of Nebraska-Lincoln, which does research on grasses at its Mead field research site, would turn the new courses into a proving ground for good golf grasses, said William Splinter, UNL's interim vice chancellor for research.

UNL also will work with the city on selection of the right trees and shrubs for the course, which may be open by summer 1993.

Minnesota county seeks proposals for two facilities

ST. PAUL, Minn. — The Ramsey County Board will seek proposals to develop, operate and manage two golf sites in Shoreview and one in St. Paul.

The largest course, projected as 18 holes, would be on 240 acres along the Rice Creek Regional Trail corridor in northwest Shoreview.

At Island Lake in Shoreview, a practice and instructional facility could go on 41 acres, possibly in combination with a small course.

At Battle Creek in southeast St. Paul, a nine-hole executive course could be built on 55 acres.

Construction could begin next year. Island Lake and Battle Creek sites might be open in 1993, the Rice Creek course in 1994.

Wildlife league honors

TOWSON, Md. — The National Institute for Urban Wildlife has recognized seven projects of the local land planning firm of Daft-McCune-Walker, Inc., as certified "Urban Wildlife Sanctuaries."

Bob Galvin, DMW president, said: "Our research indicates that the integration of natural designs with new development is extremely cost effective and creates a more marketable product. We have created approximately 268 acres of new communities which have received certification."

It Stopped Just To Have Its Pi

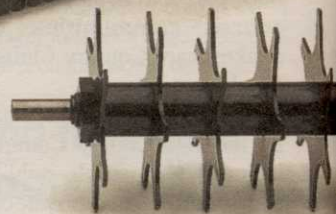
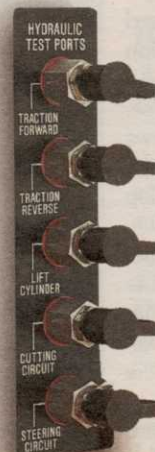
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The Reelmaster 450-D can be customized with these accessories: ROPS, Cab, 5- and 7-bladed reels, rollers and thatching reels.

Golf Course Europe lines up impressive list of speakers

WIESBADEN, Germany — The environment and golf course development in Eastern Europe will be among the topics explored at Golf Course Europe '91, scheduled here for Oct. 7-9.

Monday morning's session will involve the environmental impact of golf on the countryside and will feature speakers Jan Brugelmann of the German Golf Federation; Falk Billion of Deutsche Golf Consult, Germany; David Stubbs of Environmental Golf Services, U.K.; and Hubert Chesneau of the French Golf Federation.

An environmental policy for golf

course development in Europe will be the topic of a Tuesday morning panel discussion involving European Golf Association members, developers, architects and environmental authorities.

A "greenkeeper workshop" on the environment will be conducted Wednesday morning with speakers Jan van Mondfrans of Barenburg Holland B.V., The Netherlands; Jeffrey Perris of The Sports Turf Research Institute, U.K.; and John Hopkins of Clifton Design, U.K..

Howard Swan of The Howard Swan Practice, U.K., will discuss

the East European golf course market Wednesday morning. An evening session focusing on East German development will feature Rudolph Bernd, president of the fledgling German Golf Federation, East.

The three-day conference is divided into a management confer-



Charlie Barebo
GCE speaker

ence and greenkeeper workshops. Admission fees may be paid for some or all sessions.

The management conference includes sessions on the environment, preplanning, golf course marketing and public relations, water evaluation and availability, golf resorts, public golf courses, golf course management, and European golf course development.

Greenkeeper sessions include new products, turfgrass alternatives, environment and golf course management.

Among the 45 speakers are

Gerold Hauser of the European Society of Golf Course Architects; golf course architect Mario Croze of Italy; Jim Engh of IMG Design, U.K.; Lowell English of Golf Planning Solutions, U.S.A.; William Firth of Sasaki Associates Inc., U.S.A.; Jill McArdle of The Principals, U.K.; Peter Labbey of A La Carte Hotels and Resorts, U.K.; James Kidd of The Gleneagles Hotel, U.K.

Richard Pocock of Hydro Plan, Sweden; Bruce Parker of Philip York & Partners, U.K.; Charles Barebo of Otterbine-Barebo, U.S.A.; David Ellsworth of Ellsworth, Morgan, Lewis & Bockius, U.S.A.; Ronald van Pelt of Wimberly, Allison, Tong & Goo, U.K.; Robert Berthet of Archigolf, France; Gordon Jaaback of Gordon Jaaback, U.K.; Shunsuke Kato of Kato International Design Inc., Japan; Ronald Croen of Croen Group, France.

James McLoughlin of The McLoughlin Group, U.S.A.; Colin Searle of Master Golfer Ltd., U.K.; James Wilson of Chichester Golf Center, U.K.; Michael Redd of Teamplan Inc., U.S.A.; Tommy Lindelof of the Swedish Golf Federation; Ken McNiven of Bavaria Sport & Freizeit, Germany; John Hacker of Professional Sportsturf Design (North West) Ltd., U.K.; Dick van Beek, Yamaha Motor Europe N.V., The Netherlands.

James Donovan of Agri-Diagnostics, U.S.A.; Michael Robinson of Seed Research of Oregon Inc., U.S.A.; Felix Voss and Wolfram Gelpke of TBA Technisch Biologische Anwendung, Germany; Richard Psolla of R.E.P. Consulting, U.S.A.; Rick Elyea of The Scotts Company, U.S.A.; Tim Bowyer of Southern Turf Nurseries, U.S.A.

Co-chairing the management conference are European Environmental Consultancy Group President Michael Harvey, British Association of Golf Course Architects Chairman Joan Dudok van Heel and McLoughlin. Stit Persson, general manager of Ljunghusen Golf Club, chairs the greenkeeper workshops.

Conference spokeswoman Ellen MacGillavry said 150 people had pre-registered through mid-August, with more than 500 expected to attend.

Approximately 125 exhibitors are expected to display their wares at the Rhein/Main Hallen. RainBird, Toro, Palmer Course Design, Gary Player Design, Otterbine-Barebo, Jack Nicklaus Golf Services, Kato International Design, Sodisem, Tee-2-Green, E-Z-GO Textron, Balsam AG, Glenmac, Troax, Ris Irrigation, Barenburg, Van Engelen Zaden and Van den Berk Bomen are among the exhibitors.

The official language for the presentations and documentation is English with simultaneous translation into German available. Advance registration is encouraged although registration on the first day is possible if space is available.

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From America to Europe, busy times ahead

There are a couple of upcoming events I'd like to preview for you.

First, *Golf Course News* has arranged with ExpoConsult of Holland, organizers of Golf Course Europe, to cover this European conference and show in Wiesbaden, Germany, Oct. 7-9.

Golf Course News - Europe will publish a special section in the October issue.

Second, the Golf Course News marketing conference will take place Sept. 16-17 at the Oakbrook Hills Conference Center near Chicago. This two-day conference will address the problems in marketing products and services to golf facilities and, hopefully, develop some solutions for the industry suppliers'

marketing and sales efforts.

As I mentioned in last month's column, the 1992 editorial calendar is now published, so I'd like to review it for you. Our editorial department has added some new features, as well as four special sections that will expand coverage of particularly "hot" topics in the industry.

Here's the rundown:

January—GCSAA Preview: *Golf Course News*' Annual Awards (Architect, Builder, Resort Developer,



von Brecht

Best Conditioned Course).

February—GCSAA Show.

March—Golf Course Utility Vehicles—Special Advertising Section.

April—Pre-emergent Herbicides.

May—Driving and Practice Ranges—Special Advertising Section.

June—Rotary Mowers.

July—Fungicides.

August—Ryegrass Seed Producers and Research—Special Advertising Section.

September—Soil Blenders.

October—Irrigation and Pumping Stations—Special Advertising Section.

November—Architects, Build-

ers and Developers.

December—Hi-tech Developments in Golf Course Maintenance.

My recent column on slow play garnered some interesting response.

All disagreed with my suggestion to allow players to hit on par 3s while the group ahead has not completed play.

This is a regular practice at some courses, even though it could result in injury.

I must agree with my critics, who point out that a rule for speeding up play should not be posted. Aside from that one point, respondents agree there is a need for continuing education for faster play.

Keep your comments coming!

COMMENTARY

Get tests straight before announcing them

By Mark Leslie

Henry Adams once said: "Practical politics consists in ignoring facts."

Time and again we've seen proof of this in America. Time and again men have spoken too soon, thought too little, voted too quickly, compromised too much, pressed on when they should have let go, or given up when they should have hung on.

Time and again the results have been ominous. People suffer, families are disrupted, neighborhoods are uprooted, companies go belly-

up, cities go bankrupt, and states survive only by raising taxes.

All this is nothing new. But this is a plea for it to stop.

It follows the dioxin scare, which is perhaps the most damaging—and costly—illustration of the danger of no-think-quick-response-overstatement tendencies. In 1982, the government ordered evacua-



Leslie

tion of 2,232 residents of Times Beach, Mo., saying traces of dioxin were found in the town's soil. The Environmental Protection Agency spent \$33 million to buy up the town, posted signs on Highway 44 warning motorists to keep their windows closed and not to stop or leave their vehicles. Syntex Corp. was blamed for contamination of Times Beach and 16 other Missouri sites because one of its subsidiaries had bought a plant that had once supplied dioxin-tainted waste oil to a contractor who had sprayed it on the town's streets.

Syntex last year signed a consent decree agreeing to clean up the sites and incinerate 100,000 square yards of contaminated soil.

The estimated cost over the next decade? As much as \$200 million.

My beef? The scare, the evacuation and all the consequent hullabaloo were a mistake.

Dr. Vernon Houk, the center of Disease Control official who had recommended the evacuation, now believes it was unnecessary. He says the scientific theory and methodology that led him and others to

Continued to page 24

GUEST COMMENT

A list is a list, but take note, address problems

By Jim Gilligan

Lists attract our attention. They enumerate our problems, pleasures and needs. They are a condensed index of things to do, we should have done, and could have done.

Lists are powerful documents. We respond to them quickly, whether it is a shopping list, a Christmas list, a work list, a sports list or a problem list. It must be the simple declarative style of a list that triggers a quick response. I responded quickly when I read the list of "Golf Course Superintendents' 10 Deadly Problems." Then I saw that they were "The Top 10 Sins of Golf Course Maintenance" as seen through the eyes of 12 USGA agronomists.

The list was the result of a survey requested by a group of golf course owners. Observations were tabulated and the results listed according to frequency in the survey. These problems not only were sinful. They were deadly; a fatal combination.

The list implied that superintendents might be responsible for these problems. Golf course maintenance is a career for super-

intendents; it is a matter of job security. Industry leaders who listened to the talk or who read the article may erroneously interpret the tone of the list.

Jim Connolly, USGA agronomist who presented these facts at the Maine Golf Turfgrass Conference and Show, stated that it was not his intention to fault the superintendent but to make the industry aware of the problems. There is no denying these problems exist.

In presenting the list in this column, I changed the order to reflect my views of the importance of each problem. The comments following the category are my thoughts.

Following is the list of ten important problems facing golf course superintendents. The number in parentheses indicates the original ranking.

1. Labor (9). Size alone puts this problem at the top. Labor comprises the largest percentage of golf



Jim Gilligan

course budgets. The human element demands attention. Low wages, few benefits, seasonal employment, poor working conditions, lack of training and scarcity of qualified people contribute to this problem.

Labor needs a strong planning effort equal to or greater than other maintenance programs.

2. Communications and Public Relations (1). To resolve this important issue, communications should begin at the top and set the pace throughout the golf course organization. A positive attitude must be developed in the organization to make it effective. The forms of communication should be kept simple. The quality of writing, speaking and listening must be emphasized.

Public relations can be easy: be courteous to everyone; golfers, staff administrators and sales reps. Community activities are a means of establishing a solid public relations image.

3. Green Speeds (3). An important concern because of its impact on overwatering, pesticide use, equipment and labor. Fast greens

and low-cut fairways perpetuate the problems of maintaining the grass in a constant state of stress. Pressure is exerted from all sides in this question of keeping fast greens. As superintendents, we are not entirely blameless.

4. Overwatering (2). A significant problem that a superintendent may be forced into to preserve the "green" look. The stress of present maintenance standards are a contributing factor to this problem.

Automatic systems left unmonitored overwater; manual systems left in inexperienced hands overwater.

5. Pesticide Use (4). Pesticide misuse is the problem.

Superintendents today are taking a judicious look at their use of pesticides. Using diagnostic tools to identify pests, employing longer application intervals, and carefully selecting the correct pesticide are means superintendents are using to eliminate any misuse of pesticides.

Superintendents understand the complexities of pesticide use and the financial and environmental cost

Continued on page 24

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An aerial photograph of a golf course. A long, straight track, resembling a train track, runs vertically through the center of the image. A train, composed of many white and red cars, is positioned on this track, facing away from the viewer towards a green. The green is located at the top of the frame and is surrounded by three large, irregularly shaped sand traps. To the right of the track, there is a dense line of trees and a winding path. The overall scene is a surreal juxtaposition of a golf course and a train.

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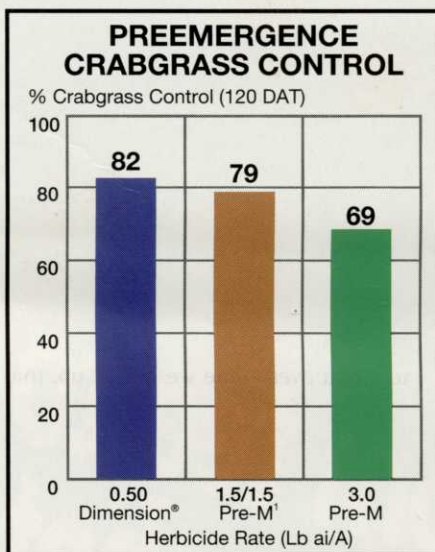
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Spokane municipal supers defended

To the editor:

I read with interest the article on the winter damage to the Spokane golf courses (*Golf Course News* July issue).

It's true I am a civil service employee. The remark made by the unnamed person and his/her insulting remark shows how little he/she knows the three supers for the city of Spokane.

For myself, I put in more than 40 hours per week in our busy time. I invite anyone to follow any of my crew members for a day.

The winter was bad, but the spring weatherwise was worse. We had no growing weather until late in June.

Every golfer thinks it his duty to take digs at golf course crews when something happens to mess up his game, but very few ever tell us "Good Job" when conditions are to one's liking.

We all take pride in our courses and do the best we can.

Tell your griper to ask sensible questions and listen. He may learn something, maybe.

Sincerely,

Horace E. Ramsey

Willow Springs wonderful

To the editor:

I have just finished playing Willow Springs Golf Course for the third time. If there is an executive length course which can match what Al Janis has created adjacent to West Friendship's Livestock Road in Howard County, Md., I would sure like to know where it is.

I am in the industry, but have no connection either to Al or the course. I just think excellence should be recognized.

The course plays only 4,253 yards from the blue tees, with a par of 62, but I don't think the pros can tear it up. The premium is on accurate shot making and is extremely fair, if you can keep the ball in play. Surrounding areas are planted to weeping love grass and wild flowers.

Most greens either are two or three-tiered, so that pin placement can be as difficult as they want to make it, but remain continually interesting.

The course is new and was built during the worst drought here in the past ten years. Fairways need to develop more, as is generally the case.

My purpose in writing is to encourage other golf course architects, land planners and developers to visit, just to see what can be done with a piece of land if you have the right vision and skills to develop what I think is the best short course in the United States.

Sincerely,

Bill Appel

Ellicott City, Md.

Don't let players go on par-3s

To the publisher:

Regarding your commentary in the July issue on slow play:

Several years ago it was demonstrated that it does not speed play on a par 3 course to let players hit after you've reached the green.

It's very unsafe to have people standing near a par 3 while people are approaching. Many people get hit. It's especially dangerous if you're looking back toward the tee into the sun.

It's also distracting to have people walking and riding up next to the green while you're putting out.

Oh, by the way, you have a great publication.

With respect,

"Stay Green" Dean Fagerlind

Superintendent, Byrnes Park Golf Course
Waterloo, Iowa

Education the answer

To the publisher:

In your "Publisher's Note" in the July issue, you discussed slow play and some of the issues surrounding it, and even made some suggestions as to how we might speed up the game and make it more enjoyable for everyone.

In general, I agree with you in that there are many ways in which we can educate the playing public, especially beginning golfers, in how to play faster. However, I think you missed the mark in a couple of areas.

In your first point, you mentioned that more signage might help. I agree that signs should be posted to allow faster players through the slower groups. This works well if the golf course is not full, but on today's jam-packed public courses that start players at seven and eight-minute intervals it does no good to let anyone through unless there is an open hole in front of the slow group. Signage to that effect and to encourage groups to keep pace with the group in front will help considerably.

Also in your first point, you suggest letting groups on the tees of par 3s hit their shots before the group on the green is through putting. I strongly disagree unless the next hole is open and the group on the green is playing slow. Otherwise all you do is create a backup at the green or the next tee.

This is especially true if the group on the tee is in carts. I will give you this, if the players on the tee are all walking and they would have to walk around a lake or some other circuitous route, then it may be of some help to let them hit up to the green.

In your third point, it is my understanding that we should get used to playing five-hour rounds because of the busy public facilities. Maybe that is so, but I think that if we were all told that every time we teed it up, that we wouldn't finish the 18th hole until five hours later, fewer of us would even bother to go to the course.

Advertising that the five-hour round should be the norm is bad for golf. Think about it. Say you drive 30 minutes to an hour to get to the course, it takes you five hours to play and then another hour to get home and you have invested seven hours. Not to mention the fact that you usually get there 15 to 30 minutes early and then hang around another 15 to 30 minutes (or more) to have a drink with your friends. That is OK, unless their wives don't want them to be gone from daylight to dark for one round of golf.

You are on the right track as are many others in our business by saying that educating the playing public in how to play faster is the key. Encouraging players to be ready to hit their shot when it is their turn, lining up their putt before it is their turn, leaving your bag or pull cart or riding cart on the side of the green closest to the next tee, putting out instead of marking every short putt, and not marking down scores while standing on the green are just a few of the ways that players can make that round of golf closer to a four hour round than five. Now that would be great and it can be done.

I look forward to reading your publication every month as there is always something either stimulating or informative between the covers. Keep up the good work.

Sincerely,

David Whelchel

P. S. — A twosome rarely has the right-of-way on a golf course. On busy days, it is my contention that they should be paired with at least one more player. That twosome takes up the same eight-minute tee time as four players and usually winds up being frustrated just like you were.

Golf course architecture feature gave special insights

To the editor:

I am an intern at South Seas Plantation, Captiva Island, Fla. I attend Lake City Community College Golf Course/Landscape School.

My major is landscape design/maintenance, but I am working on a golf course now.

Next year I will transfer to Florida A&M to earn a B.S. degree in landscape architecture. I will graduate in the spring of 1993. I have a very diversified education — architecture, golf course and landscape — because I am pursuing golf course architecture.

I enjoyed the article on golf course architects in the July issue. It gave me an in-depth view on what pros want, average golfers want, and the need for landscape design

education as well as needing to know and understand the game of golf and golf maintenance.

I appreciate the thoroughness of the articles; very informative. Thank you.

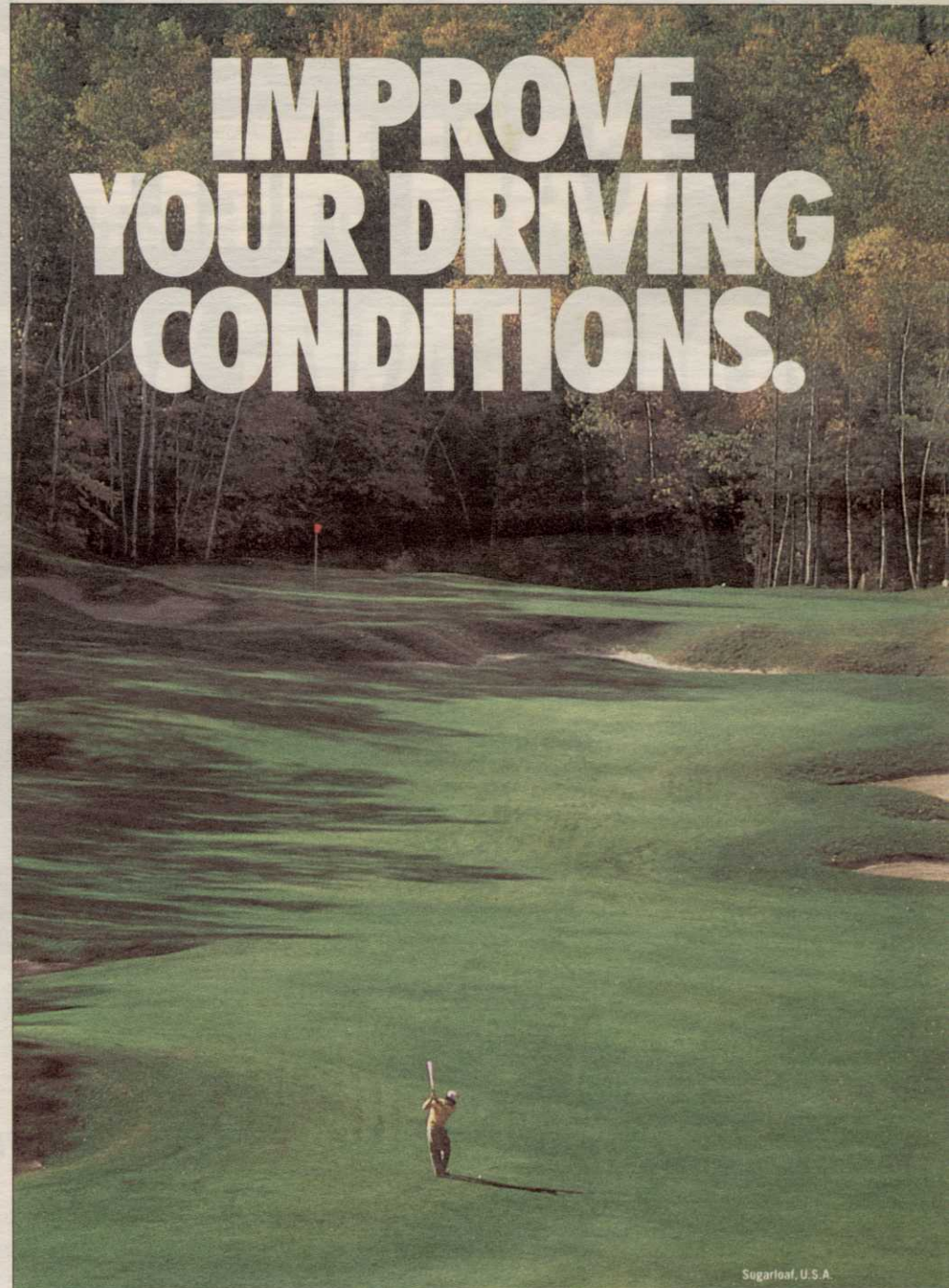
Your publication is so educational, I look forward to reading it every month. Not only is it educational, it is a marketplace for new ideas, equipment and products — not to mention job opportunities.

Keep up the good work.

Daleann Linton
Branford, Fla.

Please address your letters to: Letters, *Golf Course News*, P.O. Box 997, Yarmouth, ME 04096.

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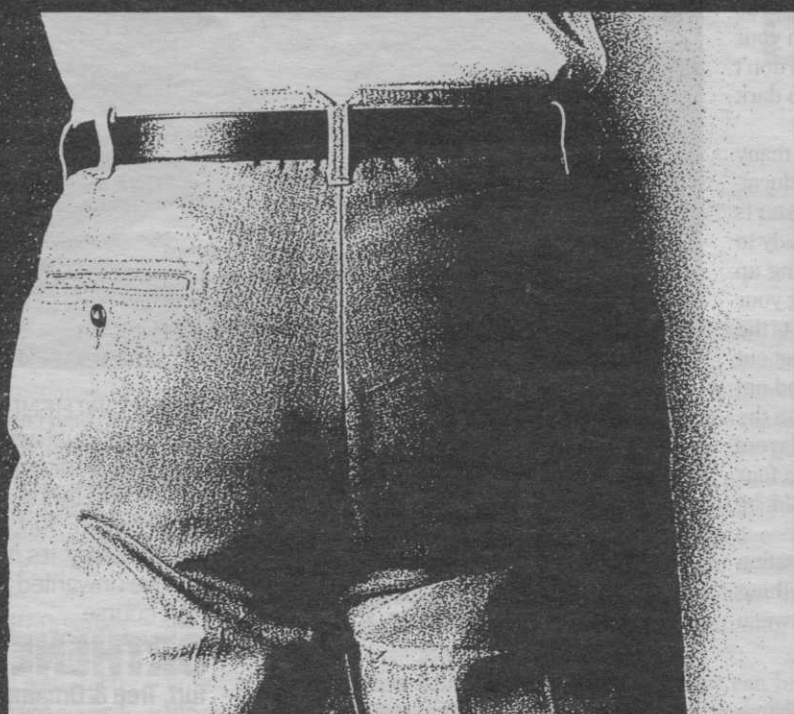
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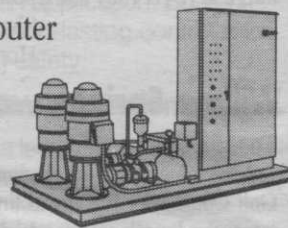
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Briefs



HERBICIDES IN RAINWATER

A recent U.S. Geological Survey study noted traces of herbicides in rainwater samples from 23 states.

Atrazine, alachlor, metalachlor and a degradation product of atrazine were among herbicides detected.

Agricultural pesticide use was believed the main source of the herbicide pollution.

This is the first major study to confirm that pesticides can be transported through vaporization into the atmosphere. Turf applications were not believed to have contributed to the pesticides found in the rainwater samples.

EPA APPROVES GEORGIA UST PROGRAM

Georgia became the fourth state approved by EPA to run its underground storage tank program in lieu of the federal program.

New Hampshire approval came in June and followed approval of Mississippi, New Mexico and New Hampshire programs.

There are almost 2 million USTs at about 750,00 sites nationwide.

Georgia has an estimated 51,248 underground storage tanks with 1,183 confirmed releases.

The Resource Conservation and Recovery Act (RCRA) authorizes EPA to approve state UST programs to operate in lieu of the federal program. To qualify for final authorization, a state's program must be "no less stringent" than the federal program.

GCSAA NAMES MCCARTHY

Patricia McCarthy has been named director of administration for the Golf Course Superintendents Association of America.

In her new role she will oversee facilities management, personnel, human resources, financing and data information systems.

Before joining GCSAA, McCarthy served as manager of administration and for regional operations, sales and marketing for Home Box Office Services in Kansas City following a two-year stint as a HBO account executive.

She also worked for Trans World Airlines for 20 years before starting at HBO.

McCarthy holds bachelor's and master's degrees in business administration from the University of Missouri-Kansas City.

HAGUE HONORED FOR OPEN WORK

CHASKA, Minn. — Chris L. Hague, course superintendent of Hazeltine National Golf Club, was cited for his excellent work in preparing the course for the recent 1991 U.S. Open.

Stephen G. Cadenelli, Golf Course Superintendents Association of America president, made the plaque presentation on behalf of the GCSAA.

Among those attending the annual GCSAA member reception were Robert Trent Jones Sr. and Jr., golf course architects; Ray Anderson and Judy Bell, USGA executive committee members, and Thomas C. Fischer, Minnesota GCSA president.

International finds a way for a 'perfect match'

By Mark Leslie

A leader of the sod growing industry says it is a story eligible for Ripley's Believe It or Not.

A seed company president feels it may be the beginning of a trend among older golf courses.

The superintendent of the golf course says it plainly makes sense.

International Tennis and Country Club in Fairfax, Va., has contracted with Summit Hall Turf Farm in Poolesville, Md., to grow four acres — that's 170,000 square feet — of bentgrass sod on a U.S. Golf Association-approved soil mix that exactly matches the course's rebuilt greens.

"This way, all our greens, when we sod them, will have exact matches as far as the mix the sod was grown on and the mix for the greens. We used the same materials, because we're looking for an exact match," said In-

Continued on page 18



A crew from Chantilly Turf Farms, Inc. lays bluegrass sod on the perimeter of the 13th green at International Town and Country Club. Chantilly, a subcontractor to John Ponko Inc., will put down bentgrass sod on the greens. Chantilly grew the bluegrass sod, while Summit Hall Turf Farm grew the bentgrass.

Top-ranked varieties in National Ryegrass Test

Name	DC1	ID2	IL2	IN1	KY1	MD1	MI1	MO1	NE1	NJ1	NJ2	NY1	OH2	OR1	OR2	RI1	SD1	UB1	VA1	Mean
*PST-2PM (Saturn)	5.0	5.9	7.2	7.0	6.8	5.5	5.9	5.7	6.2	6.3	6.4	4.8	8.0	6.1	5.9	6.9	6.2	7.3	4.8	6.2
*PST-M2E (Man. II W/E)	4.4	6.2	6.8	7.3	7.2	5.7	5.4	5.8	5.5	6.3	6.8	4.8	7.0	6.9	6.2	7.2	6.3	7.1	4.7	6.2
*SR 4000	2.9	6.3	7.0	6.8	7.2	6.2	6.3	5.8	6.0	6.2	6.5	5.3	6.3	6.1	6.1	7.1	6.7	7.2	5.0	6.2
*PICK 300 (Blazer 11)	5.3	6.6	6.9	7.2	7.3	5.7	5.7	5.8	6.2	5.4	6.9	5.2	7.3	6.6	6.1	6.7	6.6	4.4	4.9	6.1
*PST-259 (Commander)	4.9	6.3	7.1	6.9	6.8	5.5	5.2	5.0	5.9	5.8	6.9	4.8	7.3	6.2	6.3	7.0	6.7	7.2	4.7	6.1
*SR 4100	4.1	6.6	7.6	6.9	7.2	6.0	5.2	6.2	5.7	6.0	5.7	5.4	7.0	5.7	6.1	7.0	6.1	7.4	4.9	6.1
*PST-247 (Dimension)	3.3	7.3	6.7	6.6	7.1	4.8	6.3	5.5	5.8	6.1	7.2	5.3	6.7	6.8	6.3	6.6	6.3	7.0	4.9	6.1
*REPELL	5.3	6.4	7.0	6.9	7.3	6.0	5.4	5.3	5.8	5.1	6.0	5.4	7.0	5.7	6.1	7.3	6.5	6.8	4.8	6.1
*PICK 600 (Fiesta 11)	3.2	6.3	6.7	6.9	6.9	5.2	5.4	5.8	6.3	5.2	6.6	5.0	7.7	6.8	6.1	7.4	6.9	5.0	5.0	6.0
*Omega 11	3.2	6.8	6.3	7.1	7.3	5.5	5.4	5.7	5.6	5.3	6.3	5.1	7.0	6.5	5.9	6.7	6.3	6.9	4.7	6.0
*PICK 647 (Riviera)	3.8	6.3	7.2	6.8	7.1	4.8	5.8	5.5	5.7	5.8	6.4	5.3	6.7	5.8	6.0	7.2	6.8	5.4	4.6	5.9
*PENNANT	4.9	6.4	7.1	6.8	6.5	5.2	5.4	5.5	6.0	5.6	6.2	5.1	6.3	5.6	5.6	6.9	6.1	6.8	4.9	5.9
*MANHATTAN 11	4.2	6.8	6.8	6.9	6.5	5.7	5.5	5.2	5.8	5.5	6.3	4.9	7.0	6.4	6.3	6.4	6.1	6.0	4.7	5.9
*PST-250 (Competitor)	4.4	5.9	6.8	6.8	6.6	5.3	5.0	5.7	5.8	5.7	6.3	5.1	6.7	6.6	6.1	6.8	6.8	5.9	4.6	5.9
*PST-2HH (Charger)	2.8	6.2	7.1	6.8	6.8	6.2	6.0	4.8	5.7	4.8	6.5	5.1	6.3	7.0	5.9	6.6	6.9	6.4	4.8	5.9
*PICK 715 (Edge)	2.9	5.5	6.4	6.9	6.6	6.3	5.0	5.7	5.8	5.7	6.3	5.0	7.0	6.1	5.7	6.7	6.4	7.3	4.7	5.9
*PALMER	5.8	6.2	6.5	6.9	6.6	6.3	5.3	5.3	5.7	5.3	5.7	4.7	6.3	6.1	5.7	6.7	6.3	5.8	4.9	5.9
*PICK 233 (Dasher 11)	2.9	5.8	6.4	6.7	7.0	5.8	5.4	5.2	5.6	5.7	5.9	5.5	6.3	5.9	6.1	6.9	6.3	7.1	4.9	5.9
*CITATION 11	2.3	5.8	6.9	6.7	7.0	6.3	5.4	5.8	5.2	5.4	6.1	4.4	6.3	6.0	5.9	6.8	6.3	7.4	4.8	5.8
*ISI-851 (Lindsay)	3.4	6.0	6.6	6.6	6.7	5.5	5.4	5.3	5.8	5.2	5.8	4.9	6.7	5.8	6.3	6.9	6.6	5.6	5.0	5.8
PST-2DD	3.1	7.2	x	6.8	6.9	4.7	4.9	3.5	5.3	5.0	6.3	5.2	7.0	7.2	6.4	6.7	6.7	6.4	4.8	5.8
*PRELUDE	5.1	6.3	6.9	6.7	6.4	5.5	5.3	5.3	5.9	5.0	5.3	4.7	6.3	5.8	5.7	6.8	6.5	5.1	4.7	5.8
*GATOR	4.3	5.9	6.3	6.9	6.8	5.3	5.3	4.8	5.9	5.0	5.8	5.3	7.3	5.6	6.1	7.1	6.3	3.9	5.0	5.7
*ALLAIRE	4.5	5.8	6.7	6.9	6.7	5.7	5.3	5.0	6.0	5.0	6.6	5.0	6.7	5.8	5.9	6.4	6.1	4.8	4.2	5.7
PSU-333	5.1	5.8	6.9	6.8	6.5	5.8	5.2	5.0	5.8	5.0	5.6	5.0	7.0	5.1	5.5	6.5	6.3	4.6	4.7	5.7
*KWS-AL-2 (Aquarius)	3.3	6.1	6.1	6.1	6.3	4.7	5.5	5.0	5.5	6.1	6.5	4.4	7.0	6.5	6.9	6.3	7.3	3.7	4.4	5.7
*CALIENTE	5.1	5.8	7.2	6.6	6.6	5.7	4.8	5.3	5.7	5.0	4.9	4.4	6.3	5.3	5.4	6.2	6.1	6.2	4.7	5.7
*GOALIE	4.4	5.9	7.5	6.7	6.4	5.3	5.3	5.2	5.6	5.5	5.7	4.7	6.3	5.0	5.2	6.7	6.7	4.6	4.8	5.6
*TARA	3.7	6.6	6.6	6.5	6.9	5.5	5.2	4.5	5.8	4.8	5.8	5.0	7.0	6.5	6.1	7.0	6.3	3.0	4.6	5.6
RUNAWAY	3.9	5.8	6.7	6.7	6.9	6.0	5.4	5.0	5.4	5.0	5.8	5.0	6.7	5.2	5.6	6.2	6.5	4.6	4.9	5.6
*PATRIOT	4.4	5.9	6.9	6.6	6.5	4.8	5.1	5.5	5.8	4.6	5.4	4.9	6.7	5.3	6.0	6.6	6.6	5.2	4.4	5.6
*BIRDIE 11	3.3	5.8	6.9	6.7	6.6	5.7	4.8	5.5	5.7	4.8	5.2	4.9	5.7	5.6	5.9	6.4	5.8	6.8	4.7	5.6
PSU-222	4.7	5.8	6.6	6.7	6.7	5.7	5.2	4.7	5.8	5.0	5.0	5.0	6.7	4.9	5.4	6.8	6.6	4.4	4.6	5.6
*RODEO	4.7	6.3	6.3	6.4	6.4	5.0	5.2	5.0	5.8	5.0	5.7	4.8	7.0	5.8	5.8	6.7	6.0	3.9	4.3	5.6
*BAR LP 410 (Barrage)	4.1	5.8	6.6	6.7	6.8	5.3	4.6	5.7	5.3	3.9	4.3	4.8	7.0	5.3	5.7	6.5	6.3	6.4	4.9	5.6
*246	4.3	5.4	5.8	6.5	6.6	6.0	4.8	5.7	5.8	4.5	5.3	4.3	6.0	5.8	5.4	6.2	5.9	7.0	4.6	5.6
LSI VALUE	1.9	0.9	0.9	0.4	0.6	1.1	0.6	1.4	0.7	1.0	1.0	0.6	1.0	0.7	0.5	0.7	0.5	1.3	0.6	0.2

Dramatic improvements reported in ryegrass varieties

By Mark Leslie

Scientists have caused dramatic improvements in ryegrasses the last four years, but the future should be even more historic, according to the national director of the U.S. Department of Agriculture's National Turfgrass Evaluation Program.

Kevin Morris said a number of the best experimentals, seeded last fall for the next series of national tests, are "far superior to the best entries in this latest group."

New varieties are mainly lower-growing, darker green, denser, he said.

Meanwhile, he said final results for the four years of tests will be released in late summer or early fall.

Jim Snow, national director of the U.S. Golf Association Green Section, said the most striking change in ryegrasses is that so many now contain endophyte, a natural fungus that makes the grass resistant to chewing and sucking insects.

Snow pointed out one ironic fact about ryegrasses: Ryegrass is the highest selling turfgrass at golf courses nationwide because

* — Brands available on the marketplace.

Locations submitting data for the National Perennial Ryegrass Test follow, with their code names, type of soil, nitrogen in pounds per 1,000 square feet, mowing height in inches, and irrigation practices:

DC1: Washington Monument grounds; loam; 1.1-2.0; 2.1-2.5; no irrigation.

ID2: Post Falls, Idaho; silt loam and silt; 2.1-3.0; 1.1-1.5; to prevent stress.

IL2: Carbondale, Ill.; silty clay and clay; 4.1-5.0; 2.1-2.5; to prevent stress.

IN1: West Lafayette, Ind.; silt loam and silt; 3.1-4.0; 2.1-2.5; to prevent stress.

KY1: Lexington, Ky.; silt loam and silt; 2.1-3.0; 1.6-2.0; no irrigation.

UB1: Beltsville, Md.; loam; 2.1-3.0; 1.1-1.5; to prevent dormancy.

MD1: Silver Spring, Md.; sandy loam; 3.1-4.0; 2.6-3.0; to prevent dormancy.

MI1: East Lansing, Mich.; sandy loam; 2.1-3.0; 1.6-2.0; to prevent stress.

MO1: Columbia, Mo. (mechanical wear applied spring and fall); silty clay loam; 2.1-3.0; 2.1-2.5; to prevent stress.

NE1: Lincoln, Neb.; N/A.

NJ1: North Brunswick, N.J.; loam; 4.1-5.0; 1.1-1.5; to prevent stress.

NJ2: Adelphia, N.J.; sandy loam; 5.1-6.0; 1.6-2.0; to prevent dormancy.

NY1: Ithaca, N.Y.; sandy loam; 2.1-3.0; 1.6-2.0; to prevent dormancy.

OH2: Marysville, Ohio; silty clay loam; 3.1-4.0; 1.6-2.0; only during severe stress.

OR1: Hubbard, Ore.; silt loam and silt; 4.1-5.0; 1.1-1.5; to prevent dormancy.

OR2: Corvallis, Ore.; silty clay loam; 4.1-5.0; 1.6-2.0; to prevent dormancy.

RI1: Kingston, R.I.; silt loam and silt; 3.1-4.0; 1.1-1.5; to prevent stress.

SD1: Brookings, S.D.; silty clay loam; N/A; 2.1-2.5; to prevent stress.

VA1: Blacksburg, Va.; silt loam and silt; 3.1-4.0; 1.6-2.0; only during severe stress.

it is so often used for overseeding. For that reason, superintendents in the South "may not want such a good grass. They don't want it to hang on and set back the transition from rye to Bermudagrass in the spring."

Morris agreed, saying, "Some Southern superintendents are using older varieties because they know they won't stick around in the spring."

Snow said a superintendent should "base his decision on his specific purpose."

Andy Brennan puts ingenuity to work at Opryland course

NASHVILLE, Tenn. — The day Andy Brennan found out he was on the waiting list for Cornell University, he received an invitation to apply for admission to Vanderbilt University here. He decided to go south, and has been in the Nashville area since.

"I was already interested in golf courses," said Brennan, who grew up in New Jersey. He started hanging around local courses when he was 12, started caddying when he was 14, and was working on a summer maintenance crew at 17.

"My initial interest was in golf course architecture, and Vanderbilt was offering some interesting programs with their engineering degrees, integrating engineering with other study areas, including arts and sciences," Brennan said.

He ended up with an engineering science degree from Vanderbilt, with emphasis in civil engineering. That training has been a big help in his present job as superintendent at Spring House Golf Club at Opryland Hotel.

Brennan joined Spring House Golf Club when ground was broken for the new course in April, 1989. Before that, he had been with Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent. He began at Temple Hills fresh from college, first as a working foreman, then assistant superintendent, and finally as superintendent from 1981-1989.

He saw the new Spring House course as an exciting challenge. The 7,007-yard course was carved out of farmland on the west bank of the Cumberland River on the east side of Nashville, not far from the Opryland Hotel.

The course is named after the old stone spring house, built in the late 1800s and still covering a running spring that bubbles out of the limestone bluffs.

Brennan said the course is blessed with good, silty river bottom soil instead of the rocky, heavy clay soils that cover much of the area. "Although it's a fine-particle soil, it can get hard quickly in dry weather, so it requires a lot of aeration and top dressing."

The flat, river bottom area was built up with bumps and mounds in construction to make it a "British Open" type course, said Brennan. Rocky bluffs along the west side of the course and the winding Cumberland River along the east side make for tricky wind shifts.

The Spring House course was built by Landscapes Unlimited of Lincoln, Neb. It was designed by Larry Nelson Design Associates. Golfscapes of Arlington, Tex., was the architect.

The course opened for play in September, 1990, thanks in part to the fact that much of the course was sodded. "We felt the investment in sod would be well spent in getting the turf established faster," Brennan said. "We sodded the greens, tee banks and bunker faces. Fairways were sprigged, but because of the nature of the terrain, one good rain would wash out a lot of sprigging on the slopes, so we put in sod."



Andy Brennan gives directions to a mower operator.

Sodding began in April and was completed in mid-August. Greens are Penncross bentgrass; 419 Tifway Bermuda was used on the rest. Because of a severe winter in mid-Tennessee, much sod suffered winter kill, so Spring House brought in sod from a number of suppliers.

Brennan said he was lucky to obtain use of a new top dresser, designed by Cushman, after the sod was lain. "We used it to fill in the seams and top dressed frequently as the sod was taking hold. One pleasant surprise was that, because of the fifth wheel design of the unit and the resulting low ground pressure, we were able to top dress the greens without worrying about compaction or rutting."

"It hauled a lot more sand, but left virtually no tracks in the turf so it had no more impact than regular, smaller top dressing units."

The fifth wheel top dresser was used extensively during grow-in on the greens. "We put on a lot of material—basically ran it almost wide open," Brennan said. "It saved us time and labor."

Brennan top dresses the greens with a mix of 80 percent sand and 20 percent spagnum peat. The construction contract called for left-

over mix to be stockpiled at the course, and the grounds crew is using that stockpile.

He said Spring House was built specifically for guests of the 1,891-room Opryland hotel, which operates at about 85 percent capacity year-round. "The majority of play will be by convention-goers, so we anticipate a wide range of golf ability by players," he said. "Our hope is to keep play to about 40,000 rounds per year. We don't want to overdo it."

The course will be open year-round, but because of the sometimes wide fluctuations in weather in mid-Tennessee, Brennan may have to close the course at times. The 18-hole course is par 72 and is built with five sets of tees to accommodate varying golfer skills.

Although annual precipitation in the area ranges around the 40-45 inch mark, Spring House course is equipped with "wall-to-wall" irrigation, with some 1,400 sprinkler heads, all computer controlled. Water supply comes from the course's own wells.

"This organization does everything first class, and the Spring House Golf Club at Opryland fits in that category."

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Golf industry disputes N.Y. attorney general's report

Continued from page 1
residents.

Four to seven times more pesticides per treated acre were applied to golf courses than food crops, and two times more than homeowners apply to lawns, the report found. Private courses used more pesticides than public courses and fungicides were used more than herbicides or insecticides.

A third of the more than 200,000 pounds of pesticides applied to the 52 Long Island golf courses are classified as probable or possible carcinogens by the Environmental Protection Agency, according to Abrams.

"The heavy use of potentially dangerous pesticides on golf courses in Nassau and Suffolk counties year after year jeopardizes Long Island's ground water quality, especially since many golf courses are located in vulnerable recharge areas," Abrams said. "At least one of these chemicals, chlorothalonil, a probable human carcinogen, has already been detected in some Long Island ground water wells."

"Lax federal regulation of pesticides is at the root of the problem, and I think it is time for Congress and EPA to act to reduce the overuse of pesticides for non-agricultural purposes."

Six of the active ingredients listed by the courses — propoxur, DDVP, oryzalin, trifluralin, fosetyl-A1 and chlorothalonil — are classified as possible or probable carcinogens by EPA, the report states. Another three — trichlorofon, mancozeb and maneb — break down in the environment into substances EPA classifies as probable human carcinogens.

EPA is assessing five more — oxadiazon, benomyl, metalaxyl, pentachloronitrobenzene and captan — for carcinogenicity, the report states.

The report claims many of these pesticides have potential for migrating to ground water. Dacthal, the second most heavily used herbicide, and other reported pesticides have been detected in ground water in Suffolk County on the tip of Long Island.

The presence of small-leaching-potential pesticides like Dacthal and chlorothalonil in the ground water supply illustrates the area's vulnerability to contamination, according to the report.

Many of these pesticides are also applied by homeowners, Abrams noted.

The report makes several recommendations. They are:

- Reducing pesticide hazards by prohibiting known or probable carcinogen-containing chemicals for aesthetic purposes like golf courses; considering leachability and toxicity of pesticides before application and avoiding those with potentially toxic effects; routine government monitoring of ground water; advisories on labels of pesticides known to cause ground water contamination; prohibiting pesticides known to leach into ground water where the aquifer is particularly vulnerable to contamination; and permitting only certified pesticide applicators to use pesticides that leach into ground water.

- Minimizing pesticide use through less toxic alternatives and Integrated Pest Management practices backed up by federal and state legislation mandating reductions; and advisories by pesticide applicators that reduced or non-chemical alternatives to pesticides are available.

- Full disclosure including label warnings that pesticide use may pose potential health and environmental risks; label statements that registration doesn't guarantee a pesticide is risk-free; legislation requiring advance public notices of pesticide applications; and amending federal law to allow private individuals to sue and recover legal costs to halt false and deceptive pesticide safety claims.

"It is time to re-examine the true environmental costs of the heavy use of potentially cancer-causing pesticides simply to create picture-perfect lawns or golf courses," Abrams said.

"While there are benefits to using pesticides to protect our food supply, it is another matter to introduce probable carcinogens into the environment for merely aesthetic purposes."

GOLF INDUSTRY'S RESPONSE

GCSAA President Stephen Cadenelli said: "The primary thrust of the report seems to be that, simply because these materials are applied on golf courses, they will de facto enter ground water. Yet, no scientific evidence is cited in the report to support this notion."

"In fact, actual monitoring and sampling studies suggest that there is very little movement of materials applied on golf courses — even in more vulnerable soils than those found on Long Island."

Charles Cross, vice president of the Long Island Golf Course Superintendents Association, agreed with Cadenelli.

"There's nothing to back up what the report implies," he said. "There is no proof that golf courses pollute ground water. Turf is a great barrier to pesticides reaching ground water. The report appeals to the emotional side of the pesticide issue rather than the scientific one."

The report also concerned Allen James, executive director of the recently formed Responsible Industry for a Sound Environment, an organization consisting primarily of specialty chemical manufacturers, formulators and distributors charged with explaining the benefits of the proper use of pesticides.

"We share the attorney general's concern for water quality," said the RISE spokesman. "But this report is not scientific, the methodology is not clearly defined and the conclusions and recommendations are not supported by the report. The recommendations are extreme. Just because a product hasn't been re-tested doesn't mean it should be pulled off the market."



"There's nothing new or revolutionary in the recommendations. Some superintendents are already doing a good job of following these recommendations. But some should do a better job."

— Jim Snow

James said properly trained superintendents apply pesticides in an environmentally safe manner and with an eye toward leachability. He supported the EPA's current labeling and re-registration requirements. Claims that many golf course pesticides are known carcinogens are false, making prohibiting their use inappropriate, he added.

The RISE executive backed the Professional Lawn Care Association of America's call for pre-notification of applications by homeowners, but said pre-notification requirements for golf courses were overly cumbersome because of the size of golf courses and the large number of homeowners who would have to be notified.

Jim Snow, national director of the U.S. Golf Association Green Section, said some of the report's recommendations are valid and should be pursued, while others are controversial and will require compromise. Snow agreed pesticides found in ground water should not be used; pesticide users should consider a product's toxicity; regular ground water monitoring should be done; label advisories are good ideas; and licensed applicators should be the only ones allowed to use potentially toxic chemicals.

On the other hand, much of Long Island is not sandy, but rather heavy soils with little potential for leaching, Snow said. That information is not included in the report, he noted. "There's nothing new or revolutionary in

the recommendations," he said. "Some superintendents are already doing a good job of following these recommendations. But some should do a better job."

Snow is familiar with Long Island's water problems, having done graduate work in the area in the early 1970s while at Cornell University. Researchers found farm chemicals in the water. It was a concern then and it is now, he said.

"Three million people drink the water and they should be concerned," he said. "Unfortunately, much of the report is designed for shock value. That offends professionals who work with pesticides and their reaction is commonly to dismiss the report too quickly."

"But there is a lot of information there that is valid and important. It should be considered. You may not like the report's approach, but there is important information there."

Cadenelli pointed to independent studies done at Cape Cod, Mass., as well as Cornell and Pennsylvania State universities showing that properly applied golf course chemicals pose no threat to ground water.

"Any suggestion that turf chemicals, when professionally and properly applied, will enter ground water under golf courses in any amount sufficient to pose risks to humans is without foundation in science," the GCSAA president said.

Michael Surgen, Ph.D., chief environmental scientist in Abrams' office, claimed the Cape Cod study is not applicable on Long Island since Cape Cod superintendents used half as much pesticides as their counterparts on Long Island.

Surgen added that the Cape Cod study, which indicated the presence of eight pesticides and pesticide metabolites along with two compounds of undetermined origins, had two shortcomings regarding monitoring well placement. Some of the wells were dug too deep to detect surface-applied pesticides, he said. Others were placed upstream from where the pesticide applications were made, so that the chemicals had no chance of flowing past the well, he said.

The Cape Cod study authors acknowledged the deficiencies, Surgen said, and also recommended golf courses built in shallow aquifer

Continued on page 19

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International, Summit Hall team up on 4-acre bentgrass plot

Continued from page 15

ternational superintendent Steve Nash.

Nash said he spoke with several superintendents who were "not quite happy with the match of mixes" they had received in their own greens rebuilding programs.

"The mixes were just a little bit off and they were afraid they were getting a layering effect," he said. "This was a guarantee on our part that we will have the exact same stuff..."

"USGA mixes are basically supposed to be the same but there are minor differences — different sand or sphagnum, for instance."

Doug Fender, executive director of the American Sod Producers Association, said from his Rolling Meadows, Ill., headquarters: "There have been occasions where contract growing has occurred. But four acres is a considerable operation. In most cases two to four greens (or 10,000 to 20,000 square feet) is all that's involved. And most of it is grown on existing soils. What strikes me is the degree of specification — taking it from the soil on up.

"I'd put it right up there in Ripley's Believe It or Not."

Fender added: "Summit Hall has an excellent reputation and history. This would not be the first challenge they've done well with."

Mike Robinson, president of Seed Research of Oregon, whose SR 1019 and SR 1020 bentgrasses are being used in the project, said: "I think this is the first of what will be a



The first sod is cut from four acres of bentgrass at Summit Hall Turf Farm in Poolesville, Md. "It was 'beautiful,'" said International Tennis and Country Club superintendent Steve Nash.

trend.

"Most of the older courses in this country were built on old native soil. They're mainly poa annua. They're fighting the poa annua constantly. They have heavy fungicide budgets and it's a real headache for them. If they can rebuild their greens with sand bases and put in brand new germplasm, it's going to be a tremendous improvement in management

— lowering costs of fertilizer and fungicides and water. Keeping bent alive in the summer is a lot easier than poa annua. Playability will also be improved."

The 30-year-old International greens were rebuilt "because we had no drainage whatsoever," Nash said. "The greens were just pushed-up topsoil. Some were extremely small. Some were small with severe contours that limited our cupping area. We were doing upwards of 50,000 rounds of golf a year and were wearing the greens out. With no drainage, a storm would soak the greens and, with all those golfers, they would turn to mud.

"To keep up to date with modern golfing play and technology we just had to rebuild."

EXTENSIVE PREPARATIONS

The massive project was started last September when 70 tandem trucks hauled 1,500 tons of soil mix to Summit Hall's farm. (The \$40,000 price tag was borne by International, which will probably pay another \$60,000 or so for the sod, according to Nash.)

The soil mix was carefully spread at a

*I'd put it right up there
in Ripley's Believe It
or Not.'*

— Douglas Fender
American Sod Producers

depth of two inches over a four-acre tract of a flat land. The seed was sown in the fall to avoid weed encroachment and to give the bentgrass time to cover the ground by spring.

Frank Wilmot, manager of Summit Hall, said: "The soil mix was sterilized coming in and has gone without herbicides. The idea is to get a good root system. Steve can take care of any weeds once he gets the sod, but it's pretty clean.

"We're mowing at three-eighths inch — just above green height — two to three times a week ... and we've been watering about twice a week depending on the weather."

A week before shipments of the sod were to begin, Nash said: "We just cut five pieces. It came up absolutely beautiful. We couldn't have wanted it any better."

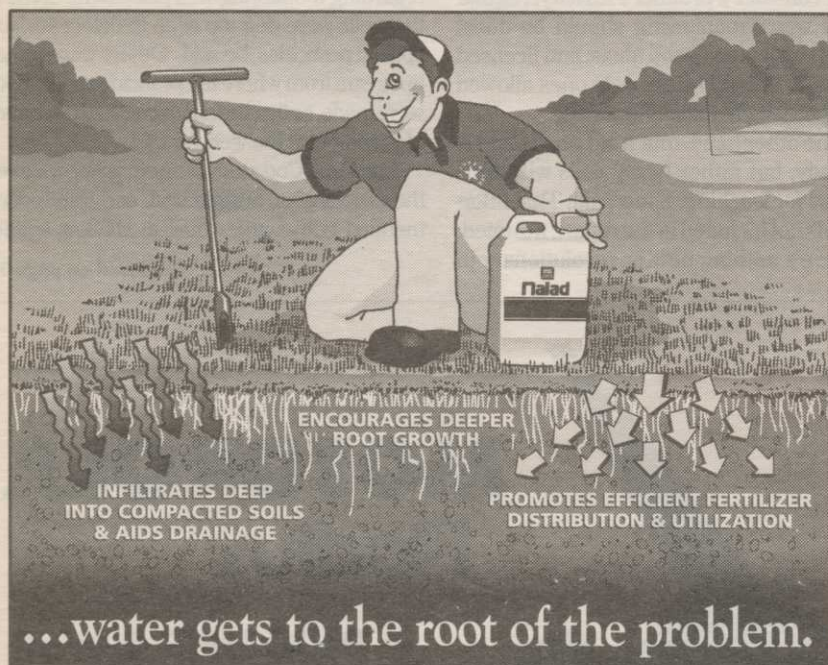
Nash also couldn't be happier with the speed of the project. Under the oversight of architect Bill Love of Ault, Clark Associates, the greens were torn up on June 10. The perimeters of the greens were sodded with bluegrass from Ray Weekly's nearby Chantilly Turf Farms, Inc. starting Aug. 12. And the sodding is expected to be complete by Sept. 26.

"One of our objectives was to get it playable as soon as possible," Nash said. "We were pressed for time. We had to hold off in the spring for tournament play on temporary greens and to give members some play. We'll hold off play until the end of next March."

What will happen to the four-acre sod site once all International's sod is hauled away?

"We'll take one-quarter to one-half inch of the root system when we harvest the turf," Wilmot said. "We'll probably then work sand into the soil underneath and bring in more sand mix for another harvest."

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GCSAA's international conference and show taking form

NEW ORLEANS, La. — Famed country singer Kenny Rogers and former professional football star Terry Bradshaw will share the spotlight with prominent golf world figures Feb. 10-17 at New Orleans Convention Center.

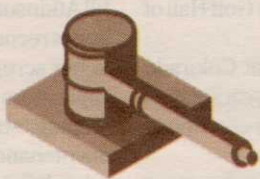
The occasion is the Golf Course Superintendents Association of America's 63rd International Golf Course Conference and Show.

In a unique two-state arrangement, the 1992 superintendents golf championship will be played Feb. 10-11 on Sawgrass courses,

Ponte Vedra Beach, Fla.

Rogers' show, at 7 p.m. Monday, Feb. 17, is geared to country and pop music lovers, and will follow presentation of the Old Tom Morris Award to an individual who has helped further the game with the same dedication and inspiration as Morris.

Quarterback Bradshaw, who led the Pittsburgh Steelers to four Super Bowl wins and was elected to the National Football League Hall of Fame in 1989, is among the nation's best motivational speakers.



His forceful talk will be at 5:15 p.m. Thursday, Feb. 13.

Pre-conference seminars are listed Monday through Thursday, Feb. 10-13, and offer continuing education units.

Environmental issues that di-

rectly affect golf course management will be addressed at a general session at 10 a.m. Friday, Feb. 14.

Speakers are Jay Feldman, national coordinator of the national coalition against the misuses of pesticides; Linda Fisher, EPA's assistant administrator for pesticides and toxic substances, and John Stossel, ABC's "20-20" news analyst and environmental reporter.

Official trade show opening will be marked by a ribbon cutting ceremony at 9 a.m. Saturday. There will be A Golf Course Builders of

America session at 1 p.m., and a zoysiagrass forum at the same time.

Wendy Stebbins' provocative topic at 9 a.m. Sunday will be "Dealing with Difficult People."

There will be sessions at 1 p.m. for the American Society of Golf Course Architects and green chairmen.

Building to the Monday night climax will be an exhibitors' breakfast meeting and USGA Green Section program at 8 a.m., trade show opening at 9 a.m. and annual meeting and election at 1 p.m.

AG's report

Continued from page 17

areas use hydrological mapping, monitoring wells and turf management plans to reduce pesticides.

Cadenelli took exception to Abrams' claim that pesticides are applied for merely aesthetic reasons. Superintendents apply plant protectants in an environmentally responsible manner to control disease, insects and unwanted plants that cause damage to a very valuable piece of property, he said.

Cadenelli said properly maintained turfgrass also benefits a community by preventing erosion, cleansing the air of pollutants, cooling the atmosphere, providing habitat for birds and wildlife and filtering pollutants from rain and irrigation water. Many courses use reclaimed water for irrigation, providing a place to dispose of and clean effluent before it reaches ground water supplies.

Superintendents have long used integrated pest management strategies, minimizing pesticide use to have the least effect on people, property and the environment, he said.

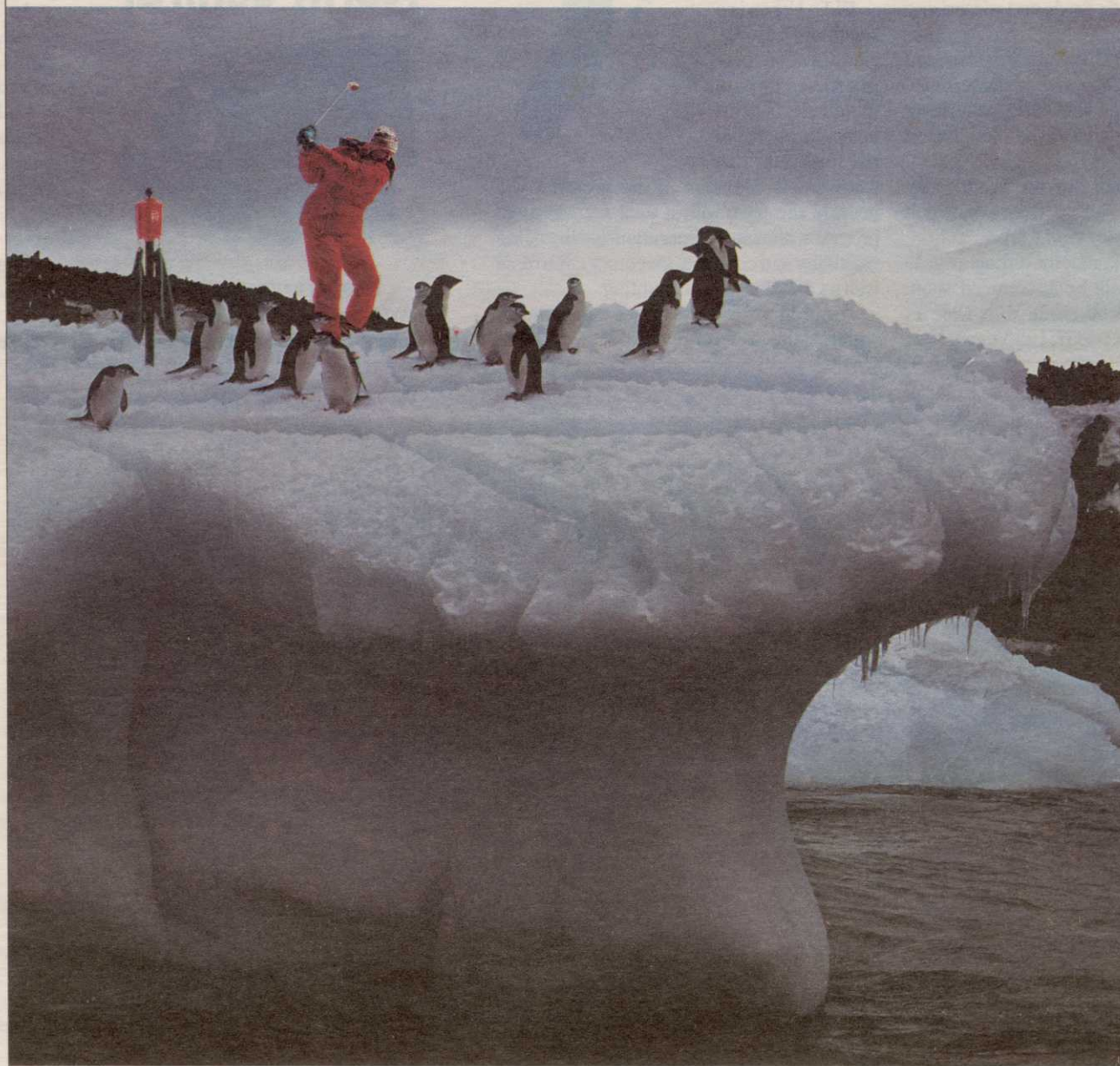
"Given the expense of chemicals and our own deep concerns about protecting natural resources, why would we use them unnecessarily?" Cadenelli asked. "Modern emphasis and education is on using pesticides curatively, as a doctor would use a specific medicine to treat a specific problem."

Many courses use IPMs, agreed Maria Cinque, a turf specialist at Cornell Cooperative Extension on Long Island where IPM has been taught the last 10 years. "I believe that the amount of pesticides has definitely been reduced during this period," she said.

Added Cross: "IPM is relatively new, but we (Long Island superintendents) have been practicing the principles a long time. We don't routinely apply pesticides just for the sake of applying them. We walk the course daily and just apply them where we need them. We drink the water, too, so why would we want to pollute it?"

Club members and the public have shown little concern over the report, said Cross, who met with his greens committee shortly after the report was published.

"The chairman wanted to know where we stood. I told him and he was satisfied," Cross said.



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Pictured above: The inaugural drive at the world's first Antarctic Open.

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Mountains



ENVIRONMENT VERSUS ECONOMY

LAS VEGAS, Nev. — "Balancing the Scale" between the environment and the economy is the theme of this year's Desert Turfgrass and Landscape Conference and Show, Dec. 11-13 at Caesars Palace.

Landscape and turf professionals can, in concurrent educational sessions, choose from such wide-ranging topics as pre-emergent herbicides for landscape maintenance, maintaining school athletic fields and winterizing the landscape.

Subjects covered will include preemergent herbicides for landscape maintenance, maintaining school athletic fields and winterizing the landscape. There also will be a seminar on "How to Kill a Tree."

The conference will "tee off" Wednesday morning, Dec. 11, with a two-person golf scramble at the Legacy Golf Club.

The keynote speaker for the annual awards luncheon Dec. 12 will be announced soon. Registration should be made with Dale F. Keller, Jr., P. O. Box 94857, Las Vegas, Nev.

89193-4857; 702-739-8500.

COLORADO HALL OF FAMERS

Dr. Jack Butler and Larry Eaton are the newest members of the Colorado Golf Hall of Fame.

Butler, a turf grass specialist at Colorado State University, for more than 20 years played a large role in advancing playing conditions for state golfers.

Eaton was one of the state's dominant players the past 40 years.

West

PESTICIDE USE PROGRAM ESTABLISHED

FRESNO, Calif. — Orange Enterprises, Inc. has developed JILL - Urban, a new program for recording pesticide use and preparing the monthly 100 percent Pesticide Use report required by California law.

JILL - Urban is a result of JILL - Agricultural, a program used by hundreds of agricultural firms throughout the state. Implementation of the program will provide the user with a total management program, allowing comprehensive invoicing capability and complete inventory control, as well as detailed cost accounting.

The program will provide legal documents with real-time reference capability, enabling



the user to respond immediately, and with accurate information, to possible chemical use complaints.

The data-base program was named after Jill Atkinson, a secretary who once spent long hours recording all the information manually in her scrupulous index files. Businesses or applicators expected to use JILL include landscaping, structural, golf courses, nurseries, maintenance, municipalities, irrigation and school districts, and chemical applicators.

EXPO EMPHASIZING WATER

COSTA MESA, Calif. — The 31st annual Southern California Turfgrass Expo Oct. 2-3 at the Orange County Fair Grounds will feature more than 200 exhibitors.

More than 6,000 green industry professionals will attend the exhibition of equipment, materials and services for installing turfgrass and landscape.

Show emphasis will be on water conservation materials, services and equipment.

North Central



HAGCSA RAISES \$25,000

LEAWOOD, Kan. — The Heart of America Golf Course Superintendents Association's

recent annual scholarship and research tournament at Hallbrook Country Club raised more than \$25,000.

Industry contributions and auction of items donated by area golf professionals helped swell the total.

Among 180 participants were three sports announcers from Kansas City TV stations.

The tourney, begun in 1985, has resulted in more than \$85,000 being awarded in 16 turf research grants and turf scholarships to the University of Missouri, Kansas State University and the Golf Course Superintendent's Association of America. Recent turf research grants are zoysia-patch disease study, ryegrass under fairway conditions study and golf course environmental concerns research.

CROOKED STICK FILLS VOID OF BLACKS

CARMEL, Ind. — Crooked Stick Golf Club, site of the recent PGA Championship, took no chances on a repeat of the membership policy flap last summer at Shoal Creek CC, Birmingham, Ala. It enlisted black Todd Stuart, 26.

As a junior member, Stuart enjoys all privileges of a regular member except voting rights. He can remain a junior member until he's 32.

Club president Michael Browning said Crooked Stick's only membership requirements were ability to pay dues, loving the game and playing it in less than four hours.

OBITZ ENTERS NEBRASKA HALL

Lifetime PGA member Harry Obitz has been inducted into the Nebraska Golf Hall of Fame. A resident of Red Cloud, Obitz is a golf course designer.

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Southeast

LEVENTHAL ASSUMES PRESIDENCY

Stuart Leventhal of Interlachen Country Club in Winter Park, is the new president of the Florida Golf Course Superintendents Association's Central Florida Chapter.

Cary Lewis of Orlando Country Club, was elected vice president.

Brian Jenkins of Orlando will continue as secretary-treasurer, Joe Ondo of Winter Pines Golf Course in Orlando as external vice president.

New directors are Dennis Parker, Rio Pinar, Orlando; Dale Reash, La Cita CC, Titusville, and Hal Richburg, Heathrow CC, Lake Morey.

Chuck Blankenship of Zellwood Station, and Buck Buckner of Orange Tree Country Club in Orlando, will remain directors, and Rick Walker, Kissimmee, will serve on the board as immediate past president.

Mike Kenovich of Sanford and Steve Wright of Lake Morey part as board members.

\$3,000 GOES INTO SCHOLARSHIPS

CFC has allocated \$3,000 from the 1991 Field Day proceeds for scholarships to these turf students at Florida colleges: Todd Bonnett, golf course architect at University of Florida, and William Moss, Mike Bellino and Ed Batcheller, golf course operations at Lake City Community College; John Morrison and

Steve Wholey.

Another \$3,000 was donated to the Ft. Lauderdale research green.

LEGACY AWARDS PRESENTED

Ten relatives of GCSAA members received inaugural Legacy awards, \$1,500 stipends for college scholarship assistance. Among Florida winners of these awards to children or grandchildren of GCSAA members were Jennifer McKee Jackson, Orlando, daughter of Joel J. Jackson, Walt Disney course, Lake Buena Vista, and Marie Sohn, Lake Placid, granddaughter of Louis Earl Trapp.

SUPERS MOVE ON

Ross Saylor, Mike Schutter and Thomas Trammell have accepted new superintendent positions.

Saylor is at Rolling Hills in Wildwood. He had been at Brooksville Country Club. Schutter is at Indian River Colony Club in Rockledge. He had been assistant to Dale Reash at La Cita Country Club. Trammell left Indian River to become superintendent at Turtle Creek Country Club in Rockledge.

FATAL CRASH

Bob Riggott, longtime CFC member, and his wife were killed in a plane crash at Myrtle Beach, S.C.

VIRGINIA FIELD DAYS SET

BLACKSBURG, Va. — Virginia Tech Turf and Landscape expanded field days, Sept. 17-19, are geared to those professionally interested in turfgrass management.

The annual golf tournament, at Virginia Tech Golf Courses, is from 9:30 a.m. to 1 p.m.

Tuesday, Sept. 17. That evening will be devoted to turfgrass and landscape research, questions and discussion session at Blacksburg Marriott.

Registration for a tour of research plots Wednesday is from 8:15 a.m. to 9 a.m. The tour begins at Lane Stadium on the Virginia Tech Campus and continues until 3:30 p.m. Field Day buffet begins at 7 p.m.

On the final day, from 8 a.m. to 3 p.m., there will be commercial application certification and recertification in Category 3.

Northeast

COMPANY HELPS SCHOLARSHIP FUND

ROCKLAND, Mass. — Read Sand & Gravel will sponsor a special one-year promotion by which Read will contribute \$.25 to the Ouimet Scholarship Fund for each cubic yard of any material delivered to any golf course Read services.

The offer extends to Aug. 1, 1992, said Joe Farina, golf course and turf specialist for Read.

Farina's golf course division supplies the golf industry with USGA specification materials, including top dressing mixes, top dressing sand, and bunker sand. The company also provides screened loam, mulch, stone and stone dust products for drainage and cart path

construction.

The company delivers to country clubs, golf courses and driving ranges quantities ranging from four cubic yard trucks to multiple 35 cubic yard trailer loads.

Paul Miller, Golf Club Superintendents Association of New England president, said, "Joe comes from a great golf family and he and his company have a wonderful understanding of how the Fund benefits our industry."

Added Farina, "It gives superintendents, managers and course owners a chance to make a contribution along with the Read Co. We're proud to be involved."

Farina may be contacted at 171 VFW Drive, Rockland, Mass. 02370; 617-878-2955.

DRIVE ON FOR RESEARCH PROGRAM

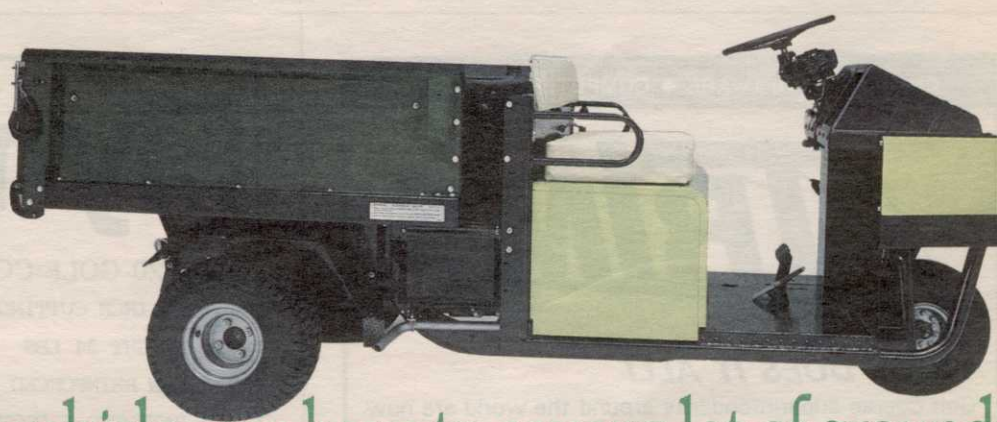
PRINCETON, Mass. — Donations for the 1991 turf research program of the Golf Course Superintendents Association of New England are coming in steadily, according to Ronald E. Milenski, superintendent at International Golf Club here.

Those desiring to contribute but unaware of the address may mail donations to Milenski, 65 Rocky Pond Road, Princeton, Mass. 01541.

Committeemen are Edward L. Brearley, Richard Zepp, Robert DiRico, Richard Duggan, Kevin Lyons and Owen Regan.

Please send news

Superintendents associations and others are invited to send news stories and photographs to: *Golf Course News*, P.O. Box 997, Yarmouth, ME 04096.



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Wetting agents gaining in importance as

By Mark Leslie

Wetting agents — a little-used creature of the marketplace for two decades — are suddenly and unequivocally in the forefront of golf course maintenance as pressure mounts on superintendents to reduce use of water and chemicals.

"Everybody's making them now. With pressure on pesticide and water use, we're going to have to find other ways to grow grass. Wetting agents help," said one superintendent in the Northeast, who is dabbling with extensive use of the products for the first time. "Very few people in our area have a wetting agent program now, but I think you'll see a lot on seasonal programs in the future."

Wetting agents are surfactants, meaning they increase the spreading and penetrating power of water by lowering surface tension.

Their benefits are many. Because they help water penetrate the ground surface and get to the root zone, they also:

- greatly enhance effectiveness of liquid pesticides or fertilizer being applied;
- help prevent wilt and localized dry spots;
- allow reductions in water and chemical use;
- help reduce compaction; and
- stop dew from forming for many days.

Mike Saffel, a research technician working with Dr. Paul Rieke at Michigan State University on wetting agent research, said there are actually three classes of products — surfactants and adjuvants (which are formulated to be used with chemical applications) and wetting agents (which are developed more to improve soil moisture and to help water penetrate the ground).

"Because of the increased number of sand-based greens, which are prone to dry spots, we'll see more use of wetting agents. The majority of people are applying them just on greens. That's the main focus," Saffel said.

CHECK IRRIGATION FIRST

U.S. Golf Association Green Section National Director Jim Snow forewarns superintendents: "Many times you use a wetting agent when you could solve the problem by fixing your irrigation system's coverage... That's more true in the North or East, where irrigation systems aren't as sophisticated or as finely tuned as they are in the West. In the West, where you don't have rain for months, you find out very quickly where your irrigation is poor. In the East you may never find that out. So when you do have a dry spell or a cutback in water, you think about treating with wetting agents."

"In the Northeast irrigation coverage is poor, relatively speaking. Yes, every area gets some water, but some areas get twice or three times as much as another spot. I've told a lot of clubs to check out their irrigation, and they've found out it was bad and they resolved the problem by changing

the heads, or nozzles, or correcting pressure problems or line deficiencies."

Saffel said management practices are critical to how well the product works. "If they overwater, the wetting agent benefits will be negated," he said.

Superintendent Tim Hiers of John's Island Club in Vero Beach, Fla., added that courses with good water quality may not need wetting agents at all. While soft water will penetrate the ground surface well, he said hard water does not. Wetting agents "allow that water to cut right through."

TEST RESULTS

Saffel said Michigan State's tests have been "very variable. Sometimes we'll get obvious results, sometimes not... We know they take dew off. We know sometimes they increase soil moisture. We know they do increase the effectiveness of some herbicides. But we don't know their soil action and what we

can expect as long-term benefits."

He said extensive phytotoxic and soil moisture measurements have been taken, and results will be available this fall.

While he had not seen the positive results of University of Georgia tested done on Roots, Inc.'s NoburN, Saffel said the wetting agents MSU has tested can burn the turf if applied at the highest rates, even if they are watered into the ground immediately. "Avoid watering on a hot day," he said.

GOOD REPORTS

That said, many are singing the praises of wetting agents.

Superintendent Jim Diorio of Purpoodock Club in Cape Elizabeth, Maine, said: "I'm getting a lot better water penetration now, after using wetting agents, aerating and deep-tine aerating. We're getting less and less puddling."

Diorio, who started this treatment program five years ago, uses a hose applicator to hit localized dry

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CIRCLE #118

Misinformation in market, says company official

The marketplace is filled with "tremendous misinformation" regarding application rates of wetting agents, according to one manufacturer.

"People are making exaggerated claims because — they can," said Ray Kimmel of Parkway Research in Houston, Texas, noting that the industry is not government-regulated.

Yet Kimmel opposes regulation which, he said, would mean "lesser quality from fewer people, and the price would go way up. (With registration) you start having registration costs and inspections and all the other things that drive up the prices of pesticides and herbicides to astronomical proportions."

Superintendent Jim Diorio of Purpoodock Club in Cape Elizabeth, Maine, said: "Normally, the higher the percentage of active ingredient in a product the less you have to use to do the job. And manufacturers are using all sorts of active ingredients."

Kimmel agreed. "There's very little way to measure effectiveness of wetting agents. So in our mind the best way to judge is by active ingredient," he said.

He said most wetting agents use similar raw materials. Most are non-ionic surfactant materials.

However, he said: "Everyone is in a big scramble to beef up their active ingredient (AI) total, so they are counting alcohol. That is misleading. Alcohol has no beneficial effect."

Meanwhile, U.S. Golf Association Green Section National Director Jim Snow warned that superintendents should consider more than percentage of active ingredient in choosing a wetting agent.

"It is true that as far as the buy is concerned, you use less product with a higher active ingredient. And that product may be better. On the other hand, the formulation is important and maybe other products work better even though their AI is not as high."

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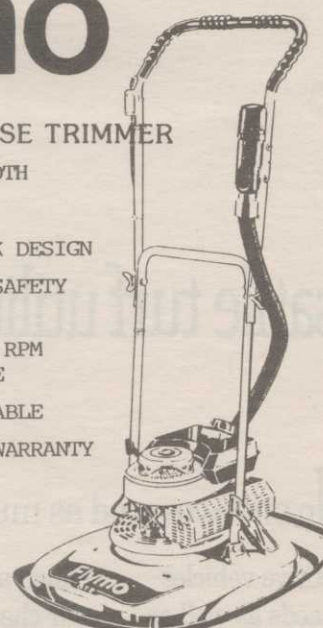
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CIRCLE #120

water and chemical use pressures mount

spots. "That's worked real well. It has kept areas green that normally I'd lose," he said.

Snow said wetting agents should be used preventively as well as curatively, to stop dry-spot problems before they occur, because they can be "very hard to re-establish."

President Ray Kimmel of Parkway Research, which has been making wetting agents for many years, said: "When you have a spray going on turf, surface tension may keep it on the blades of grass. That's fine if you are applying a systemic pesticide, herbicide or fungicide. But if you want it to be absorbed and to go to the soil, use a surfactant..."

"Wetting agents initially were —

and I think still are — used mostly as enhancement products for better efficacy for herbicides, fungicides, or fertilizers. But in the last few years, many people are looking at using them as an application in their own right, where they feel they need a wetting agent in the soil to help the water, either natural or irrigated, get through the surface layers.

"If you have high surface tension in the soil, when you irrigate water stays up on top. First, it doesn't get to the root level. Secondly, it breeds fungus."

One superintendent alluded to the effectiveness of wetting agents in helping localized problems. "I hope next year I'll spray for snow mold and wetting agents and use

even water less. My optimum would be to apply wetting agents once a month."

"All diseases need water. Less water means less disease," he added. "Also, we all know the less you water, the better the golf course plays. It plays firmer and you don't use as much to keep it green. You don't need as much fungicide because less water means less disease. And if the greens are firm you can mow higher and still maintain the roll and good grass."

Another benefit, he said, is elimination of dew for a number of days after application because the turf does not respire at night. "That is a great bonus when mowing in the morning and when you

have a tournament," he said.

The fear of wetting agents burning turf has focused researchers' attention on finding a solution to that problem. Roots, Inc. has made that the "essential issue" in its promotion of NoburN. NoburN doesn't need to be watered in, said Roots' Wayne Wall. "We took a chance at staking the future of NoburN on that benefit and it was a winner."

Compaction is another major factor. As Diorio found at Purpoodock, soil compaction can be greatly decreased using wetting agents, which neutralize ions tied up in the soil.

FINDING THE BEST FOR YOU

Diorio suggested comparison testing, saying: "No two courses

are the same. It can even be different on the same course. I have two greens built five years ago, nine built 20 years ago and seven built 70 years ago. I've got native soils, clays. Nothing's the same."

A colleague said: "I'm trying several now to see which works best for me. I've been hitting really bad spots on fairways. And I can see which are coming back quicker. In one or two applications I can see which one's best, then figure it into my budget for next year."

Whichever wetting agents they decide to use, superintendents are increasingly using them in their maintenance schedules. They are another tool in the toolbox for growing better grass with less water and chemicals.

Survey of wetting agents in golf course market

Company Address Phone #	Brand name	Year introduced	Granular or liquid	Days without dew
Aqua-Aid, Inc. P.O. Box 223 White Marsh, MD 21162 301-335-3702	Aqua-Aid	1985	Both	3-10
Aquatrols Corp. of America 1432 Union Ave. Pennsauken, NJ 08110 800-257-7797	AquaGro	1954	Both	8-10
Grace-Sierra Crop Protection Co. P.O. Box 4003, 1001 Yosemite Dr. Milpitas, CA 95035 800-492-8255	Hydraflo	1988	Both	14-21
KALO, Inc. 4550 W. 109th St. Overland Park, KS 66211 913-491-9125	Hydro-Wet	1971	Both	N/A
Montco/Surf-side P.O. Box 404 Ambler, PA 19002 215-836-4992	Surf-side	1976	Both	N/A
Naiad Co. 5627 Stoneridge Dr., #316 Pleasanton, CA 94588 800-541-6662	Naiad	1978	Both	N/A
Parkway Research Corp. 13802 Chrisman Rd. Houston, TX 77039 800-256-3668	Wet Foot	1990	Both	45
PBI/Gordon Corp. 1217 W. 12th St. Kansas City, MO 64101 816-474-0462	Aqua-Zorb		Liquid	
Precision Laboratories, Inc. 333 Anthony Trail Northbrook, IL 60062 800-323-6280	New Balance Penetrate II	1991 1991	Liquid liquid	N/A N/A
Rohm and Haas Co. Independence Mall West Philadelphia, PA 19105 215-592-3292	Latron AG-98	1991	Liquid	N/A
Roots, Inc. 25 Science Park New Haven, CT 06511 800-342-6173	NoburN (formerly SSO)	1991	Liquid	30
J.R. Simplot P.O. Box 198 Lathrop, CA 95330 209-858-2511	Slippery Water		Liquid	N/A
Southern Mill Creek Products Co. 5414 N. 56th St. Tampa, FL 33610 813-626-2111	SMCP Wetting Agent	1980	Liquid	N/A

Manufacturers look to new products in field

Guns, fertilizer blends, and dry and wettable-powder forms are among the advances that hold the future for wetting agent manufacturers.

Because water-needy areas like Southern California and Florida are imposing restrictions on irrigation, producers are impregnating materials like corn cob grounds with wetting agents to act as carriers.

At the same time, Kalo, Inc. of Overland Park, Kan., and others in the chemical additive business, are adding wetting agents to their products.

Spring Valley Turf Products of Jackson, Wis., for instance, is blending Kalo's Hydro-Wet wetting agent with fertilizer.

A growing number of companies are making "guns" that mix their specific wetting agent with water.

Kalo's Pro-Ap is a high-volume, metered applicator that allows people to syringe the wetting agent on to trouble spots.

Parkway Research of Houston, Texas, markets a Big Foot applicator for its Wet Foot wetting agent.

"A lot of competitors are using guns," said Parkway Research President Ray Kimmel. "The next phase of development is designing a product that is ideal for injection directly to the irrigation systems."

Each area of advancement is a race by the industry's research and development teams. It appears a number of companies have left the starter's block and are looking at every angle possible to advance the use of wetting agents in the universe of turf care.

Wetting agents defined

Wetting agents are a substance that, when added to a liquid, increase its spreading and penetrating power by lowering the surface tension. Many materials are used as wetting agents, including long chain alcohols, petroleum sulfonates, acid sulfates and derivatives, sulfonated aromatic derivatives, esters of fatty acids and clays.

The Association of American Pesticide Control Officials defines a wetting agent as "a substance which appreciably lowers the interfacial tension between a liquid and a solid, and increases the tendency of a liquid to make complete contact with the surface of a solid, so that no dry area may remain."

An odyssey: groundskeeper to pro to Tour official

Mickey Bradley has braved hurricanes and other storms in two job conversions

By Vern Putney

Joyce Kilmer wrote, "Only God can make a tree."

With one furious sweep, Hurricane Camille in August 1969 destroyed 1,375 trees at the Biloxi, Miss., Broadwater Beach Hotel and Golf Club complex where Mickey Bradley was assistant professional and changed his career direction.

The 36 holes and par-3 lighted nine-hole course were closed. On the heels of that disaster, Bradley was given the task of counting and removing tree stumps at \$2.75 a stump.

During that heart-breaking job, Bradley became friendly with course superintendent Bert Newman and received a fresh perspective on course preservation and maintenance. He discovered he preferred outdoor work to the sometimes-confining pro shop.

He began by cutting greens, then branched into course maintenance.

Complete conversion to course care wasn't immediate. When the course was restored, Bradley returned to the pro shop.

In 1972, he became head pro at a nine-hole layout in Ittabena, Miss. There, a farmer, one helper and Bradley handled maintenance with one walk-behind grass mower. Bradley was on the course at dawn to mow the greens, then opened the pro shop.

Fortunately, no travel time was wasted. Bradley lived in a trailer on the course.

A crop-dusting airplane was used to fertilize the course. It and the pilot lacked Stealth fighter accu-

racy. Anything not covered, including the swimming pool and clubhouse, was saturated.

Bradley in 1974 became pro-course super at Ellendale Country Club in Houma, La. During his five-year stint, Golf Digest ranked Ellendale one of the top five courses in the state.

Bradley's bent to the course superintendent field continued strong. He next became superintendent at Sherwood Forest in Baton Rouge, La., and earned his certified golf course superintendent degree that same year, 1980.

Bradley switched to Hickory Hill Country Club in Gautier, Miss., in 1983.

In October 1989, he was hired by the PGA Tour to direct the Ben Hogan tournaments. Tour officials were seeking a person who could communicate with superintendents, one with combined pro and super knowledge. Bradley fit the bill.

It's been a wonderful experience, dealing with all facets of the game, and Bradley feels fortunate to be in such a unique position.

He communicates well with superintendents and pros, though he wasn't wishing the best of luck to Woodlands Country Club host pro Chris McClure on the last of a nine-hole team scramble match at a Tour stop in Falmouth, Maine. Bradley, McClure, tour agronomist Jeff Healey and 45-year Tour pro Fred Haas cased the course with keen eyes to tourney stake placement.

After Haas dunked a chip shot for what seemed a match-winning birdie, McClure canned a tricky 15-



Mickey Bradley at a Hogan Tour stop at The Woodlands in Falmouth, Maine.

Photo by Dr. Carman Pettapiece

Bradley's itinerary is a heavy one: 32 weeks a year and 22 tournament stops. But it's a long way from removing tree stumps at \$2.75 apiece.

foot downhill to gain a deadlock. Both teams had two-under-par 34s.

Woodlands, now in its third season, was the toughest of 30 Hogan tracks last year. Only winner Brandel Chamblee broke par, by one stroke. Bradley was called upon for 60 rulings. This year, there were half such knotty questions.

Improved conditions, especially cleared rough, propelled several into red numbers. New course superintendent Jeff Smith had followed up neatly on the two-year spadework of Ken Flisek.

Because of uncertain course situations last year, Bradley was required to be at 28 of 30 tour stops

from a week to a few days in advance. This year, only 22 sites will be visited early.

Other PGA officials usually arrive before tourney time. Bradley considers huddles with them on course setups most informative.

There is a downside to such extensive travel. He's away from home 32 weeks annually. He treasures time spent with wife Julie and daughter Micha, 1.

The Bradleys reside in a home on Gulf Hills Course in Ocean Spring, Miss. Bradley first caddied there at age 15, using near-scratch golfer-father Donald's and grandfather Norm Blessey's clubs.

There have been some scary as well as light moments in Bradley's testing job.

Last year at the Country Club of Louisiana in Baton Rouge, a water moccasin snake held sway over the 9th fairway.

Course superintendent Tolby Strahn appeared to have dispatched the menacing creature with a powerful swing of the stimp meter.

Its stimp measure was 4-1/2 feet, according to Bradley. The snake was lugged to the maintenance building, where it revived and began crawling around, cleaning out the building in a hurry.

Tourney officials try to maintain green speed the same for tournaments as for practice rounds. The 9.5 at Woodlands was considered a good, fair speed.

PGA Class A member Bradley's baptism as a rulesmith came during his tour debut at Bakersfield (Calif.) Country Club. Pea-sized hail rained down during the first round.

Bradley was flooded with player inquiries. "Can I move the ball on the putting green?"

Bradley shot back, "Hail, Yes!"

This list made a difference

Continued from page 12

associated with any misuse.

6. Continuity of Club Officials (5). An important issue that is unmanageable. The constant changing of club officials creates a climate of uncertainty in the superintendent's mind. Lack of short and long-term goals impede the progress of the golf course maintenance program. At times, new club officials have conflicting management priorities, causing disruptive shifts in maintenance strategies.

"Nobody asked, but..." Five year terms for club officials would anchor a sound maintenance program.

7. Equipment (10). It isn't a compliment to our industry to hear that we have to scrounge for workable equipment. When maintenance goals are established, buy the equipment to support those goals.

Too often we "put the cart before the horse" or, in our case, "playability before the equipment."

8. Pesticide Storage and Maintenance Buildings (6). A serious problem for the superintendent burdened with inadequate structures to store pesticides and equipment that fail to meet minimum standards.

Pesticide storage and disposal are regulated fiercely at all levels of government. But these new structures are costly to build and maintain, forcing golf courses to delay construction.

9. Amount of Play (8). Secretly, most superintendents would like to have the course all to themselves, with no play. But we know we must share this beautiful creation with the golfers if we are to continue working. But give us adequate time to insure the golf course is properly maintained.

When cultural practices are missed or delayed, quality is diminished. Blocking sections of time each week or month during the season is critical to survival of the golf course.

10. Tree Management (7). I don't

see this as a top ten problem. Cutting down trees is an environmental issue in most jurisdictions.

As in any listing, nominees left off deserve recognition. The problems that didn't make the top ten include: superintendents unable to read soil tests (it takes a degree in agronomy), poor record keeping (can assistants type), inappropriately timed maintenance (did you aerify before a member-guest), and taking advice from the wrong people (think about it).

My perspective has changed since I read the article in "Golf Course News."

In the process of preparing this column I began to understand the USGA agronomists' viewpoint, and I am aware of the weak points in my own programs.

Jim Gilligan is superintendent at Richmond County Country Club in Staten Island, N.Y. He has long been a columnist for *The Greensider*, the New Jersey GCSA newsletter.

Rushing to judgment can cause a major crime

Continued from page 12

a false conclusion. It made an assumption that violates a fundamental rule in toxicology: The dose makes the poison.

He now agrees with Bruce Ames, head of the University of California Biochemistry Department, who contends that animal tests are fundamentally flawed because the maximum tolerated doses of the chemicals being treated kill cells due to sheer size of the dosage.

"If dioxin is a human carcinogen, it is a rather weak one in the population exposed to high doses ... and is not a carcinogen in the population exposed to lower doses," Houks says.

It's a sham and it's a shame ... but this sort of thing happens too often.

I received a press release awhile ago from a prominent university announcing plans to study pesticide runoff from golf course greens. It contained a headline—itsself unique to press releases—that read: "Pesticide runoff from golf greens may be dangerous." Enough to

scare the most secure reader.

The third paragraph into the story, however, says: "Scientists do not know whether pesticides are present in the runoff from greens or whether pesticides in the runoff pose any risks."

Responsibility for this sort of mistake must start somewhere. Let it start with the individual.

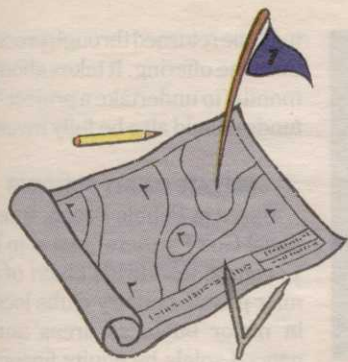
Let's avoid snap judgments. Before acting, let's not just seek but find answers. Let's think before we speak. And let's ponder the consequences of our actions before taking one tiny step.

Int'l division formed

The Golf Course Superintendents Association of America has formed a new department to develop and implement programs for its 734 international members.

Tom Akins, GCSAA director of planning, will head the department and assume the new title of director of planning and international programs.

Briefs



DYE DESIGNS COURSE OPENS IN JAPAN

TOKYO, Japan — The Country Club Glenmoor, located in the Chiba Prefecture outside Tokyo, opened July 20.

The Dye Designs' family, led by Perry Dye, attended opening day Shinto ceremonies. Honorary guest Pete Dye performed the rituals.

Glenmoor is the second of four Dye golf course projects to be completed for Toshio Someya, owner and chairman of Mariya Company, Ltd.

Pete and Perry Dye's first golf course in Japan was Mariya Country Club, opened in November 1987. The third course, Gran Mariya Country Club, is under construction. Completion is anticipated in the fall of 1993.

LOHMANN TRANSFORMS SCHAUMBURG

CRYSTAL LAKE, Ill. — Lohmann Golf Designs and the Schaumburg Park District have joined to transform the 27-hole Schaumburg Golf Club into a premier public golf facility. Phase one of the three-phase renovation project is complete, and nine holes are scheduled to open in September.

The original course was designed in 1927 by architects William Langford and Theodore Moreau. Inattention in recent years turned challenging golf holes into what has been termed "concrete acres." Schaumburg Park District purchased the golf course in 1989 and hired Lohmann for total renovation.

Lohmann has been capturing the course's original character. The master renovation plan includes computerized and automatic irrigation, bent grass tees, greens and fairways; new bunkers and reshaping old bunkers. Ground was broken this summer for a new clubhouse.

ELKHORN EYES DEC. 1 OPENING

STOCKTON, Calif. — Projected completion date of Elkhorn Country Club's member clubhouse remodeling and expansion is Dec. 1.

The 10,000-square-foot clubhouse will include expanded men's and women's locker rooms, bar and grill room, formal dining facilities, expanded golf shop and administrative offices.

H & H Construction of Stockton is the project's general contractor, Jackson Associates the architect.

The 93-acre, 18-hole layout designed by Bert Stamps is a private golf facility with 530 members. Elkhorn recently increased membership entry fee from \$5,000 to \$7,000.

DAVIS SIGNS FOR GEORGIA LAYOUT

ROME, Ga. — The architectural firm of Arthur L. Davis Inc. will design the city's proposed public golf course and be involved in course site selection. Davis' fee will be about \$200,000.

The Rome City Commission unanimously approved his presentation. Davis, a former Rome resident, now lives in Gainesville.

Non-traditional funding sources take spotlight in developing golf facilities

By Peter Blais

Alternative sources of financing are filling some of the golf course development and acquisition gaps left by the virtual departure of banks and savings and loans from the leisure real-estate market.

Non-traditional mortgage lenders, real-estate syndications, preferred stock offerings, foreign investors, corporate America, pension funds, unions and foreign contractors are helping fill the void.

A panel of financiers discussed golf course funding alternatives at a recent Institute for International Research conference in Las Vegas.

Following are some of their thoughts.

NON-TRADITIONAL MORTGAGE LENDERS

"Capital markets are tight, but that has always been so for golf courses," said Herb Hogue, director of golf investments for GATX Golf Capital. "Money is available for golf courses that can be profitable businesses with a well-thought-out plan."

GATX is a finance company that does par-



ticipating mortgage loans for firms wishing to acquire or develop and then manage golf courses. The company has financed more than 30 courses. It has also funded golf course communities.

GATX is a lender, but also wants to create value rather than just collect guaranteed interest payments, Hogue said. GATX transactions are highly leveraged with moderate interest rates.

"Our profit is really back-ended where the owner's profit is. So we're really into these projects with the same incentive as the

'Capital markets are tight, but that has always been so for golf courses.'

— Herb Hogue
GATX Golf Capital

owner's," Hogue said. "We're lenders but our profit is contingent on the project being successful. We're more like venture capitalists."

"We don't do one-shot deals. We are relationship lenders. We're in the business to develop relationships with the best developers and managers of golf courses in the country. We finance their plans to develop or acquire a series of courses over the next several years."

Seventy percent of new courses are parts

Continued on page 26

'Sure-fire' methods of past have passed away

By Peter Blais

Attaching a golf course to a residential development is not a sure-fire way to make a project successful, according to a golf course communities consultant.

"We're involved in 50 to 60 residential golf course projects a year around the country," said Dan Levitan, a principal with the Greenman Group, a Hollywood, Fla.-based residential marketing consulting company. "My skepticism comes from the fact that half of those are troubled properties."

The residential trend is toward large community developments complete with amenities, including golf courses, said Levitan during the recent Institute for International Research Golf Course Development and Financing Conference in Las Vegas, Nev.

After all, the National Golf Foundation



predicts the number of golfers will increase 40 percent by the year 2000. And the typical golfer's income is \$11,000 above the national average.

So, with demographics and demand solidly in golf's corner, why are so many residential

'My skepticism comes from the fact that half of those (50-60 residential projects) are troubled properties.'

— Dan Levitan
Greenman Group

golf projects in trouble?

First, golf demand is localized. "What may work well on the north side of town may not work on the south side," said Levitan, who described an attractive golf course commu-

Continued on page 30

More industrial, commercial projects adding golf

CHICAGO, Ill. — More golf courses are being built in conjunction with industrial and commercial developments, according to Tom Clark, president of the American Society of Golf Course Architects.

Developers, real-estate professionals and businesses are realizing that golf courses add much more than curb appeal to commercial properties, according to Clark. "A golf course can add prestige and beauty, help attract occupants and provide the ideal environment to entertain clients," he said.

There's a certain prestige to working in an office surrounded by a beautiful green belt. "Many companies that want to project an upscale image are establishing their headquarters on golf course property," he said.

Several city government offices, including those of Norfolk, Va., are taking part in the growing trend. "Any mayor or city administrator would appreciate the benefits of an office overlooking a public course, especially one that brings revenue to the city," said Clark, who recently developed a master plan for a

course that will house offices for the city of Norfolk.

Another reason for the growing popularity of hybrid golf courses is that they help pre-sell commercial projects.

"If a potential business wants to lease space overlooking a certain hole or lake they must act quickly," Clark said. "In this respect, courses generate additional interest and excitement for the project."

In addition to making a property more attractive, a golf course's open space absorbs noise. Trees produce oxygen, especially beneficial to industrial and commercial developments.

"Some courses have been built over landfills, eliminating an eyesore to the community and possibly reducing further environmental risks," said Clark. "Golf courses will benefit commercial and industrial developments in the next decade in the same way they have generated sales in residential developments the past 10 years."

Executives in the private sector also know

the value of having their business address on a golf course. "Golf courses offer an excellent place to meet and entertain clients," Clark said. "Since decisions often are made on the links, why not gain a competitive advantage with potential clients and business associates?"

Clark cites Windsor Parke Golf Club, Jacksonville, Fla., as an example of a course built in conjunction with a commercial project. Said ASGCA member Art Hills, who designed the public course which opened in May, 1990, "We blended the golf course and commercial space into a single cohesive project."

Another example of a hybrid course is Dakota Dunes in South Dakota, near Sioux City, Iowa. The project features two 18-hole courses surrounded by a residential community and a campus-like 200-acre commercial development.

Those interested in the master plan concept should write the American Society of Golf Course Architects, 221 N. LaSalle St., Chicago, Ill. 60601.

Alternative ways to finance projects coming to forefront

of master-planned communities, Hogue estimated. Residential developers are sometimes willing to lose money on a course to sell house lots. GATX is not interested in those deals, he said.

"Golf course lenders like us, particularly participating mortgage lenders, are very concerned the borrower has one agenda, and that's to make money with the golf course," he said.

To get a loan from a lender like GATX, borrowers must prove they want to make money from the course and that they have the ability

to do it. There are, Hogue said, five things he looks for:

- Owners or management staffs with experience in the golf business. Even though loans are secured, lenders don't want to take over projects. Evidence of management control can come from histories of courses the borrower has made more profitable. Credit checks, references, trust and personal chemistry are also important.

- Well-conceived projects in good markets. Every lender has its preferences. GATX likes daily-fee courses in metropolitan markets of

The economy has eliminated the amateur investors from the market. Those left will be looking hard at the economics of any investment.

— Norm Carl
Carl Realty Advisors

500,000 or more where play comes primarily from residents. The project must address an unserved market niche.

- Economics that work. Cash flow from operations should be at least 20 percent of total project costs within three or four years. Borrowers should have a 90-percent confidence level in reaching pro forma targets.

- Hard-cash equity from the borrower, even if the developer owns the land. The owner should have a source of equity to cover working capital and cost overruns. An equity investment shows a highly leveraged lender to a specialized business, like GATX is to golf, that the owner is committed to the course's success.

- Evidence the borrower has done his homework. Proposal packages should include a complete project description starting with a thorough budget; market analysis; and financial analysis of realistic profit and loss projections. Borrowers should use conservative and defensible pro forma projections rather than optimistic forecasts that can't be substantiated.

REAL ESTATE SYNDICATION

The amount of syndication money has diminished dramatically in recent years, but about \$3 billion of it will be available in 1991, the same as in 1980, said Paul E. Dunn, president of Wellspring Advisors.

"The good news is that the \$3 billion is available and that it is being applied to specialty niches by relatively small companies," he said.

Dunn said he is more receptive to companies with well-conceived projects in hard-hit economic areas that are on the verge of coming out of the recession than areas that may be overbuilt and the developer believes can't miss.

Most current syndication activity is not on specific projects. The focus instead is on raising equity for companies to finance whatever it is they want to do in the future, Dunn said. His company is working on a project that will provide a collateralized, 10-year line of credit for a developer.

"We are less concerned, in fact almost cavalier, about the properties themselves," Dunn said. "What we're really looking for is the people involved, their sophistication and willingness to work hard, their commitment to our project and their ability to be flexible. Over the next 10-year cycle, we know that whatever is popular today will not

be popular in the future.

"We look at developers with a diversification and capacity to look at the market and say, 'No, we want to avoid that' and move on to another market niche or strategy."

"Years from now, golf courses could be overbuilt around the country. It isn't likely in the short term. But I'd rather be with someone who is still up and running if golf courses are no longer an attractive place to be."

Dunn was formerly with NTS Securities, a Louisville, Ky. developer doing Arnold Palmer-designed courses in Louisville and Fredericksburg, Va. NTS wanted more control over its projects than traditional lenders were allowing and so created NTS Mortgage Income Fund, a source of debt financing that raised \$61 million that went directly to NTS for various projects over 15 years. While building the golf course communities was the fund's aim, the company has a lot of flexibility on how the money is spent.

The NTS money was expensive and included a 1-percent origination fee; regular interest equalling the prime rate plus 2 percent for first mortgages and prime plus 3.5 percent for secondary mortgages; and, a novel equity kicker that gave the fund 5 percent of the gross sales price of real estate lots.

"The investing public in general has lost faith in capital appreciation as an investment goal and therefore they want confirmation they made a good investment by getting current cash flow in their pockets," Dunn explained of the high current interest paid investors.

Dunn is also working on Riverside County, Calif.'s Moreno Valley Ranch Land Fund, raising \$22 million through a three-year limited partnership for equity investing. The short three-year term, and the fact the project is already two-thirds complete, make it unusual.

The benefits of syndication funding are the control developers have over the pool of financing; greater flexibility in funding and timing projects; fewer personal guarantees; and, the ability to return to the same source for more funding.

The cons are the relatively high expense of borrowing; uncertainty whether investors will be interested in the offering; and, the time and money involved in putting the project together.

To make it work, the borrower needs to be financially strong since it will cost between \$500,000 and \$1 million to put the project together. Fortunately, those costs will even-

tually be returned through proceeds from the offering. It takes about six months to undertake a project. The funds should also be fully invested.

PRIVATE EQUITY FUNDING

Based in Pebble Beach, International Golf Partners' goal is to be a 12-course worldwide chain of premier private country clubs located in major business areas and financed solely by equity financing, according to Senior Vice President Richard Thorman. They will be used primarily by corporations.

"The end product, in a phrase, will be a Winged Foot Country Club with a 40- to 60-room Belair Hotel," Thorman said. It will be privately guarded, with a heliport and limousine service. Memberships are being sold through a preferred stock offering.

Projected membership sales of 4,800 over eight years are expected to raise \$1 billion to \$1.4 billion, some of which is expected to come from foreign investors, Thorman said. Capital costs for land, development and start-up are estimated at \$600 million. That will leave common stockholders, who will invest about \$75 million, with assets of improved properties of \$600 million and cash in the bank of \$600 million to \$800 million.

Two pieces of property are under contract. One is in Chicago and has all its building permits. The second is near Los Angeles and is just entering the permitting stage. Sites in San Francisco, New York and Dallas are ready to enter negotiations.

The company's founder put up the first \$3 million. Small, foreign entrepreneurs have kicked in another \$2 million. The Persian Gulf War, U.S. recession and drying up of Japanese capital has slowed investment somewhat, Thorman said.

But pockets of foreign capital still exist in Hong Kong, Singapore, Taiwan, Malaysia, England and Germany, he added.

JAPANESE INVESTMENT

Norman A. Carl, president of Carl Realty Advisors, helped put together a \$200 million deal 18 months ago between Japanese investors and the team of architect Bob Cupp and golfer Tom Kite to develop courses in the United States and Canada. The company has also negotiated foreign deals with Greg Norman.

Most Japanese golf course investment dollars in the United States, until recently, came from Japanese companies borrowing against the escalated values of their real estate holdings in Japan. That has essentially stopped, Carl said.

Japanese companies that can still invest abroad are those with cash in hand that can move it out of the country to invest.

After interviewing Japanese financiers the past few months, Carl estimated 90 percent of those investing in U.S. golf course projects are now out of the market.

"However, there are companies

Continued on page 28

Their Approach To Boosting Potash.



Okay, so blended products may cost a little less than Country Club 8-4-24. But when you use a blend for boosting potash you're sacrificing a lot. Namely balanced and efficient nutrient distribution.

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So if you're a turf manager who prefers to play the high-performance formula, consider what's on the opposite page.

Blisses' 'alternative financing' was old-fashioned bartering

By Peter Blais

What do you do when banks, S&Ls, mortgage lenders, real-estate syndications, preferred stock offerings, foreign investors, corporate America, pension funds, unions, foreign contractors and other traditional and non-traditional lenders turn their backs on your golf course project?

You turn to a financing method that pre-dates the pyramids, that's what you do. You barter.

That's what the father-and-son team of Gordon and Kevin Bliss have done to build 18-hole Blissful Meadows Golf Club in Uxbridge, Mass., located in the Blackstone Valley midway between Worcester and Providence, R.I.

The pair decided three years ago to build the course on the family farm. The project sailed through the permit process and had just obtained financing from several banks when the New England economy began to sour. The banks folded, leaving father and son with an approved project, but no money.

They didn't give up.

Armed with the knowledge they picked up at golf course architecture seminars sponsored by the Harvard Graduate School of Design, Golf Course Superintendents Association of America and Professional Golfers Association, Gordon and Kevin routed the course through the oaks, hills and stone walls of the family farm they had tinkered with since 1964.

"The seminars give you some confidence about the construction aspects of a golf course," said Gordon Bliss, who manages the family's construction business. "I wanted to route it myself because I knew the land."



Gordon Bliss, right, and his son Kevin take a look at the construction at Blissful Meadows Golf Club in Uxbridge, Mass.

Architect Brian Silva approved the routing plan and designed the tees and greens, Bliss said.

To get the project underway, Bliss took advantage of the farm's plentiful gravel supply, trading 100,000 cubic yards to a local crushing and screening operation. In exchange, the company moved a portable unit onto the Bliss farm, pulverizing much of the remaining gravel into the stones for drainage, sand for tee and green mix, coarse stone for brook beds and screened loam for fairways.

To get the earth-moving work completed, Bliss traded some industrial land he owned near a major state highway to a builder. The builder had the heavy equipment, loaders, backhoes and excavators needed to complete the earth moving. Bliss, who owns a small construction company, also used some of his own equipment.

Next, Bliss exchanged more gravel to a concrete and asphalt company, building up credit for the

clubhouse foundation and parking lot paving. Gravel sales also raised money for engineering, shaping and irrigation work, as well as a portable mill trucked down from Dixfield, Maine. The mill operator cleared a pine grove and planed 30,000 feet of board that will be used to build the clubhouse.

With nine holes and an extensive practice area ready for seeding, Bliss this summer approached a local bank that was willing to extend a \$250,000 line of credit to complete the job.

"The banks have stopped lending money for speculative golf projects. They want to see some work completed and that there is actually going to be a golf course before they'll finance anything," said Bliss, who estimates the project's current value at \$750,000 to \$950,000 and expects it to be worth at least \$2 million when the first nine holes, clubhouse and practice range open next spring. The second nine is scheduled to open in the spring of

In hard times, you've got to be creative. Business people are willing to do deals they wouldn't do in good times.

You just have to reach out for the opportunities.'

— Gordon Bliss

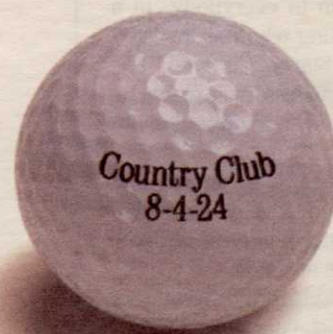
1992.

Bliss said he may not have to use any of the bank's money if the membership program is successful. A membership in the semi-private club requires a \$2,500 refundable bond and \$800 annual fee. The bond is treated as a loan to the construc-

tion company and is refundable upon demand. The program has been well received so far, Bliss said.

"In hard times, you've got to be creative," Bliss said. "Business people are willing to do deals they wouldn't do in good times. You just have to reach out for the opportunities."

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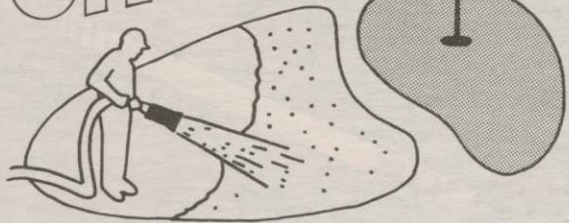
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Non-traditional sources join forces with builders in golf

Continued from page 26

with significant cash-on-hand that can continue to invest overseas," he added. "The economy has eliminated the amateur investors from the market. Those left will be looking hard at the economics of any investment. It's a very difficult environment to raise money."

An executive of one of Japan's largest banks told Carl his firm has shifted its focus from helping clients acquire foreign properties to helping them sell those properties.

Accessing what Japanese capital remains requires U.S. developers and sellers of golf courses to be smarter and willing to accept smaller profits and more risk, Carl said.

"The day of the foreign investor coming in and providing 100 percent of the equity capital to do a 50-50 deal is history," Carl said.

The most important thing in raising Japanese capital is selecting who will represent the developer's project. Whoever the developer selects should represent the developer on an exclusive basis, should have a track record and should be able to provide proof of the network of investors he will contact.

"The worst thing a developer can do is brokering the deal, putting together 150 packages and trying to send them to everybody in a directory listing who has invested in the United States," Carl said. "The appeal for an investor... is to feel he is about the only person seeing the transaction."

The developer's representative should be given a free hand to bridge the cultural gap between developer and Japanese investor.

"If you look at foreign investment as a last resort, your opportunities to attract that capital are greatly reduced," Carl said. "It's extremely important to realize the relationship you are going to develop with your partner should be viewed as long-term."

Most transactions with foreign capital in the next three years will be under \$10 million, reflecting the change in the Japanese economy, Carl said.

CAPITAL MARKETS

New and increasing sources of capital will become slowly available over the next few years for golf courses, resorts and other leisure industries, said Steven H. Gold, chairman and CFO of Center Financial Group.

Developers must begin looking for many sources of capital since guarantees no longer exist that even the largest banks, financial companies and insurance companies will be around or anxious to invest six months from now, Gold said.

Corporate America will be one of the major new capital sources through credit companies set up by firms like General Electric, GATX, Westinghouse and Chrysler, Gold said. Most aren't doing construction financing, but rather refinanc-

ing and re-doing existing financings.

Gold said they are interested in 18-hole courses; daily-fee or semi-private; minimum 6,300 yards; no equity ownerships; personal guarantees on loans; two-year cash flow histories; interest rates 2-1/2 to 3-1/2 percent over the prime rate plus one to two points; five-year terms with amortizations of 10 to 20 years; minimum debt coverage ratios of 1.3 to 1 and loan-to-value of 50 to 65 percent.

"There are about a half dozen corporate lenders doing real estate

lending in the United States today," Gold said.

Pension funds are another source, Gold said. They were battered in the 1980s, particularly on real estate. Still, labor unions come up with interesting lending programs. But the developer must use union labor.

Life insurance companies will be in difficult shape for the next few months. "They are either substantially out of the market or super conservative," Gold said.

Bringing in a Japanese contract-

ing firm as a partner, who acts as the contract management firm rather than the actual builder, has worked on some deals, Gold said. The U.S. developer is the on-site manager.

The Japanese contractor was able to go to its bank for capital, something the U.S. company could never do. The U.S. company may have to give up some control, but the project may get done, and under terrific terms, Gold said.

"There are so many sources of different capital, you can't just say,

'Let's go hit the top 10 insurance companies or the top 10 Japanese banks.' Nobody has full access any longer. It has become a quiet marketplace for money.

"Anything you are doing, don't be afraid to share information. And give yourself a minimum of six months to close a deal.

"Give yourself time to collaborate. If you are logical and not greedy, you have to meet with success. Times are going to get better. But they are going to get better slowly."



Oregon owner intends to be 'a major player' in region

COTTAGE GROVE, Ore. — The 18-hole par 67 Middlefield Village Golf Course is the newest addition to the Oregon golf scene.

Kris Woodard, owner and developer, said, "We intend to be a major player in promoting Lane County

and the Southern Willamette as a first-rate recreation destination."

Al Mundle is director of operations, Gene "Bunny" Mason, chief architect, and Jerry Asher head teaching professional.

Mundle said, "It'll be a great

course for learning the game as well as a pleasure to tour."

Woodard noted that Middlefield Village was developed as a course complementing the scenic surrounding of this southern Willamette Valley community with

the advantage of easy, regional access provided by Interstate 5.

The 14-acre driving range includes 40 all-grass tees, 20 of them covered; putting greens, practice bunkers and an area for pitch shots. An indoor teaching facility is planned there.

Hills, Foster open latest projects in Utah and Colorado

MESA, Ariz. — Arthur Hills and Associates recently held grand openings at golf courses in Salt Lake City, Utah, and Pueblo, Colo.

Wingpointe, designed by Hills and Keith Foster, is Salt Lake City's

latest challenging but playable public course. Located adjacent to the Salt Lake International Airport, officials feel it should become a model city project.

Hills and Foster also designed

Walking Stick, a par-72, 7,300-yard layout cut into the Pueblo site. The course was designed to be played in varied water conditions, and can be played with high loft approaches or bump-and-run type shots.

Hills and Foster will co-design a championship golf course for the city of Westminster, Colo., as part of a master planned community northwest of Denver. Construction is set to begin early in 1992.

Another course in Myrtle Beach

CALABASH, N.C. — Construction is under way at Brunswick Plantation, a 600-acre community nestled among mature oaks and flowering dogwood trees just north of Myrtle Beach, S.C.

Brunswick Plantation will surround an 18-hole golf course designed by Willard Byrd scheduled to open next spring and will feature two clubhouses reminiscent of Orton Plantation, an antebellum home and gardens located near Wilmington, N.C.

Development is by Caw Caw Land Corp., a partnership of Brunswick County businessmen.

The partners in Caw Caw Land Corp. are long-time residents of the South Brunswick Islands, and each will be actively involved in construction and development of the community.

The clubhouses will be built by Sloane-Anderson Builders of Ocean Isle, N.C., and owned by Caw Caw partners Mason Anderson and George A. Sloane III.

Shallotte, N.C.-based L.M. McLamb & Son Construction, headed by Caw Caw partner Jimmy McLamb, will build the course; and all streets, tennis courts and golf cart paths will be built by Mac Construction Co., headed by partner W. J. McLamb.

Ski resort adding Player layout

SNOWSHOE, W.Va. — An 18-hole championship Gary Player Signature golf course will be playable at Snowshoe Mountain Resort's Pocahontas County facility by mid-summer, 1993.

Snowshoe long has been recognized as a premier skiing facility.

At the base of Snowshoe Mountain in Hawthorne Valley, the 7,000-yard-plus course has been designed to take maximum advantage of the area's natural topography.

Wide fairways will provide ample landing areas in preparation for approach shots to the greens, which will be placed in naturally-protected settings. Many putting surfaces will be bordered by scenic free-running streams. Most tee boxes will be terraced into the natural terrain.

Plymouth course in construction

PLYMOUTH, Mass. — Construction has begun on Coachman Village Golf Club, an 18-hole executive length course of 3,500 yards and a par of 58.

The course, owned by A. Charles Caranci of Plymouth, is sited on a sandy, well-treed lot adjoining Route 44, about four miles from Plymouth Rock. It will be seeded in October and open in August 1992.

The course is being constructed by Marcos Golf Course Construction, Lakeville. Architect is Ray Richard of Richard and Associates in Sagamore Beach. Richard also designed The Head of the Bay Golf Club here.

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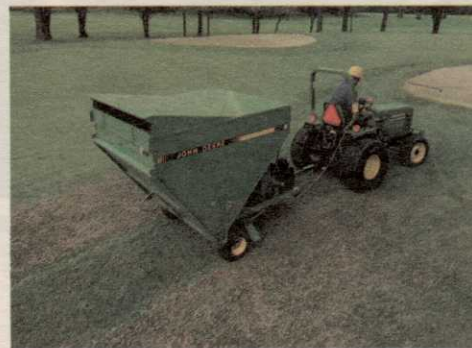
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The odds — and at-odds — of golf course development

Continued from page 25

nity in a Florida city that was located 20 minutes from the growing part of town.

"It was a hot residential area 10 years ago. But no one is interested in moving into the area today. There is a life cycle to neighborhoods and it had bypassed this property. They have redeveloped this course and it has been open two years. They have sold 14 home sites and 25 memberships. You're talking substantial red ink," Levitan said.

Second, residential golf course developments require large tracts of land. That amount of acreage is usually only available in remote areas, putting the community at odds

with the home buyer's desire for a convenient location.

"Unless you are building a destination resort that is self-contained, putting the new residential development 10, 15 or 20 minutes out is not an advantage for the sale of residential property," Levitan said.

Third, golf course design often takes precedence over community design. The profit from the sale of an average golf course is about one-fourth of the profit from lot sales, Levitan said. Yet more money and attention are often spent on course design than in creating attractive environments for house lots or maximizing lots along the golf course, he added.

"If you can't get 40 percent of your house lots on the course in a small development, or 25 percent in a large one, you're losing real money," he said.

Fourth, the golf course concept — membership costs and availability — often conflicts with the residential market. Levitan mentioned a 2,400-lot development with an equity golf course. With 800 lots sold, the 400 golf course members exercised their option to buy the course and make it private. Lot sales stopped cold. The developers had to buy 300 acres five miles away and build two more courses that they could offer as an amenity to prospective buyers of the remaining 1,600

lots before sales picked up again.

Not all golf course lot buyers are the young, beautiful and rich people pictured on marketing pamphlets, Levitan said. Some are blue collar. Some are short and fat. The type of housing offered and difficulty of the course should reflect that, he added.

Finally, many builders don't understand or budget for the economics of golf course development. The Greenman Group recommends budgeting for a \$250,000 per year operating loss on the golf course for the first five years, not including the losses for promotional use of the course to sell home sites.

Golf course development costs are up front and usually amount to \$3 million or more for an upscale development, including course, clubhouse, locker rooms, restaurant, bar and pro shop.

"You need all that, even though no one may use them for several years," Levitan said. "Yet they need to be up and available for that one, two or three buyers. That's a lot of up-front money. Residential developments can be phased. But it's very difficult to phase a golf course. It's difficult to convince people to pay \$200,000 for a home and \$15,000 for a membership at the club if they only have nine holes to play for two years."

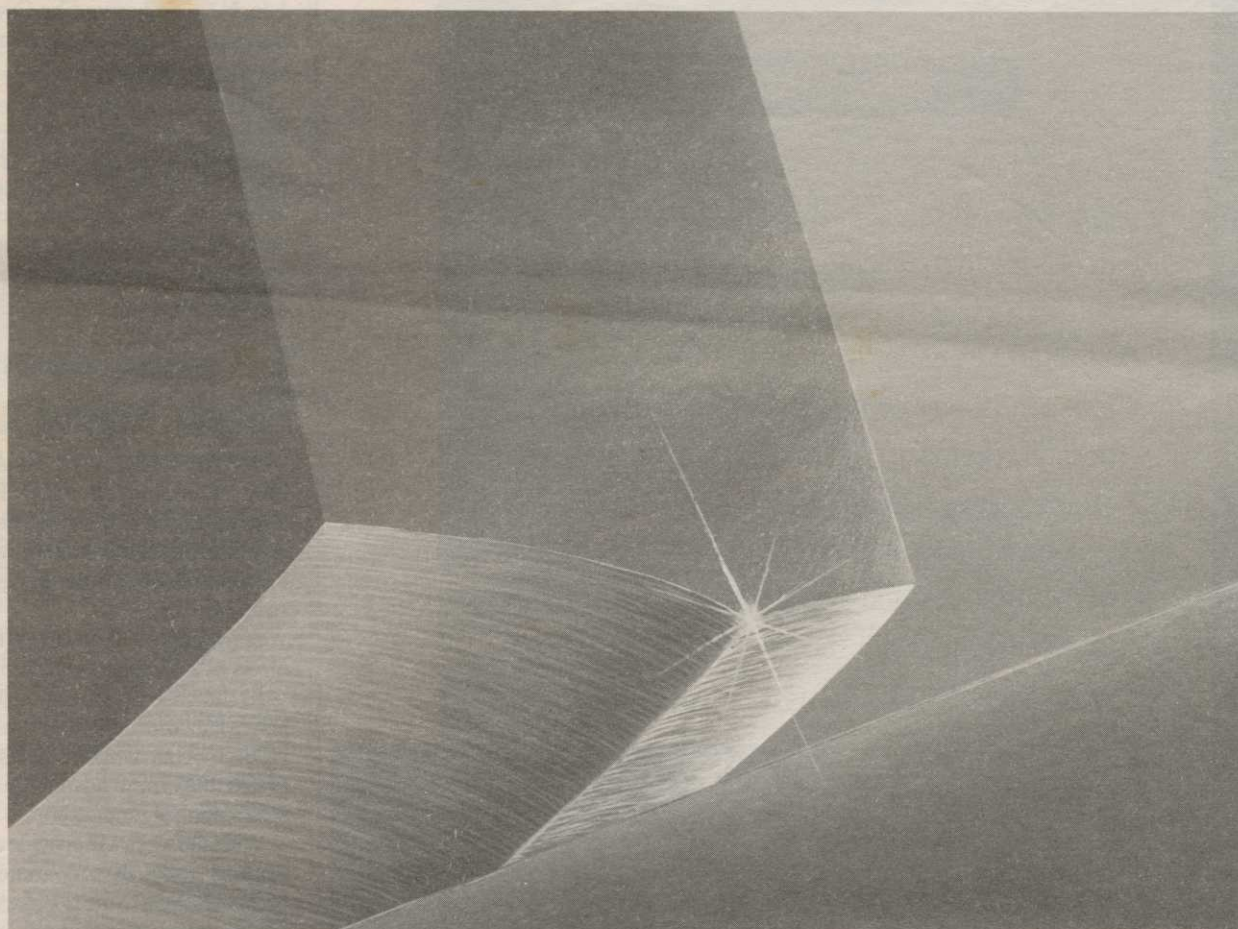
The cost of a name designer adds \$1 million or more. One well-known architect has a clause in his contract allowing him to rip out a hole he doesn't like before the course opens, totally at the developer's expense, Levitan said.

"I'm not saying you can't make money with a golf course. But you have to know what you're getting into. The bottom line is it has to work for you and the buyers," he added.

So, how does a developer avoid, or at least decrease the likelihood of taking a bath on a residential golf course development project? Levitan offered "Greenman's 17 Tried and True Rules for Successful Residential Golfing Development." While some may be distasteful to golf course purists, Levitan believes they will help the community and the course survive in today's marketplace.

Continued on page 31

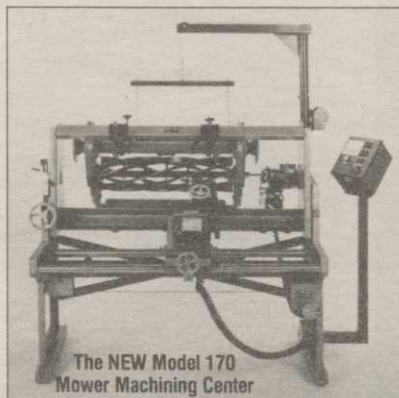
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The odds

Continued from page 30

They are:

1. Research market thoroughly — Research golf demand and supply, residential demand and supply and market components.

2. Evaluate site carefully — Investigate the surrounding area, quality of access, character of the area and site, suitability for residential development (first) and for golf (second).

3. Understand why buyers purchase homes in golfing communities — The most important reason could be open space and views, ambience or the club atmosphere. Remember, an average of just 20 to 30 percent of residents will play the golf course.

4. Develop a realistic consumer profile — Who will live in the community? Where are they coming from? What prices will sell? What product types and sizes are required?

5. Create a unique concept — Don't copy the market, it may be fully saturated.

6. Design an appropriate residential community environment around the golf course — This is the opposite of designing a wonderful golf course and throwing some housing in. The community design is the primary concern.

7. Utilize the golf course to benefit residential site planning — The golf course should be visible from as many homes as possible and as vehicles enter the community.

8. Design the course and membership structure to the residential market — The course must be playable by the residents. It must be affordable and have adequate capacity.

9. Prepare realistic budgets and cash flow analyses — Development is heavily front-end loaded and early operating losses must be considered.

10. Market the community intelligently and creatively — Just offering golf isn't enough, especially in an area that already has many courses.

11. Utilize the golf course to sell homes — There is nothing worse than an empty golf course. If it's empty, it's not selling homes. Encourage play, sponsor outings and get the market involved in the lifestyle.

12. Balance housing products — Make certain to have product for all viable markets and pocketbooks. Phase development. The golf course is what is being sold so, where possible, it should be visible from every room in the house.

13. Monitor your housing inventory — Premium and non-premium lots should sell in balance. If premium course-front lots are selling much faster than back lots, raise the price of the premium lots. "The last home site you want to have left to sell is the one with the view of the first tee, green, fairway and lake," Levitan said. "You want to sell your bad product first."

14. Maintain membership availability — The last home sold should come with the opportunity to buy a golf membership, or at least a social one with a realistic opportunity to soon purchase a regular golf membership.

15. Operate the golf course for the members' benefit and convenience — They are the customers and will refer new members and homeowners if they are happy. Avoid needless restrictions, like a dress code if your market is 60-year-old retirees from Ohio. They are going to wear Bermuda shorts and T-shirts no matter what the developers say because that's what they're used to wearing.

16. Remembering priorities — This is a residential community first and a golf course second. Even in small developments, 75 percent of all profits come from the residential side, 90 percent in larger developments.

17. Golf is not a cure-all — Golf is a wonderful amenity that will help a developer sell homes and make money. It will not save a residential development that is poorly located, conceived or executed.

Nugent adds his artistry to Rockford, Ill.'s 5th muni

ROCKFORD, Ill. — A forward-looking Rockford Park District and forward-thinking architect Dick Nugent — nudged on by a donation from a public-thinking industrialist — have created the fifth municipal golf course here.

Taking a \$2-million gift from retired businessman Norris Aldeen that included 143 acres from his family farm and \$300,000 in trees, the Rockford Park District added \$4.8 million from two bond issues, another \$10,000 in private donations and built an \$8.2-million facility.

The course carries the name of Aldeen, who also donated a small bridge reminiscent of that over Swilcan Burn at St. Andrews.

Nugent added mounding and contours, heavily bunkered greens, and a layout that skirts water on 10 holes to transform the flat and wide-open farm. Nine of the holes opened July 26 and the back nine will open next year.

"They wanted a course suitable for all levels of public play up to and including state amateur championships and maybe some day the national public links championship, so we designed with that in mind," Nugent said.

Four sets of tees make the course playable from 7,058 to 5,030 yards.

"Everybody is extremely pleased," said Jim Reid, manager of design and construction for the Park District. "The course is much

more than I thought it was going to be."

Course manager David Claeysens, who now oversees five courses, described the newest as an upscale public facility.

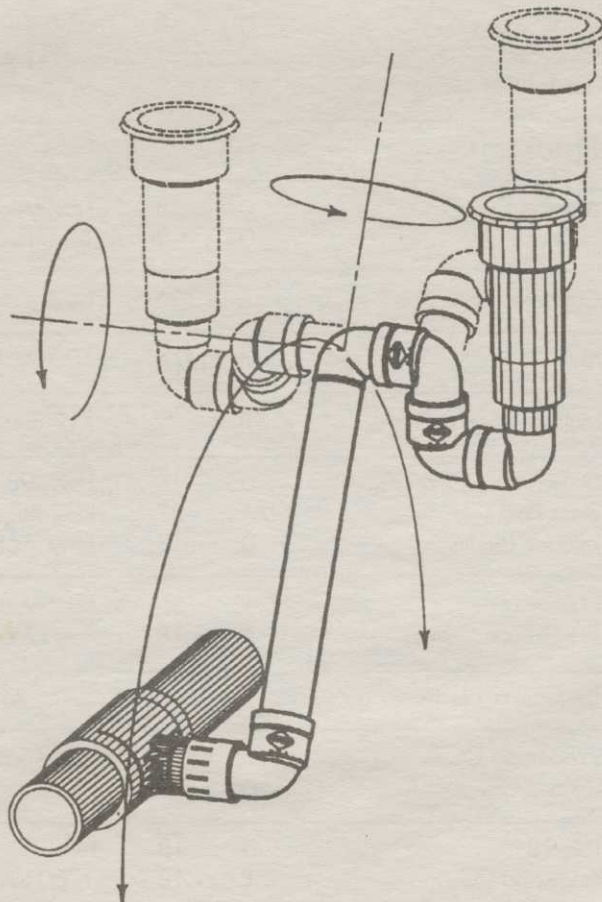
One of its most unique features, he said, is a \$1.25-million practice area Nugent designed so that "any shot you can get on a course, you can get on the range, from sand to water, playing on bentgrass or bluegrass."

It includes four target greens, a chipping green and bunker complex, and large putting green.

Ken Giesler, formerly at Ingersoll Golf Course, is superintendent at the Aldeen course, which is all bentgrass from tee to green.

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Courses newly planned and approved in the U.S.

These lists include courses that have been announced or approved around the country in the past month. When the planned courses are ready to begin 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.

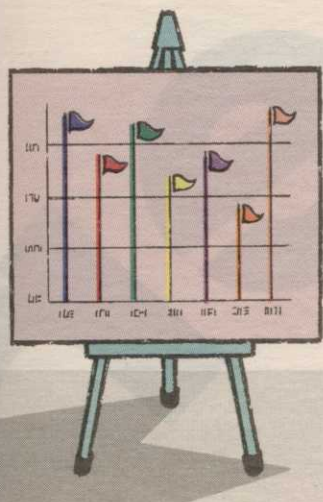
Courses planned...

Location	Contact
Alabama	
Tusculum	205-381-4452
California	
Fairfield	Robert Graves
Fremont	Robert Cupp
Kern County	Oakridge American Co.
Los Angeles	Newhall Land & Farming
Los Banos	Rod Stevenson
Oak Hills	Michael Gallagher
Orinda	Jack Nicklaus
Poway	Silver Real Estate
Connecticut	
Bristol	Kenneth Roberts
Bristol	Kenneth Roberts
Portland	Portland GC
Seymour	Chris Bargas
Waterford	Roland Lefebvre
Delaware	
Rehobeth Beach	Ault, Clark & Assoc.
Florida	
Alachua	Mayor Alan Cain
Haines City	Sports Shinko, Fla.
Mims	R. Elder/C. Madary
Pasco County	Mark McCumber
Tallahassee	Dean Refram
Georgia	
Atlanta	Lee Trevino/W. Graves
Watkinsville	Mike Young
Hawaii	
Kamuela	Robert Trent Jones, Sr.
Oahu	Arnold Palmer/Ed Seay
Idaho	
McCall	Robert Muir Graves
Illinois	
Blue Island	Robert Lohmann
Elgin	Dick Nugent
Gurnee	Jerry Moody
Joliet	Channahon Park Dist.
Indiana	
South Bend	Mayor Joseph Kernan
Iowa	
Bos Landen	Dick Phelps
Kentucky	
Covington	Bruce Ferguson
Maryland	
Cecilton	800-638-2596
Clarksburg	Ault, Clark & Assoc.
Gaithersburg	Ault, Clark & Assoc.
Howard County	Ault, Clark & Assoc.
Prince Georges Cnty	Ault, Clark & Assoc.
Michigan	
Flint	Funk & Co. Bldrs.
Kearney Twp.	The Delaware Corp.
Minnesota	
Maplewood	Ramsey Cnty. Bd.
Winona	Wayne Idso
Missouri	
Cottleville	Developer Ned Story
Cuba	Gary Kern
Kansas City	PGA Tour Public Golf Inc.
O'Fallon	J.C. Allen & Assoc.
Nevada	
Las Vegas	Casper/Nash & Assoc.
New Hampshire	
Dunbarton	Marvin Armstrong
Pittsfield	Philip Wogan
New Jersey	
Egg Harbor Twp.	Robert Elder & Sons
Manchester	Hovnanian Ind.
New York	
New Windsor	Lester Clark
Somers	Robert T. Jones, Sr.
Yorktown Heights	914-428-0760
Ohio	
Carey	Bob Donelson
Mayfield Village	Ault, Clark & Assoc.
Piqua	John F. Robinson
Union Township	Cornish & Silva
Van Wert	Denis Griffiths & Assoc.
Pennsylvania	
Elizabethtown	Peter Whipple
Lehman Township	Rees Jones
West Chester	Fairways, Inc.
South Carolina	
Lake Wylie	Dan Maples
Texas	
Carrollton	Scott Erwin
Corpus Christi	City Mgr. Juan Garza
Dallas	214-827-8057
San Angelo	Richard Fausset
San Antonio	512-227-2293
Utah	
Salt Lake County	Cnty Contracts & Proc.
Sandy	Scott Steenblik
Virginia	
Berea	Robert L. Elder & Sons
Williamsburg	Ault, Clark & Assoc.
Williamsburg	Dan Maples
Williamsburg	Mark McCumber
Washington	
Arlington	206-435-6430
Duvall	William Overdorf
Gorst	John Harbottle
Orondo	Jack Frei
Wisconsin	
Fond du Lac	Robert Lohmann
Menomonee Falls	Silver Spring CC

Courses approved...

Location	Course Name	Type	Holes	Address	Architect/Contact
Alabama					
Birmingham	Liberty Park	P	18	I-459 & Liberty Park	Tom Fazio/Jerry Pate
Moulton	Deer Run GC	M	9	N/A	Earl Stone & Assoc.
Shoal Creek	Shoal Creek	P	9	New Williamsburg Rd.	Jack Nicklaus
Alaska					
Ft. Wainwright	Chena Bend GC	D	9	Ft. Wainwright	U.S. Army Engineer Dist.
California					
Beaumont	Oak Valley GC	D	18	Oak Valley GC	Landmark Signature
Fairfield	N/A	M	N/A	1000 Webster St.	City of Fairfield
Fresno	New Fresno Airways GC	D	18	5440 E. Shields Ave.	209-488-1478
Menifee	Menifee Lakes	P	18	29875 Menifee Lakes Dr.	Ted Robinson
Colorado					
Loveland	Marianna Butte GC	M	18	N/A	Dick Phelps
Florida					
Cocoa Beach	Cocoa Beach Muni GC	M	9	Tom Wariner Blvd.	Charles Ankrom
Okeechobee	Okeechobee G & CC	D	9	405 NE 131st Ln.	Lonnie Somers
Port Orange	Cypress Head GC	D	18	N/A	Arthur Hills
Georgia					
McDonough	Lake Dow GC	D	18	N/A	Denis Griffiths & Assoc.
Hawaii					
Lanai	Challenge at Manele GC	D	18	Manele Bay Hotel	Jack Nicklaus
Illinois					
Aurora	Orchard Valley GC	M	18	Orchard Rd. & Galena Blvd.	Ken Kavanaugh
Carbondale	Carbondale Public GC	M	27	New Era & Glenn Rds.	William Spear
Kansas					
Satanta	Cimarron Valley GC	M	9	Hwy. 56	Larry Flatt
Maryland					
Hampstead	Oakmont Green Inc.	D	18	N/A	Morris Ritchie & Assoc.
Massachusetts					
Sutton	Sutton Hills GC	D	36	277 Putnam Hill Rd.	Brian Silva
Michigan					
Grand Rapids	N/A	D	18	Grand Valley State University	First Golf Corp.
Minnesota					
Belle Plaine	Valley View GC	D	18	23795 Laredo Rd.	S & H Golf
Mississippi					
Natchez	Duncan Park GC	M	9	57 Duncan Park Rd.	Ault Clark & Assoc.
Nebraska					
Clearwater	Summerland GC	D	9	N/A	Martin Johnson Jr.
New Hampshire					
Atkinson	Atkinson CC	D	18	Providence Hill Rd.	Philip Wogan
Salem	Hawkin's Glen	D	9	Town Farm Rd.	Captain's Village Dev. Corp.
New Jersey					
Parsippany	Copperas Ridge	P	36	N/A	Arnold Palmer/Ed Seay
New Mexico					
Grants	N/A	M	N/A	600 W. Santa Fe Ave.	William H. Neff
New York					
Lockport	Lockport Town & CC	P	9	717 East Ave.	Harry F. Bowers
North Carolina					
Durham	Grove Park Golf & CC	D	18	Hwy. 98	Lisa J. Maki
Edenton	Black Rock	N/A	27	River Rd. at Hwy. 17	Hale Irwin
Jefferson	Jefferson Landing	D	18	Hwy. 1688	Larry Nelson
Oregon					
Hillsboro	N/A	P	36	Southwest 229th Ave.	Tom Kite/Bob Cupp
West Linn	The Oregon GC	P	18	Pete's Mountain	K. Kavanaugh/P. Jacobsen
Pennsylvania					
Presto	The Club at Nevillewood	P	18	Hilltop Rd. at Walters Mill	Jack Nicklaus
Tennessee					
Franklin	Woodmont CC	P	9	1323 Sneed Rd.	Gary Baird
Gallatin	Foxland GC	D	18	N/A	Kevin Tucker
Texas					
Houston	Tour 18	D	18	N/A	RDC Ltd.
Kingwood	Kingwood CC	P	18	1700 Lake Kingwood Trl.	Finger-Dye-Spann Inc.
Utah					
Logan	Logan Muni GC	M	18	255 No. Main St.	Robert Graves
Virginia					
Charlottesville	Pen Park Muni GC	M	9	1400 Pen Park Rd.	Ault Clark & Assoc.
Washington					
Spokane	The Creek at Qualchan	M	18	U.S. Hwy 195 & Qualchan	William Robinson
West Virginia					
Hedgesville	The Woods Resort	P	9	Mountain Lake Rd.	Ray Johnston
Snowshoe Mountain	N/A	D	18	N/A	Gary Player
Wisconsin					
Mayville	Mayville GC	D	9	325 S. German St.	Robert Lohmann

Briefs



NGF RELEASES STATISTICS

JUPITER, Fla. — The National Golf Foundation reports 1990 increases in rounds played and the number of core golfers.

Rounds played increased by 6.9 percent to 502 million. Core golfers, those 18 or older who play eight or more rounds a year, increased 4.4 percent to 11.8 million.

Players were divided into three categories: core golfers, occasional golfers, those 18 or older who play less than eight rounds a year, and juniors, those 12-17 who play at least one round a year. Half the 27.8 million total are occasional golfers, 42 percent core golfers and 8 percent, or 2.1 million, juniors.

Core golfers account for nearly 90 percent of all rounds played. Their direct spending on golf is three times higher than any other player category on average.

Public facilities hosted 70.3 percent of the rounds, but private club players played more often (24.6 vs. 16.2 rounds per year.)

Total U. S. golf population increased 3.6 million, or 14.9 percent.

Of the 2.8 million playing the game for the first time last year, 43 percent were women.

Seniors 60 and older are on the decline as a percentage of the overall U. S. golf population.... 14.1 percent compared to 16.5 percent in 1986.

There's a 40 percent growth of juniors.

NCA EXPANDS CONFERENCE SCHEDULE

WASHINGTON, D.C. — The National Club Association's Club Leadership Conference schedule the next 12 months has been expanded to six locations from coast to coast.

The conferences, covering legal, legislative, financial, organizational and environmental issues, are designed for first-time owners, directors and officers. General managers are encouraged to attend.

Dates and locations are: Sept. 11-14 at Grand Traverse Resort, Grand Traverse Village, Mich.; Sept. 25-28 at The Westin La Paloma, Tucson, Ariz.; Nov. 20-23 at Boca Raton, Fla., Resort & Club; Feb. 26-29 at Monterey, Calif., Plaza; March 22-25 at Pinehurst, N. C., Hotel & Country Club; May 6-9 at The Broadmoor, Colorado Springs, Colo.

For more information contact 202-625-2080.

RANSOMES PROMOTES AAL

LINCOLN, Neb. — Irvin E. Aal has been appointed to the newly created position of president of Ransomes America Corp.

Aal has served as vice president of Sperry New Holland, president of International Harvester's agricultural equipment group, president/CEO of Steiger Tractor, Inc., and CEO of Phoenix International Corp.

Fla. Golf Council fights new sales tax

Seeks relief from levy on assessments, initiation fees and contributions

By Peter Blais

The Florida Golf Council is working with clubs hoping to get exemptions from the state's recently imposed sales tax on club initiation fees, assessments and capital contributions.

The trade association also hopes the state Legislature may grant the golf industry some relief from the levy when it reconvenes next year, said Golf Council Executive Director Bobby Brantley.

Membership dues have been taxable for many years. The new 6-percent tax took effect July 1.

The Department of Revenue is encouraging all clubs to collect the tax, even those believing they may be entitled to an exemption. Those later found deserving of an exemption will be reimbursed for the tax collected or given a credit against future tax bills, Brantley said.

Several clubs requested exemptions during a July 29 Department of Revenue public hearing.

Some argued initiation fees at their clubs are the equivalent of buying stock in the course, and should be exempt from the tax as are stocks in companies.

A Pasco County course claimed that taxing a special assessment used to buy kitchen equipment from a local business, which would also collect a tax on the equipment, amounted to double taxation.

The biggest problem, though, is initiation fees, Brantley said. A \$30,000 initiation fee, for instance, could come with a sales tax of \$1,800.

"This seems to be another tax aimed at the golf industry," Brantley said. "Some people seem to feel golf is a luxury, that the industry is doing well and they can tax it whenever they want."

"But business is down at many of the state's courses because of the recession. Some southern Florida courses report business is off 40 to 60 percent. Others are on the brink of bankruptcy. Anything that discourages members from renewing memberships at those clubs could be the straw that breaks the camel's back."



Bobby Brantley

The tax was originally intended to cover just health clubs, Brantley said. But a subcommittee amended the bill to include golf, yacht, tennis or any fitness facility. When the bill came before the full Senate, many senators mistakenly thought the bill still applied only to health clubs, Brantley said.

But should golf clubs receive more favorable tax treatment than health clubs?

Brantley said most people might not think so. But the \$5.5-billion golf industry may deserve it, he added.

The Legislature has exempted Super Bowl tickets from the sales tax in the past because the event, which stimulates \$60 million to \$80 million of economic activity in the local economy, was deemed good for the state, Brantley said.

A recent Professional Golfers' Association study found that the association's professional events generate \$450 million to \$750 million in economic activity between the PGA, Senior and Hogan tour stops in the Sunshine State. Yet the industry is being hit with new taxes, he noted.

"When you consider the amount of money golf pumps into the state, and you can count on it every single year, you can make a good argument that it's a clean industry deserving some protection," Brantley concluded.

Private Marietta CC transformed into muni

(Editor's note: This is the first of two stories on converting courses from one type to another. This article deals with the conversion of private Marietta (Ga.) Country Club to a municipal course. Next month's will concern the change of El Conquistador Golf & Tennis Resort in Tucson, Ariz. from a resort to a public facility.)

By Sally Lee

A transformation is under way in Marietta, Ga. What has stood as the private 18-hole Marietta Country Club is undergoing extensive redesign and renovation and will reopen this fall as the city's first municipal golfing facility.

Targeting its new audience, the course will feature four completely new holes, design modifications on the other 14, rebuilt and enlarged tees and greens and a new irrigation system.

The city bought the 127-acre site, including course, driving range and clubhouse, for \$6.7 million. An additional \$2.3 million is earmarked for the renovation and to buy maintenance equipment.

Mike Young Designs of Watkinsville, Ga., designed the layout and Classic Golf Management of Athens, Ga., is overseeing the project for the city.

According to Ron Gosa, the city's streets and traffic superintendent and contract administrator for the project, the course averaged 25,000 rounds per year as a private club. He expects that figure to at least double.

The country club course, according to Gosa, was a tight, challenging layout with many landing areas that carried a ball out of bounds and into rocky or wooded rough. The new design modified these areas to slope inward and catch errant shots.

"Through creative design changes, the course will offer more controlled play and, at the same time, have a greater level of interest," Gosa said. "All the aesthetics will be there, but with a more direct approach to the green."

With its tight contours, numerous hazards, vast rough areas and small tees and greens, the country club tract had little chance to succeed as a muni. A consultant suggested extensive renovation specifically designed to speed play and increase revenues.



To better accommodate increased traffic, the first green at Marietta Municipal GC is being rebuilt.

As they approached the project, city officials realized the design would have to allow the course to be played in four hours or less and be capable of hosting 50,000 to 60,000 rounds. And with that type of traffic, they knew maintenance was also important.

From a maintenance perspective, one of the design strategies Young incorporated was widening the areas leading to and away from the greens. This should speed up play and reduce wear and tear on the turf.

The same is true in the tee area. Each hole has four tees, not only to accommodate below to average golfers, but to better distribute traffic.

And for ease of maintenance, the tees are built on the same level and can therefore be mowed with a single pass. The new course will also feature eight-foot-wide fiberglass mesh concrete cart paths that double as maintenance roads.

"For at least the first year, golfers will be required to keep carts on the paths," Gosa said, "but because the paths flow very well with the layout of the course, we do not anticipate any delays."

Although the various skill levels of the golfers had to be reflected in the design, it was just as important to all concerned that the course maintain its challenge and integrity. With only

105 acres to work with, the course could not be long, so it is designed to emphasize strategy.

It integrates strategy and playability with the ingress and egress at the greens and tees.

To expedite play, most areas are being restructured if the second shots were not visible from the tee, or if long carries over water were required.

The course will, however, still have its fair share of hazards. Some 25 grass or sand bunkers come into play from the back tees, but do not pose as much of a threat for the high handicapper hitting from the front tees.

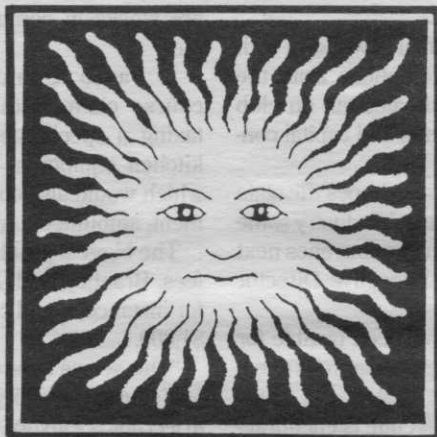
As part of the renovation and redesign, all 19 greens are being enlarged and rebuilt to USGA specifications. Dating to the early 1900s, the existing greens were built on native soil and measured only 3,500 to 4,000 square feet. The new bentgrass surfaces average 7,000 square feet and are being built from sand and Canadian spagnum peat.

Enlarged tees, sprigged with 419 Bermudagrass, are another phase of the project. The course will also feature a new Toro irrigation system and a PSI pumping station.

When Marietta Municipal Golf Course opens to the public this fall, it will be a first-class facility.

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Our middle-of-the-month spray program varies, however, we use a minimum of 1/2 gallon of SURF-SIDE 37 per acre with our tank mix which could include any of the following: Bayleton, Banol, Dacthal, 26019, Prograss.

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Golf Course Management (AD) / April 1982

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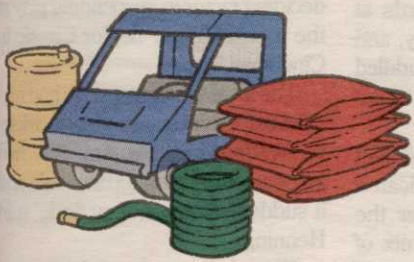
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BLEND 37

DURING 1980 I treated one green with Surf-Side to learn something about the use of surfactants. We syringed the treated green a couple of times during the season, whereas, the rest of the greens required over 50 days of syringing — that one green was incredible!
DURING 1981 We treated all the greens and only had to syringe a handful of times, maybe a dozen times all summer, and most of that on the high spots.

215-836-4992

Briefs



GCN MARKETING CONFERENCE

YARMOUTH, Maine — There is still time to register for "Marketing to Golf Course Facilities."

The seminar, sponsored by *Golf Course News*, will be held Sept. 16-17 at Oak Brook Hills Hotel and Resort in Oak Brook, Ill.

The program will focus on the market needs of golf facilities and the development of market strategies to meet those needs.

Seminar topics will include trend data on growth and changes in golf facilities; buying habits of golf course market segments, including superintendents, developers, builders, and management company decision makers; international marketing; successful green marketing; and results-oriented sales.

The program is designed for chief executive officers, sales/marketing vice presidents and directors, sales managers and marketing communication managers in companies offering products and services for golf course facilities. It is also aimed at media directors or account representatives.

For more information or to register call the United Publications conference group manager, Rebecca Quinlan, at 207-846-0600.

DEERE CREATES NEW DIVISION

MOLINE, Ill. — Deere & Co. has created the Lawns & Grounds Care Division. The new division formerly was known as the Consumer Products Group, and was part of the company's worldwide agricultural equipment and consumer products division.

Bernard L. Hardiek, senior vice president who will retain responsibility for the Parts Division, and Mark C. Rostvold, vice president of the Lawn & Grounds Care Division, will head the new division.

"Creation of this new division reflects expanding prospects," said Hardiek. "The past 28 years, beginning with our first lawn and garden tractor, John Deere has developed what we feel is the industry's broadest line of lawn and grounds care equipment," he added. "We now manufacture for a variety of markets, including homeowner, commercial and golf and turf markets."

Hardiek noted that the company's worldwide growth in these markets continue to match or exceed objectives.

YWCA HONORS JOYCE

GLENDORA, Calif. — Barbara Joyce, Rain Bird Sales, Inc. customer service administrator of the distribution center in Tampa, Fla., has received a Women of Achievement award at the San Gabriel Valley YWCA's annual banquet.

This event provides the opportunity for organizations as well as the community to recognize women who show leadership and perseverance in their chosen fields.

Rain Bird officials said Joyce has made outstanding progress the past six years in developing the customer service department in Tampa through training of customer service reps and working closely with all the firm's markets and divisions.

She received Golf's Right Stuff award in 1987. She resides in Brandon, Fla.,

Lightning will always present major problems despite technological advances

By Vern Putney

The latest lightning tragedy, electrocution of a spectator at the PGA Championship at Crooked Stick Golf Club in Carmel, Ind., underscores the vulnerability of the golf course audience.

Unlike most spectators at major sport events, golf fans are out in the open if not the cold, subject to Nature's whims. Baseball followers can get under solid cover quickly, and football fanatics caught in a sudden storm may get hit with plenty of snow and rain, but are rarely exposed to lightning.

The fairway flock has few options. Summer weather and its mercurial twists and turns are a fact of life.

Storm clouds of criticism hovered for hours over the heads of several manufacturers of lightning detection equipment following the

death of a spectator and injury to five others during the first round of the U.S. Open at Hazeltine National Golf Club in Chaska, Minn.

Unfortunately, 40,000 persons simply couldn't be dispersed in less than 10 minutes. What could they do when there are few trees and practically all open area?

The most sophisticated man-made device is at best a mere toy when Mother Nature heats up.

A viewer couldn't help but be sympathetic to a broadcast team explaining the intricacies of the hand-held, battery-operated M-01 Intracloud Lightning Detector pioneered by Dr. Ralph Markson a few seconds before all heck broke loose.

The M-01 senses intracloud lightning activity, that is, lightning from cloud to cloud or within a single cloud. Ninety percent of all lightning is

intracloud.

The Atmospheric Potential Probe made by Airborne Research Associates of Weston, Mass., complements the M-01, searching for raised electrical fields penetrated by thunderclouds that can reach up to 10,000 volts per meter.

Installed in a clubhouse and connected to a personal computer with special software, it permits a course official to monitor thunderclouds within five miles. Yellow warnings and red alert levels display information that automatically can trigger alarms and sirens.

Airborne systems worked well when invited by the USGA to assist in lightning detection at the 1990 U.S. Open. Times, weather and course conditions change, however.

Suddenly-savage Nature wasn't in the mood

Continued on page 35

Idaho field burning may be snuffed out, too

By Bob Spiwak

New fuel is being added to the fires of controversy surrounding turf field burning in Idaho.

Duane Hagadone, businessman who owns Coeur d'Alene Resort (with the world's only floating green) and a chain of newspapers in Idaho, has turned the cap on the fuel container, according to a Spokane, Wash., newspaper. It appears his ultimate goal is to turn the screws on the practice of field burning until it is no more.

He's not alone. Health and environmental forces are likewise incensed over the clouds of smoke that annually fill the air of North Idaho.

A Hagadone newspaper, the Coeur d'Alene Press, hired an ex-Spokane columnist to write about field burning. This follows comments by Don Jacklin, co-owner of Jacklin Seed Co. in nearby Post Falls, that he was advised there would be a negative story every day of the burning season.

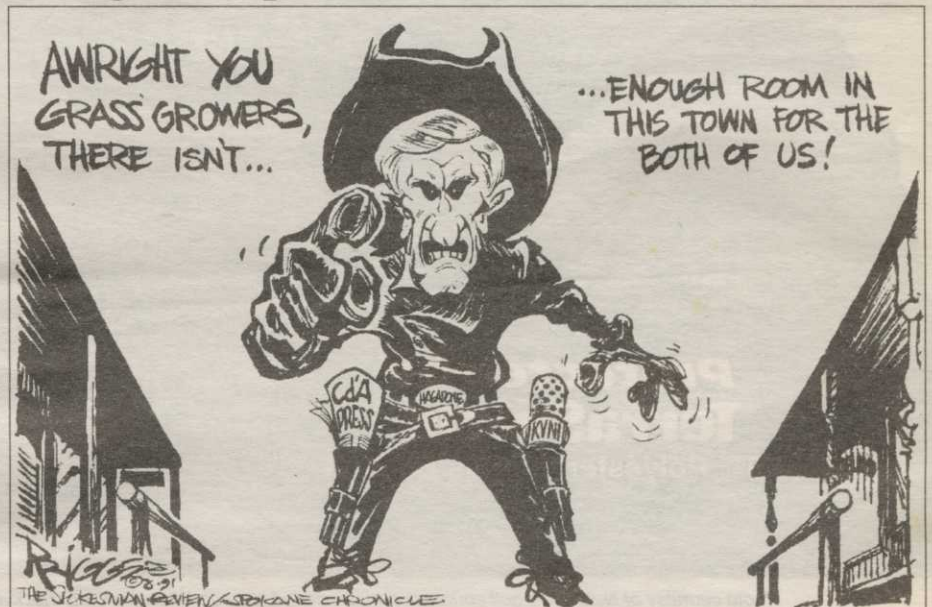
Hagadone's resort, which has won top awards in travel surveys, relies on tourism, as does a large portion of north Idaho. When palls of smoke hang in the air, the visual and olfactory pollution do little to enhance the image of clean air on the Rockies' west slope.

Earlier this year, a compromise burning measure was defeated in the Idaho state Legislature. Supported by many growers and suppliers as an alternative to a burning ban, the compromise would have decreased the acreage burned, with voluntary compliance by the growers. When the solons, in effect, voted to change nothing, their action drew criticism from the Coeur d'Alene paper.

Not only the esthetics of smoke has provided the ammunition for the foes of burning. The effect on health has become an important issue. Some people complain they are prisoners in their own home when burning begins, according to a spokesperson from the Washington chapter of the American Lung Association. The association acknowledges that there has been no information on the effects of the burning fields on health.

In the state of Washington, burning is limited to a certain number of days. Prior to ignition, growers must obtain official approval based mainly on weather conditions. This year, Idaho growers have agreed to limit burning to 14 days on a voluntary basis, despite a more liberal approach in the state law.

Early in August, Oregon passed a law that will ban all burning of fields by the year 2000. Oregon produces mainly fescues and bentgrasses, with Washington and Idaho leading in bluegrass production. Burning has been the traditional



method of promoting new growth, ridding the fields of stubble as well as controlling disease.

The grass burning reached the status of cause celebre Aug. 12, the first day of burning. A Spokane television crew filmed the fires on Idaho's Rathdrum Prairie. Prior to igniting the fields, balloons were sent aloft to reflect weather data and test the field for a favorable northeasterly flow — away from populated areas.

Art Long of the Kootenai Clean Air Coalition, a multi-country organization, was not happy. "From our perspective, this is a disaster in Bonner County (north of Coeur d'Alene). "You could barely see the lake from Highway 95 which runs

alongside. It (the smoke) was on the ground ... totally obscuring the view. The impact on tourism is about to come."

Robert Duffield of the Kootenai County Clean Air Coalition said he was on the telephone for 20 minutes consoling a young woman with asthma. He said, "We see grass burning as something that is unnecessary and wrong, and we want it to stop."

A burning ban could winnow a lot of the area's bluegrass growers, some of whom feel that if grass production is halted, it could lead to housing development or to other crops such as wheat.

Then there would be dust instead of smoke. And a lot more of it.

Ore. field burning banned by end of decade

Continued from page 1

of field burning, propane flaming requires an hour to do five acres.

Nelson estimates a day to rake and bale the straw of a hundred acres prior to applying the six-foot-wide propane torch. Growers have questioned the economic feasibility of the propane method.

Burning fees paid to the state have been raised from \$3.50 to \$10 per acre field-burned, and a dollar an acre levy has been imposed on propane flaming. This has led some growers to consider places such as Alberta, Canada, or New Zealand as alternative growing sites.

"You always get a few growers who are going to the moon," said Nelson. He added that growers, in the main, have decreased reliance on field burning, citing a 60 percent reduction of burning compared to three years ago.

He said that Alberta is "casting about" for good cash crops, but all the province could produce is Boreal red fescue, a grass comparatively coarser in texture than fine fescues such as Chewings, which are close to 100,000 acres in Oregon cultivation. (Annual and perennial ryegrasses are grown over about 200,000 acres, and bent grasses occupy another 15,000 acres.)

New Zealand, Nelson went on, probably has reached its maximum growing potential, in the neighborhood of 20,000-30,000 acres.

What is the future of Oregon's grass seed industry in the face of the new law? "It's a challenging piece of legislation. It will put a lot of demand on the seed industry to find alternative growing methods."

Asked about reaction to passage of the law, Nelson referred to it as "A bittersweet thing." His

Continued on page 36

Mobay Corp. fined record amount by EPA

Continued from page 1

-forcement response policy which takes into account the nature, circumstances and extent of each violation.

EPA's complaint against Mobay, containing more than 400 counts, alleges that Mobay:

- imported chemical substances for chemical purposes that were not on EPA's TSCA inventory;
- falsely certified that the import shipments were in compliance with TSCA;
- filed incomplete PMNs that failed to include all known trade names and all intended uses for the specified

chemical substances;

- provided false information to EPA regarding the dates certain substances were first imported;

- improperly reported certain substances to the TSCA inventory during the initial reporting period; and

- submitted inaccurate or unsupported information in required reports.

Under TSCA, companies may not manufacture or import chemical substances unless they are reported to and listed on an inventory of chemical substances compiled by EPA.

New chemical substances must be reported to EPA 90 days prior to

manufacture of import through a pre-manufacture notice which includes information on the intended use of the substance, as well as test data related to human health and environmental effects.

Edwin B. Erickson, regional administrator for EPA Region III, said: "In seeking large penalties for these violations, EPA is sending a message to all chemical manufacturers to abide by the law. When a company violates TSCA rules, it risks exposure of the community and the environment to hazards associated with potentially harmful chemicals."

Lightning plagues golf courses

Continued from page 35

for theory or futile safeguards at Hazeltine. It struck in full fury, and tragedy resulted as the group huddled under a lone willow tree close to the 11th tee.

Is there a lesson to be learned? Not really. Man's most sophisticated warning weaponry won't alter the outcome pitting the volatile mix of compacted crowds and wide-open courses against Nature.

The lightning detector is a valued tool in determining suspension of play and clearing players from the course.

As Brian Henning, Senior PGA Tour director, wrote to Markson: "The

lightning detector once again was the deciding factor in suspending play at the recent Kroger Senior Classic in Cincinnati."

The local weather service had told officials to expect rain but no electricity for Wednesday's Pro-Am. "We had just started in the afternoon rain and it suddenly became very dark," said Henning.

"The detector was giving us a warning even though we could not see lightning. We decided to suspend play and call players off the course. Fifteen minutes later the heavens opened. Not only did it rain very hard, but there was cloud-to-ground lightning. Fortunately, everybody was safely under shelter."

Ken Lindsay, PGA of America director, noted that in a tourney at Jackson, Miss., "Airborne equipment helped us to determine the right time to suspend play and evacuate the golfers. Eighteen minutes later, everyone was off the course. Twenty-five minutes later, the lightning began and it started to rain very hard."

While this Airborne-linked action takes care of the players, 40,000 watchers face a dilemma. How and where do you flee to safety?

Castle Pines GC in Castle Rock, Colo., bought French-made "Prevelectron S6" conductors as added lightning safeguards for its mid-August International tour tournament. Used mainly on tall buildings and nuclear power plants, each is said to shield a 200-yard radius of a designated safety zone.

These terminals, about the size of a football and costing \$3,500 each, have a self-contained electrical device that generates ions under storm conditions, creating a path for the lightning to follow and thus directing it away from sensitive areas.

Lightning claimed 106 lives in the United States last year. Now, if the M-01, the Probe and the S6 work as well as the Patriot missile, mankind may have taken a small step to combat, or at least deflect, unforgiving and capricious Nature.

Ore. burning

Continued from page 35

hope is that after years of uncertainty about legislative action, it will "...give a known direction, and get rid of the political squabbles..." associated with the issue of burning.

The future will require new methods as well as different cultivars. For sanitation of fields, experimental raking and thatching are being tried which may take the debris out of the plant crowns. Chemical methods are being investigated. And there are huge field vacuum cleaners, complete with brushes and flails which are another hopeful alternative to burning. Propane burning will not be banned, provided emissions meet federal "PM-10" standards. These require that particulate matter 10 microns or less not exceed 20 pounds per acre, based on an annual average of 24-hour periods of measurement.

It appears that, despite the cries of some doomsayers, the law will not kill the Oregon seed industry.

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SEED
CORPORATION

**Protected by
TerraShield®**
100% Polyester Greens Blanket

**Covered by
"Another"**
Leading Brand

Photo courtesy of Nat Binns, golf course superintendent, Lakewood Country Club, Rockville, Maryland. (unretouched photo)

Actual side-by-side comparisons prove...

**TerraShield® is your best protection
against costly winter kill damage.**

Warren's TerraShield also helps stimulate
healthy root growth and get spring green-up started sooner
so your course is ready for play weeks earlier.

Best for winter protection... TerraShield gives you up to 3 times more blanket material than thin plastic films, light-weight fabrics or sheets of material resembling rows of ribbons sewn loosely together.

Best for wind protection... because it's a non-woven polyester blanket and not a film or sheet, TerraShield does a superior job protecting against desiccation kill by keeping cold, dry, winter winds away from grass crowns.

Best for extra strength... because it's 100% polyester continuous filament needlepunched fabric, TerraShield resists ballooning and fights ripping and tearing that can destroy thin films, sheets, or lighter-weight fabrics. (And, there is no need for crosswires to keep TerraShield in place in very high winds.)

Best for healthy turf... because it 'breathes', TerraShield lets oxygen, carbon dioxide, and water vapor pass through freely and easily. It also helps retain needed soil moisture.

**You can have TerraShield Greens
Blankets ready for your course in
plenty of time for installation
this fall if you act now.**

To order, just phone
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A Subsidiary of

Warren's®
Turf Professionals

Monsanto herbicide receives full EPA registration

ST. LOUIS, Mo. — Full EPA registration of Dimension, Monsanto Agricultural Company's new turf herbicide, will help better control crabgrass and other problem weeds and grasses in turfgrass.

Advantages of Dimension over conventional turf herbicides, according to Dimension product manager Jim Budzynski, are season-long control with a single application; both pre-emergence and post-emergence application flexibility for crabgrass control, and exceptional turfgrass safety.

Dimension is designed for use

by golf course superintendents as an effective maintenance tool. Its active ingredient, dithiopyr, comes from a new class of chemistry developed by Monsanto and is characterized by desirable environmental features, including low use rates.

While providing long control, Dimension allows golf courses to conduct normal fall overseeding programs after a spring application. It controls a broad spectrum of annual grasses and broad-leaf weeds, including especially-tough species such as goosegrass, foxtail, spurge

and oxalis.

Noting the rise in course use of bentgrass, Budzynski believes Monsanto has met the challenge of possible bentgrass problems. "Dimension can be applied to bentgrass without fear of injury, and it will not harm ornamental plants adjacent to treatment areas," said Budzynski.

For more information on Dimension or any other Monsanto product contact Monsanto at 800 N. Lindbergh Boulevard, St. Louis, Mo. 63167 or telephone 800-323-1421.

CIRCLE #305

Pattern indicator now in pouches

HOUSTON, Tex. — Big Foot IPP is Parkway Research's new super-concentrated version of its Big Foot Spray Pattern Indicator, packaged in a new and convenient individual portion pouch.

This new pouch technology affords a pre-measured amount of liquid which will color 50 to 100 gallons of spray solution. It is not moisture sensitive and has an unlimited shelf life.

Contact the company at 800-256-3668 or write P. O. Box 5441, Kingwood, Texas 77325.

CIRCLE #306

Lake Colorant WSP

Lake colorant available in soluble packets

AMES, Iowa — Coloring lakes, ponds and golf course water hazards is as simple as tossing a water soluble packet into the water.

Lake Colorant WSP, a new product from Becker-Underwood, is a highly-concentrated lake colorant in water soluble packets. Each packet colors one acre foot of water.

The packet will dissolve in less than four minutes, dispersing the color quickly, simply and completely. No plastic jars or bottles remain for dispersal.

Lake Colorant WSP won't harm fish or wildlife.

Contact Becker-Underwood, Inc., 801 Dayton Ave., Ames, Iowa 50010 or call 800-232-5907.

CIRCLE #301

Scott offering new weed control

MARYSVILLE, Ohio — Southern Weedgrass Control, specially developed for pre-emergent weed control on southern turfgrasses, is available from the Professional Business Group of The O. M. Scott & Sons Company.

It features an improved carrier with the proper particle size consistency for optimum turf coverage and weed control, and greater density for decreased drift potential.

The product, which contains the active ingredient pendimethalin, provides pre-emergent control of six annual grassy weeds and 10 broad-leaf weeds.

Fungicides VII and X are improved versions of the Scotts ProTurf line of products.

Fungicide VII features an improved carrier with the proper particle size for optimum turf coverage and disease control. It may be rotated with Pro systemic fungicide to reduce resistant turf disease strains buildup, including dollar spot, brown patch, poa annua, anthracnose and rust.

Fungicide X is for use on fairways, putting greens and other turf areas with Kentucky bluegrass, bentgrass, perennial ryegrass, fine fescue, Bermudagrass, St. Augustinegrass, or mixtures of these grasses.

Because of an improved pulp carrier, it provides optimum turf coverage and disease control with less susceptibility to drift, while preventing and controlling brown patch, leaf spot, red leaf spot and Fusarium patch/pink snow mold.

Contact The O.M. Scott & Sons Company, 14111 Scottslawn Road, Marysville, Ohio 43041.

CIRCLE #307

It's taken forty years and countless ill-conceived attempts for mankind to come to grips with one fundamental truth about imported fire ants. No matter how concerted the effort, no matter how ingenious the attack, they cannot be eradicated. However, they now can be controlled by Triumph® insecticide. In university tests, Triumph killed an average of

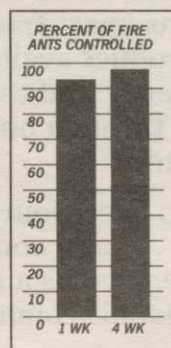
HOW TO EXTINGUISH A FIRE ANT.

lived counterparts, callbacks, what Triumph remains you can plan on making more of with Triumph is money.

94 percent of fire ants active in the soil for up to 10 weeks, depending on the target pest. Which means that instead of more applications, instead of more

find out complete details, contact your turf products distributor or Ciba-Geigy marketing representative. TRIUMPH

truth about imported fire ants. No matter how concerted the effort, no matter how ingenious the attack, they cannot be eradicated. However, they now can be controlled by Triumph® insecticide. In university tests, Triumph killed an average of



Average of 3 trials, Mississippi State University, 1989

© 1990 CIBA-GEIGY Corporation, Turf and Ornamental Products, Box 18300, Greensboro, NC 27419. Always read and follow label directions. For retail sale to and use only by certified applicators or persons under their direct supervision, and only for those uses covered by the applicator certification.

ThermaFab offers portable waste storage system

LEXINGTON, S.C.—ThermaFab, Inc. has introduced TroubleShooter, a portable system for the temporary storage of hazardous materials.

The one-piece unit has inflatable or rigid sides and, if needed, a portable storage tank.

The unit is very compact, allows for easy transport, easy storage and quick installation at the site. From set-up to dismantling, it can be managed by one person.

The TroubleShooter holds up to



ThermaFab portable hazardous waste storage system

10,000 gallons and is the ideal containment system to collect liquid from leaking drums, as well as overflow spills from tank trucks.

Contact Bill Watkins at ThermaFab, Inc., 200 Rich Lex Drive, Lexington, S.C. 29072 or call 803-794-2543.

CIRCLE #302

Ciba-Geigy markets first larvicide

GREENSBORO, N.C.—Exhibit, Ciba-Geigy's first biological, nematode-based larvicide, now is available to green industry members.

The active ingredient in Exhibit is formulated using a naturally-occurring species of beneficial nematodes that coexist in the ecosystems with wildlife, beneficial insects, domestic animals and humans.

The nematode's life cycle begins when it enters a target pest through a body opening and releases its deadly bacteria directly into the blood system of the host. The host pest dies within 24 hours, and

nematodes develop rapidly into first-generation adults and reproduce.

Soon, second-generation adults appear and reproduce. The cadaver fills with juvenile nematodes, which then leave and seek out a new host. If they can not find a host within 14 days, they die.

Exhibit will not burn turf or ornamentals. Plants may be sold the same day they're treated, and there are no re-entry restrictions for the product.

Since nematodes are part of the ecosystem, there should be no concerns about runoff.

Contact Ciba-Geigy Turf and Ornamental Products at 919-632-6000.

CIRCLE #308

OUR JOB IS KEEPING YOU HAPPY...



So You Can Keep Them Happy.

You can't guarantee them a low score. But keeping your course in the best possible condition is the surest way to bring golfers back. And the full line of The Andersons Tee Time products are proven winners for top flight course maintenance.

Just look at the record. For high quality fertilizers, herbicides, insecticides and

combination products, we're right on top of the leader board. But what really sets The Andersons apart from the pack is product availability, consistency and technical support through our local distributors.

If you want to keep your golfers happy . . . and coming back for more, give us a call. We're professionals commit-

ted to making your job easier. Let us put a smile on your face.

Call toll free, 1-800-225-ANDY for a comprehensive Tee Time Selection Guide.



the professional's partner®

The Andersons

Petroleum stored in flexible pipes

EXTON, Pa.—Enviroflex, a new flexible double-wall piping system from Total Containment, Inc., gives the petroleum industry a new approach to underground storage and secondary containment.

The system consists of flexible primary piping and secondary jacketing, and a series of unique surface chambers within the dispenser and tank sumps.

This arrangement provides both primary and secondary containment from tank outlet to dispenser, completely eliminating exposed underground piping joints, fittings and connections where most reported leaks occur. It also provides secondary containment for dispensers, pumps and manways.

If a leak should occur, the surface access chambers under the dispensers make it easy to pinpoint and repair the problem. The system offers remote leak detection, with a number of fluid detection sensors available, featuring alarm and automatic shut-down capabilities.

Contact Total Containment, Inc., 306 Commerce Drive, Exton, Pa. 19341 or call 215-524-9274.

CIRCLE #309

Lebanon adds new fertilizer

LEBANON, Pa.—Lebanon Turf Products recently introduced a granular homogeneous starter fertilizer for use on professionally maintained, low-cut turf areas such as greens and tees.

Country Club 10-18—18 A. O. S. (Aerification-Overseeding-Starter) assures successful seeding and provides even nutrient distribution. This 1-2-2 ratio contains 35 percent organic nitrogen and 2.2 units WIN for safe and sustained feeding, plus 100 percent sulfate of potash.

This product permits superintendents to spoon feed cool-season turf in overseeding situations and is ideal for USGA greens and high sand turf areas.

Contact Lebanon Turf Products, P. O. Box 180, Lebanon, Pa. 17042 or call 800-233-0628.

CIRCLE #310

Herbicide and fungicide tailored to green industry

PHILADELPHIA, Pa. — Rohm and Haas Company, manufacturer of specialty chemicals, has issued new Kerb WSP herbicide and Fore fungicide specimen labels.

The labels are part of an ongoing program to publish use directions, design packaging, refine formulations and improve distribution to better serve customer needs, according to Robert Gordon, turf and ornamental products market manager.

The labels are tailored to the specific needs and application methods of golf course superinten-

dents, grounds keepers, commercial growers and others in the turf and ornamental industry, according to the company.

The herbicide specimen label provides use directions for poa annua control in Bermudagrass, and broadleaf and grassy weed control in woody ornamentals, nursery stock and Christmas trees.

Similarly, the fungicide specimen label targets disease control in assorted turf grasses and ornamental flowers, shrubs and trees.

There is new color-coded printing on labels and containers. Brown

is the signal color for the Kerb specimen label and package, and will designate future turf and ornamental herbicides.

As an added advantage for handling and mixing the product, Kerb herbicide is packaged in pre-measured, water soluble pouches.

The Fore label and package are printed in green.

Copies of the new specimen labels are available from Rohm and Haas Company, Marketing Services Dept. T/O, Independence Mall West, Philadelphia, Pa. 19105.

CIRCLE #311

Grace-Sierra answers requests

MILPITAS, Calif. — Grace-Sierra Horticultural Products Co. has introduced Peters Professional water soluble fertilizers in a no-stain formula.

The blue color tracer does not stain hands or clothes and washes away quickly with soap and water.

The new fertilizer is in response to a request from growers that the staining color tracer from the Peters water soluble fertilizers be removed.

For more information contact 408-263-8080.

CIRCLE #312



EstateKeeper backpack sprayer

New sprayer gives longer use, more pressure

LOS ANGELES, Calif. — SP Systems has introduced the EstateKeeper backpack sprayer, featuring a patented factory sealed diaphragm pump capable of producing 70 pounds-per-square-inch of pressure.

The four-gallon sprayer has a wide 6-inch fill opening and a safety check valve in the cap to prevent spills if the unit is knocked over. The sprayer is tamper proof.

The pump, constructed of non-corrosive materials, is capable of more than two million pump strokes and two years of constant use.

Contact Ferro Pagliai, president, SP Systems, Inc. 11818 Wilshire Boulevard, Suite #210, Los Angeles, Calif., 90025 or call 213-820-1045.

CIRCLE #303

Growth enhancer compatible with many herbicides

MEMPHIS, Tenn. — Floratine Products Group has introduced Proliff-RC, a biostimulant-based growth enhancer compatible for programmed use in conjunction with turfgrass regulator products used as herbicides.

A variation of FPG's widely-used Astron 5000 product, Proliff-RC contains high auxins and cytokinins but no gibberellic acids which might counteract the anti-gibberellin activity of the regulators.

Proliff-RC is designed to enhance the health and color of the desired turfgrass while not inhibiting the killing effect of the undesirable species.

Floratine Products Group may be contacted at 901-528-1713.

CIRCLE #313

Chipco Ronstar easier to handle

As a result of a new granular formation, Chipco Ronstar brand oxadiazon herbicide now is easier to handle and use.

Chipco Ronstar G now is carried on a granule made from a by-product of recycled paper. The result is less dust during loading application of the herbicide and a more uniform spread pattern.

Revised calibration settings accommodate faster flow.

For more information call 919-549-4689.

CIRCLE #314



Signs That The New Cushman® Turf Master Has Arrived.



Anything Else will Sell You Short.

Compare feature after standard feature, and you'll arrive at one conclusion: the Cushman Turf Master is easier to calibrate, easier to operate, and the most accurate.

Compare the Vehicle.

No competitor provides the absolute ground speed control that's critical for precise spraying. You get

it — and a lot more — only from the Cushman Turf-Truckster™ vehicle.

Compare the Sprayer.

The latest from SDI features a new generation Hypo polypropylene pump, mechanical and bypass agitation, 15' or 20' booms, three pressure gauges — only a few of the many features the competition doesn't offer.

Compare the Facts for Yourself.

Call toll free 1-800-228-4444 for a free comparison brochure, or contact your Cushman dealer for a demonstration. You'll see that the Cushman Turf Master is far and away your best buy.

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Built to Last

CIRCLE #132

Above-ground tank offers added safety

SANTA ANA, Calif. — Associated Concrete Products, Inc., a division of the Quikset Organization, now is manufacturing "ConVault" above-ground fuel storage tanks in their Santa Ana and Livermore facilities.

Delivery and installation are provided by trucks with special engineered cranes.

The ConVault is a U. L.-listed rectangular steel tank either 1/8-



Associated Concrete Products above-ground storage tank

or 3/16-inch thickly wrapped in secondary containment, consisting of a 30-millimeter polyflex polyethylene geomembrane and

encased in six inches of monolithically poured reinforced concrete.

The tank provides a two-hour

fire wall required by N.F.P.A. and comes with a 20-year or 30-year warranty. The tank is also ballistic proof.

The above-ground design enables visual inspection for leaks, and eliminates the need for expensive underground monitoring and testing equipment. They are available in sizes from 250 to 2,000 gallons.

For more information on ConVault or any other Associated Concrete products contact John Schmuckal at 4301 West MacArthur Boulevard, Santa Ana, Calif. 92704 or telephone 714-557-7470.

CIRCLE #304

Erosion blanket helps germination and protects seed

ARLINGTON, Tex. — American Excelsior Company's latest environmentally-safe erosion control product is Quickgrass, a dyed green wood excelsior erosion control blanket with a photodegradable netting applied to one side.

Constructed from 100 percent Aspen curled wood fibers, Quickgrass is designed to prevent erosion, assist in germination and protect seedlings.

Durable and designed to remain in place on even the roughest terrain, the top side of Quickgrass is covered with a photodegradable extruded plastic mesh, and is smolder resistant without use of chemical additives. It provides ideal ground conditions for fast turf development, retains moisture, controls surface soil temperature fluctuations, conforms to the terrain and protects against sun burnout.

Quickgrass expands when wet, creating a "clinging" effect to the soil. When wet, the blanket becomes twice as thick, adding protection during heavy rain. By absorbing and releasing moisture, Quickgrass returns moisture to seedlings to improve germination.

Contact Ken Starrett, vice president, marketing, American Excelsior Company, 850 Avenue H East, P. O. Box 50678, Arlington, Tex. 76011 or call 817-640-1555.

CIRCLE #316

Ringer markets spring fertilizer

MINNEAPOLIS, Minn. — Ringer Corporation is marketing a new fertilizer product designed for early spring application to Bermudagrass greens.

Bermudagrass Greens 12-2-26 is a bridge between purely natural options and chemical applications.

It contains completely natural protein sources and ammonium sulfate for desired quick spring green-up. Iron phosphate citrate is the product's source of fully-chelated iron.

It is manufactured in finely granulated form, appropriate for greens use. For information contact 612-941-4180.

CIRCLE #317

PROMPT receives EPA registration

PROMPT herbicide, now registered by the Environmental Protection Agency and labeled for use on turf, is a low-atrazine alternative that provides broad spectrum broad-leaf weed control.

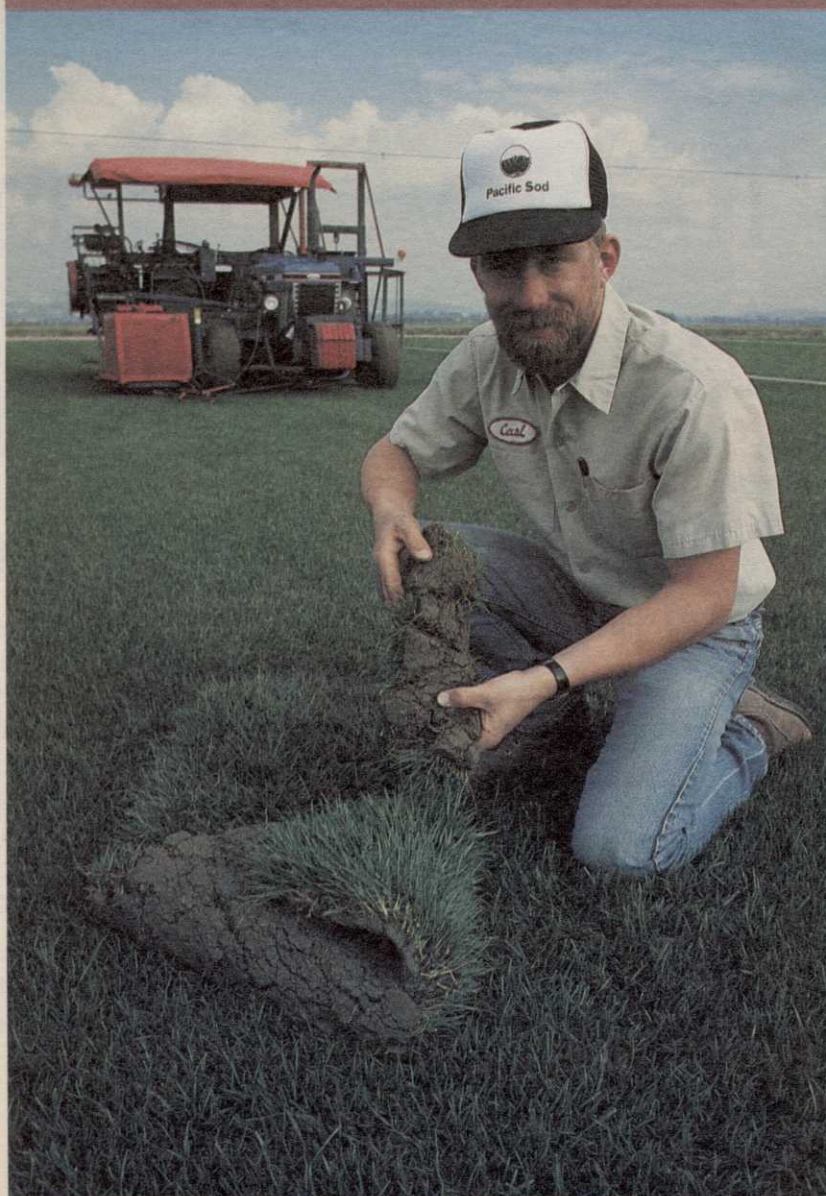
The BASF Corp. product can be applied on established and newly established St. Augustine grass, zoysiagrass and centipedegrass as soon as 10 days after sprigging or plugging.

It is effective on two dozen annual broad-leaf weeds, in addition to controlling tough perennial weeds.

For more information contact 919-361-5722.

CIRCLE #318

YOUR SEED SOURCE



Carl Aebersold, harvesting crew foreman at Pacific Sod, Camarillo, CA, is pleased with the above-, and below-surface performance of dwarfed Monarch turf-type tall fescue.

Quality Turf-Seed varieties developed and produced for turf professionals.

Species	Variety
Improved turf-type Kentucky Bluegrass	Challenger Columbia Midnight Galaxy blend
Imp. Common Ky.	Voyager
Improved turf-type perennial ryegrass	Birdie II Charger Citation II Manhattan II Omega II Remington Saturn Alliance blend CBS II blend
Improved hard fescue	Aurora
Improved Chewings fescue	Shadow
Improved Sheeps fescue	Bighorn
Improved creeping fescue	Fortress Shademaster
Improved tall fescue	Apache Bonanza Eldorado Monarch Murietta Olympic Silverado Triathalawn blend
Improved creeping bentgrass	Penncross Penneagle PennLinks
Creeping bentgrass blend	Pennway

TURF-SEED

PO Box 250, Hubbard, OR 97032
503/981-9571 FAX 503/981-5626
1-800-247-6910

CIRCLE #133

The World's Best Golf provides armchair view of top courses

By Peter Blais

Want to visit the world's top courses from the comfort of your favorite recliner? Then crack open a beer and settle back with William H. Davis' *The World's Best Golf*.

The founder of *Golf Digest* tapped his own globe-trotting golfing experiences and the talents of internationally known photographers Stephen Szurlej of *Golf Digest* and Brian Morgan of *Scotland* to create a 312-page travelog of the world's best facilities.

Davis organized the golf globe into clusters, regions "where you can go off and play golf on a number of different courses and stay in one place. That's the best way to enjoy a trip..." Clusters are found within the United States, Great Britain, Ireland, continental Europe, Australia, Canada, the Far East, Mexico and the Caribbean.

Each cluster lists several courses along with course type (private, public, resort), designer, yardages and general information regarding layout, history and best-known holes. The Los Angeles cluster, for

example, describes three George C. Thomas Jr. layouts — Riviera and Los Angeles country clubs and Bel Air.

"Ben Crenshaw commented that he enjoyed a Thomas course because of its subtleties," Davis noted.

The goal of the photos was to give a feel for not only how the course looked, but also how it played. Szurlej and Morgan succeeded admirably.

Of award-winning caliber is a shot through the cactus behind the ninth

green and leading back along a mounded fairway that disappears into the distant purple mountains surrounding Forest Highlands in Arizona.

And the viewer gets all too clear a picture of the lack of level lies along the 14th hole at Scotland's St. Andrews.

Davis shows an understanding of the difficulties facing today's architects in matching these tapestries from the past, and of the important environmental role played by su-

perintendents.

"Protecting our wetlands and our deserts, the use of pesticides and fungicides and the management of our water resources are the major challenges," he writes in the preface. "As Jack Nicklaus admits, 'Muirfield in the United States wouldn't have been built if today's wetland restrictions were in force.'"

Davis pays homage to the designers who work with today's environmental regulations yet still craft works of art, like Dan Maples,

who built a 600-foot bridge between the first and second holes to span an environmental problem at The Witch in Myrtle Beach, S.C.

And despite fears that modern designers are laying out courses to make glitzy pictures for magazines, rather than to be easily maintained or enjoyable for golfers, Davis believes "the courses of the 1990s will come to stand tall next to the revered giants."

The World's Best Golf costs \$49.95 and is published by Pocket Books.

DON'T MISS THE NATION'S LARGEST REGIONAL TURF SHOW

OTF

25TH ANNUAL CONFERENCE & SHOW

The Ohio Turfgrass Foundation is proud to sponsor the 25th Annual OTF Conference And Show in Cincinnati, Ohio, December 2-5. This year marks the silver anniversary of the OTF show and is sure to be the most exciting ever.

THE REGIONAL SHOW THAT APPEALS TO PROFESSIONALS NATION-WIDE

In 1990, professional lawn care, golf course, maintenance, athletic field, and public turf managers came to Cincinnati from 35 states.

They'll be in Cincinnati again this December to learn from the industry's top experts, to share ideas with over 4,000 other pros like themselves, and to take a close look at one of the nation's largest displays of equipment, turf care products and supplies available to the turf industry.

FOUR OF THE MOST ACTION-PACKED DAYS OF THE TURFGRASS YEAR

Whatever your business or career, you'll find what you need at OTF. The huge show floor of the Cincinnati Convention center will be filled with all the tools of your trade. The educational conference includes university researchers and industry professionals offering sessions and workshops on:

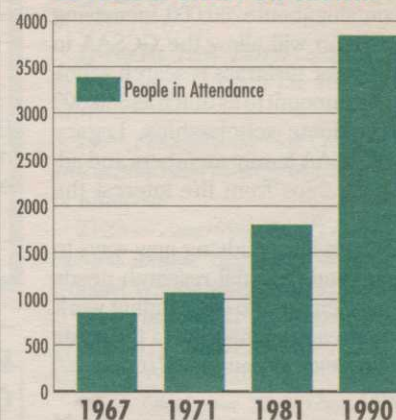
- Golf Turf
- Lawn Care
- Grounds Maintenance
- Sports Turf

Many of these sessions qualify for pesticide recertification credits.

NEW! FOR THE '91 OTF SHOW

New for 1991 will be **Buckeye Beer Garden** on the show floor, and a **Silent Auction** to give you the chance for some fantastic bargains. Be there, and join the fun!

25 YEARS OF STEADY OTF GROWTH



Steady growth for 25 years has attracted over 45,000 green industry professionals to the OTF. Plan now to be in Cincinnati December 2-5 to help celebrate 25 years of industry excellence.

YES! PLEASE SEND MORE INFORMATION ABOUT THE 1991 OTF CONFERENCE & SHOW.

Check appropriate boxes:

- ☐ I'm interested in exhibiting
☐ I'm interested in attending
☐ I'm interested in OTF membership

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NCA publishes leadership guide for club officials

WASHINGTON, D. C. — "The Private Club Leadership Guide" is the National Club Association's latest club director reference series publication.

The guide aims at providing private club officers, directors and management teams with a formula for building productive working relationships, a method for evaluating club organization, and a framework for the selection and orientation of officers, directors and general managers.

Next books due are "Model Golf Rules — A Guide for Clubs," and "Understanding the Federal Wage and Hour Laws," in a revised format.

For more information contact the National Club Association at Washington Harbour, 3050 K St. N.W., Ste. 330, Washington, D.C. or telephone 202-625-2080.

LABB releases software booklet for green industry

SCOTTSDALE, Ariz. — LABB Systems/Software has released a new color brochure illustrating the company's line of computer software for the golf course and turfgrass manager.

The brochure, divided into pamphlets detailing TRIMS grounds management software, graphics enhancement and TRIMS tree inventory system, answers questions most frequently asked about computers.

To obtain a copy, call 800-733-9710 or write LABB Systems/Software, 6018 E. Osborn Rd., Scottsdale, Ariz. 85251.



CINCINNATI, OHIO • DECEMBER 2-5, 1991

Golf Course Marketplace

GCSAA funding

Continued from page 1

Association's research programs.

"GCSAA has been providing funds for turfgrass research grants and student scholarships for more than 35 years, but the demands are growing and our board has made development one of its top priorities," said GCSAA Executive Director John M. Schilling.

"Dedicating full-time staff to this effort is evidence of GCSAA's commitment to providing the scientific knowledge and educational resources the professional superintendents of the future will need."



Pat Jones

Now we'd like to complement the USGA's efforts with some real-time studies to document that properly maintained golf courses are environmentally sound.'

— Pat Jones, GCSAA
Development Director

Jones said the Robert Trent Jones Fund, the primary funding source for scholarships, currently contains about \$250,000. Increasing that to \$1 million will allow the GCSAA to finance its regular turfgrass research scholarships (which amount to as much as \$30,000 annually), graduate scholarships, Legacy Awards for GCSAA family members and additional scholarships from the interest the fund will earn.

The GCSAA is also studying new ways to meet national and regional research needs that will "complement the outstanding work the USGA is already sponsoring in the areas of turf breeding and environmental research," Schilling said.

One project under consideration would establish one or more research centers on new or existing golf courses.

"A GCSAA research center could give us the opportunity to perform key studies of practices on actual golf courses and be a place for education and training as well," Schilling said.

Jones said he considered his new post "a real challenge" and that there are "some amazing opportunities for GCSAA to become a leading force in research."

The association has worked with the USGA since 1983, co-funding projects that have led to new strains of Bermudagrass and buffalograss.

"The USGA has concentrated on university-based research," Jones said. "We've looked at the GCSAA as the delivery system for the benefits of that research."

"Now we'd like to complement the USGA's efforts with some real-time studies to document that properly maintained golf courses are environmentally sound. We don't want to be redundant or duplicate anyone's research. We'll stress work on golf courses. How much we fund will depend on the nature of the projects."

Jones said he will contact individuals and GCSAA members, as well as foundations and corporations inside and outside the golf industry in the coming months to help fund the new program.

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CIRCLE #147

September

1-3 — International Garden Trade Fair in Cologne, Germany. Contact show producers at 212-974-8836.

3-5 — IoG Sports & Leisure World Trade Exhibition in Peterborough, England. Telephone 0908 311856.

6-7 — GCSAA 65th anniversary and dedication of new headquarters building in Lawrence, Kan. Contact GCSAA at 913-841-2240.

11 — Poa Annual Golf Tournament sponsored by NEGCSA in Lake George, N.Y. Contact 518-783-1322.

11-14 — National Club Assn. Club Leadership Conference at Grand Traverse Village, Mich. Contact 202-625-2080.

12 — Ohio Turfgrass and Landscape Horticultural Field Day in Columbus. Contact Dr. Karl Danneberger at 614-292-2001.

12-14 — Crittenden Golf Development Expo in Orlando, Fla. Contact 800-443-8318.

13-15 — Florida Nursery and Allied Trades Show in Orlando, Fla. Contact FNGA at 407-345-8137.

15-17 — GMA Show-International Professional Lawn, Garden and Outdoor Power Equipment Exhibition in Kempton Park, United Kingdom. Contact Andry Montgomery Group at 502-473-1992.

15-17 — Alabama Turf Conference in Auburn. Contact Coleman Ward at 205-844-5479.

16-17 — Marketing to Golf Facilities Seminar in Chicago sponsored by Golf Course News. Contact Becky Quinlan at 207-846-0600.

16-19 — Northwest Turfgrass Conference and Exhibition in Couer d'Alene, Idaho. Contact NTA at 206-754-0825.

17 — Metropolitan GCSA Professional Turfgrass Field Day at Rye N.Y. Contact Bob Lipmann at 914-248-7476.

17-19 — Va. Tech. Turf & Landscape Field Days in Blacksburg. Contact J.R. Hall III at 703-231-5797.

19 — Pennsylvania Golf Course Owners general membership meeting at Butler's Golf Course in Elizabeth.

21-25 — American Society of Irrigation Consultants annual conference in Kauai, Hawaii. Contact Wanda Sarsfield at 415-516-1300.

23 — Poa Annual Golf Tournament sponsored by Central NYGCSA in Rome, N.Y. Contact Rick Canale at 607-753-3021.

25 — Oklahoma State University Turfgrass Nursery and Floriculture Field Day in Stillwater. Contact Kim Wall at 405-744-5414.

25 — 25th Annual CGSA Fall Field Day at Carling Lake Golf & CC in Lachute, Quebec, Canada. Contact Canadian Golf Superintendents Association at 800-387-1056.

25-28 — National Club Assn. Club Leadership Conference in Tucson, Ariz. Contact 202-625-2080.

26-29 — Professional Plant Growers Assn. annual international conference and trade show in Nashville, Tenn. Contact 517-694-7700.

October

2-3 — 31st Annual Southern Calif. Turfgrass Expo in Costa Mesa. Contact Chuck Wilson at 714-951-8547.

3 — GCSA of New England Research Tournament at The Country Club in Brookline, Mass. Contact Paul Miller at 508-369-5704.

7 — Allied Association Meeting at St. Ives CC and Bend CC. Contact Georgia GCSA at 404-769-4076.

7-9 — Golf Course Europe in Wiesbaden, Germany. Contact Ellen McGillivray at (03465) 73777.

8 — 5th Annual West Texas Turfgrass Conference Golf Tournament and Sponsors Bar-B-Que at Western Texas College. Contact George Fugitt at 806-792-7442.

8-10 — Kentucky Turfgrass Conference and Field Day in Louisville. Contact Dwight Barkley

Continued on page 44

Continued from page 43

at 606-622-2228.

12—*Pennsylvania Golf Course Owners state-wide dinner meeting at State College.*

13—*Keystone Public Golf Assn. annual meeting in State College, Pa.* Contact 800-762-3577.

13-16 - *Fla. Turfgrass Annual Conference & Show in Jacksonville.* Contact 407-898-6721.

14-16 — *Cornell Greenhouse Conference, "Systems that minimize environmental impact" at Ithaca, N.Y.* Contact 607-255-2166.

14-17 — *American Seed Trade Assn. Management Academy in West Lafayette, Ind.* Contact 317-494-4247.

21-24 — *Constructed Wetlands for Water Quality Improvement symposium in Pensacola.* Contact 904-474-3722.

24-26—*Summit 91 Women in Golf in Daytona Beach, Fla.* Contact LPGA at 9040254-8800.

November

2-5 — *American Seed Trade Assn. Lawn & Farm Seed Conference in Kansas City.*

3-5 — *Georgia GCSA Annual Meeting at Jekyll Island Club Resort.* Contact Georgia GCSA at 404-769-4076.

5-6 — *Indiana State Lawn Care Association Conference and Show in Indianapolis.* Contact ISLCA at 317-575-9010.

5-8 — *New York State Turfgrass Association Turf and Grounds Exposition in Rochester, N.Y.* Contact NYSTA at 800-873-TURF.

7-10 - *Golfworld 91 in Dusseldorf, Germany.* Contact Monika Waraczynski at (0211) 45600-543.

10-12 — *Canadian Seed Trade Assn. semi-annual convention in Ottawa, Ontario.*

10-13 — *International Irrigation Exposition in San Antonio, Texas.* Contact The Irrigation Association at 703-524-1200.

14-16 — *Landscape Maintenance Association Meeting and Demo at a site to be announced.* Contact LMA at 813-584-2312.

17-19 — *Ohio Seed Dealers Assn. winter meeting in Columbus.* Contact Richard Moore at 614-459-1018.

17-21 — *Green Industry Expo in Tampa, Fla.* Contact PLCAA at 404-977-5222.

19-20 — *4th Annual Southern Grounds & Turf Maintenance Exhibition and Conference in Myrtle Beach, S.C.* Contact S.C. State Board for Technical & Comprehensive Education at 803-737-9355.

19-21 — *Inland Northwest Turf and Landscape Conference and Trade Show in Spokane, Wash.* Contact show producers at 800-729-5904.

21 — *Pennsylvania Golf Course Owners general membership meeting in Monroeville.*

December

2 - 6th *Your Home Turf at Michigan State University in East Lansing.* Contact Dr. Frank Rossi at 517-353-0860.

2-5 — *Ohio Turfgrass Foundation Annual Show in Cincinnati.* Contact 614-292-2601.

3 — *New Hampshire GCSA Annual Meeting in Concord, N.H.*

3-4 — *Southern Grounds and Turf Maintenance Expo in Myrtle Beach, S.C.* Contact show producers at 800-553-7702.

3-5 — *Rocky Mountain Turf Conference in Denver.* Contact 303-688-3440.

6-7 — *GCSAA regional seminar in Fort Worth.*

8-11 — *CGSA's 43rd Annual Canadian Turfgrass Conference and Trade Show and 25th Annual Meeting in Toronto.* Contact Canadian Golf Superintendents Association at 800-387-1056.

9-11 — *22nd Annual Georgia Turfgrass Conference & Trade Show in Atlanta.* Contact Extension Conference Office at 912-681-5189.

9-11 — *Texas Turfgrass Conference in Fort Worth.* Contact David Byrd at 915-685-7363.

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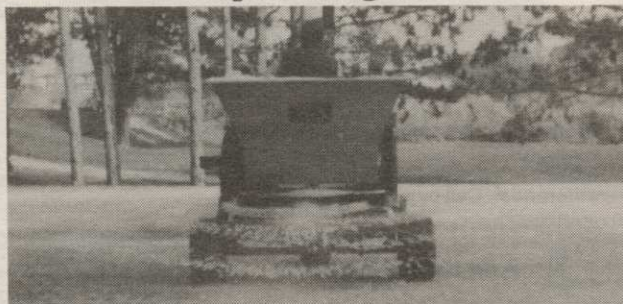
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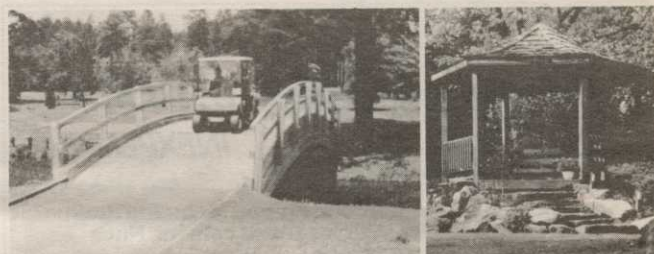
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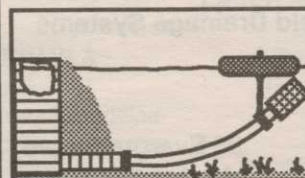
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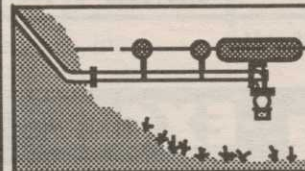
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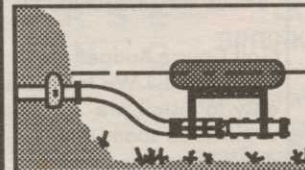
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Continued from page 44

9-12 — *Ohio Turfgrass Conference and Trade Show in Cincinnati.* Contact Ohio Turfgrass Foundation at 614-292-2601.

10-12 — *22nd Annual Georgia Turfgrass Conference & Trade Show in Atlanta.* Contact 912-681-5189.

1992

January

7-8 — *Wisconsin Turfgrass Association Winter Conference in Oconomowoc.* Contact Wayne Otto at 414-242-0142.

9-10 — *New Hampshire Turf Conference in Manchester.*

12-16 — *Club Managers Association of America Annual Conference and Exposition in San Diego, Calif.* Contact 703-739-9500.

13-16 — *32nd Va. Turf & Landscape Conference & Trade Show in Richmond.* Contact Randeem Tharp at 804-340-3473.

14 — *Landscape and Nursery Expo in Sacramento.* Contact Kenny Kakutani at 916-442-4470.

16-18 — *Mid-Am Trade Show in Chicago.* Contact 708-526-3993.

19-21 — *New York State Arborists Assn. Empire State Tree Conference in Albany.* Contact 518-783-1322.

20-22 — *62nd Annual Michigan Turfgrass Conference in Lansing.* Contact Mike Saffel at 517-353-9022.

February

10-17 — *GCSAA Annual Conference & Show in New Orleans.**

24-27 — *American Seed Trade Assn. Management Academy in West Lafayette, Ind.* Contact 317-494-4247.

* — 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.

Dormant seeding

Continued from page 46

Poa with bentgrass in late summer (when Poa is at its strongest stage) to achieve a greater bentgrass population, Ross suggests waiting until late fall and dormant seeding. The dormant-seeded bentgrass should germinate in early spring when Poa is at its weakest stage.

Second, using Round Up before the Poa goes dormant, followed by dormant seeding of bentgrass, can help the bentgrass population.

"I'd try experimenting with a conversion program on a few par-3 fairways first to see how it works," Ross advised. "Bentgrass can get the best of Poa in the spring when Poa is basically just lying there."

The best time to dormant seed varies with the region, Ross said. In Southern Maine, Nov. 8-12 works best. Later seeding resulted in later germination come spring.

Ross isn't certain why dormant seeding works. He theorizes that the first two steps in the germination process — water absorption by the seed followed by the swelling that initiates biochemical and morphological events — are accomplished in the fall and early winter. The primed seed then freezes with the enzyme and carbohydrate processes that occur during actual germination going dormant. Come spring, the partially germinated seed has a three- to five-week jump on spring-planted seeds.

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CIRCLE #161

Sow them late and reap the benefits early

Maine superintendent finds that dormant-seeded bentgrass sprouts earlier and stronger

By Peter Blais

He thought it was ridiculous. But the bank insisted. Seed the last four holes before winter or no more construction money.

Falmouth (Maine) Country Club superintendent Kevin Ross had lived in the Pine Tree State a good portion of his life and knew temperatures in early November were too cold for bentgrass seeds to germinate. He had never tried dormant seeding (seeding when soil temperatures are too cold for germination) and didn't know if the seeds would survive the Southern Maine winter.

But the bank was calling the shots and the new course needed the cash if it wanted to stay on schedule. Grudgingly, Ross planted the remaining holes.

The results were dramatic. The dormant-seeded holes germinated very early in the spring of 1988 and a fine stand of turf resulted. Soon they were in better shape than the holes seeded early enough for fall germination. In fact, much of the seed that germinated the previous fall didn't survive the winter.

"I was against the original dormant seeding," recalled Ross, pointing at a plug of dormant-seeded turf with inch-long roots on a recent late-April morning. "I was amazed when we had grass coming up in early April. You usually can't



Falmouth Country Club superintendent Kevin Ross (left) displays a section of the club's driving range that was dormant-seeded with bentgrass. A close-up view of the healthy turf in a tee area is highlighted (right). Ross believes dormant-seeded turf areas come up earlier and healthier than areas planted in early autumn.



get grass to germinate around here until the middle of May."

Ross was so taken with the results he tried it elsewhere. That fall his crew aerified and dormant-seeded some weaker fairways. They also dormant-seeded divots on tees and a driving range target green. The results were the same.

"While some fellow superintendents were re-seeding winter-damaged greens with bentgrass and getting poor germination results, I was noticing excellent germination in our

experimental areas. These results were noticed from early- to mid-April, with soil temperatures of only 40 to 45 degrees," Ross wrote for Seed Research of Oregon for which he is an advisory committee member.

Bentgrass generally germinates when temperatures reach about 55 degrees, "or at least that's what they teach you in turf school," he added.

In the fall of 1989, Ross' crew groove seeded a practice range tee in two directions. Germination occurred in soil temperatures between 38 and 43 degrees.

"The dormant-seeded areas were mowable before before I had germination from spring seeding on some winter-damaged greens," he wrote.

Ross now routinely dormant seeds greens, tee divots and trouble spots on fairways as an

insurance policy against winter damage. To help the process, he fertilizes the areas with a slow-release fertilizer. He minimizes erosion of newly seeded areas with mulch, turf covers or erosion blankets. Turf covers are moved from greens to other dormant-seeded areas as soon as possible in the spring. Time permitting, he treats the areas with a quick-release fertilizer in early spring.

The \$5,000 annual price tag for seed, materials and labor is a small price to pay for healthy turf that comes up four to six weeks early, particularly in an area with a short growing season, Ross said.

Dormant seeding could also prove useful on courses converting from *Poa annua* to bentgrass, Ross said. This could be accomplished in two ways.

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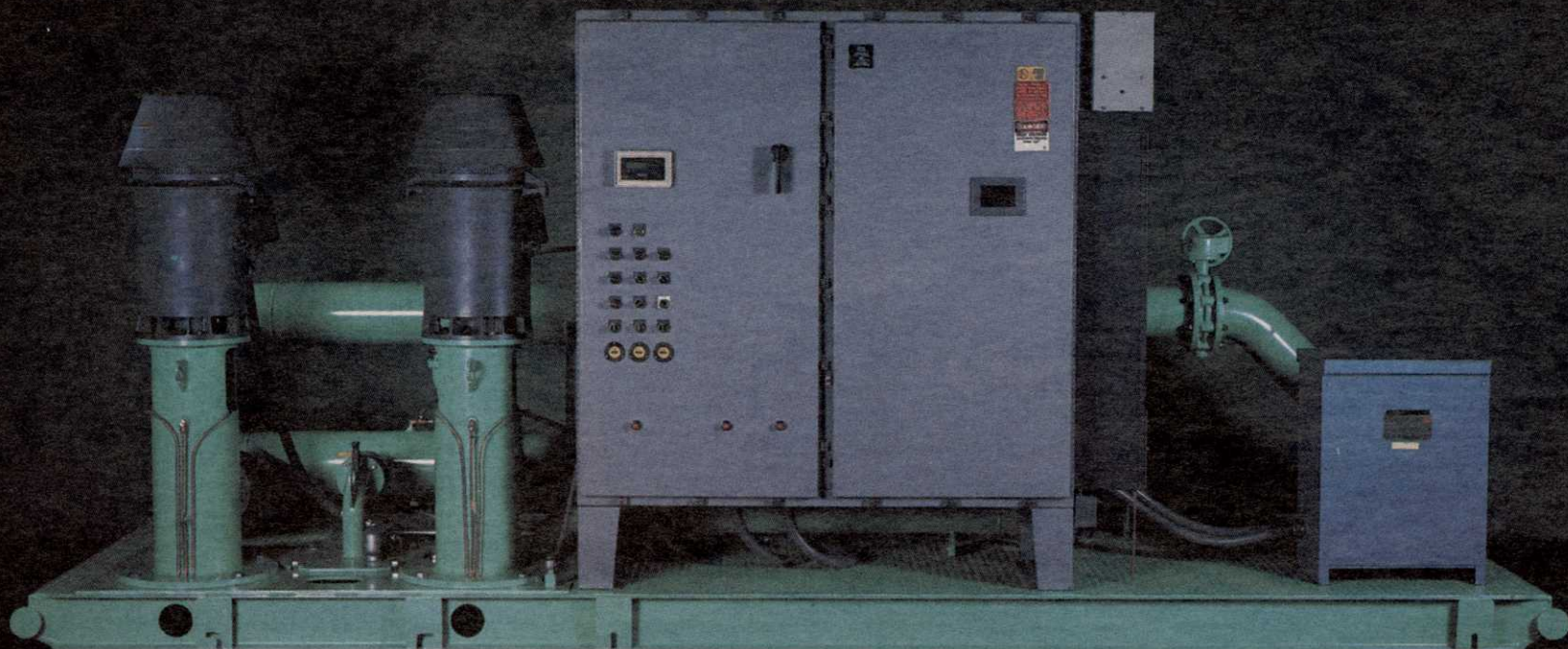
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