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 its 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 researchers from the University of Rhode Island, according to Abrams. Ground water is the sole source of drinking water for the area's 3 million residents.

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 Substances 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 enforcement strategy that increased the penalties for first-time violators. Noting that Mobay had a record of past violations, the EPA contended that the new federal law had established a more rigorous standard.

The penalties were assessed for illegal shipments of Mobay's Mobilcol 2186, a novel chemical sold as an additive to increase the density of glass. The EPA said that Mobay shipped 2.3 million pounds of the compound instead of the 2,000 pounds allowed under the new law.

Contaminating ground water with the chemical could result in its use on golf courses and in drinking water supplies. In some cases, the EPA said, Mobay and Allied Colloids could have been responsible for up to 14% of some pesticide's use on Long Island golf courses.

The agency said that the 15% penalty assessments were balanced with the dollar amounts that the two companies could be assessed for the same violations in the future.

The EPA said that the assessment of $4.75 million was determined by applying a formula that considered the volume of the compound shipped, the extent of Mobay's previous violations and the extent of the company's ability to pay the penalty.

"The agency has a decision-making process that takes many factors into account, and the formula for assessing penalties is designed to allow the agency to achieve a number of goals," said a spokesman for the EPA.

The agency added that the assessment of $4.75 million was in line with other assessments of relatively minor violations.

The agency also noted that it had not yet determined whether the agency could seek a fine against Allied Colloids.

Continued on page 35
This may be the most beautiful golf car you've ever seen.

She's been around awhile. Up and down countless hills. Carelessly smashed and violently thrashed. Stuck, struck, rocked, rolled, bumped, bruised, used and abused.

Yes, she's worn. But worn out? Not yet.

That's because she's a Yamaha. And the beauty of that distinction? She's a tougher car—built with tougher standards. So Yamaha cars, gas and electric, outperform and outlast all others. On your course and your bottom line.

So if you're not driving a Yamaha fleet, you're not driving the kind of revenues you could be. And that's trouble. But doing something about it is no trouble at all. Just give us a call at 1-800-447-4700. We'll show you some real beauties.

YAMAHA USA
Better in the long run.
Coastal Comm. appeals Pebble Beach tee time policy

Pact with Monterey's Board of Supervisors brought into doubt

SAN FRANCISCO, Calif. — Pebble Beach Golf Links 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 into the tee with an appeal of that agreement, on behalf of 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 "trivial," 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.

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, Columbus, Ohio; Mike Stein, Arthur Andersen & Co., Miami, Fla.; Jim Fazio, president, Fazio Design Inc., Juno Beach, Fla.; Trevor Jackson, Golf Marketing and Sales — resort or golf hotels.

For more information, contact Executive Conferences and Seminars, Inc., 875 4th St., Washington, D.C. 20001. (202) 347-9277.

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 Councilman and critic Desyn 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 300-room all-suite hotel, 50-room health spa and tennis complex.

Last April, the council approved a $500-million, 55-year tax rebate on the Canyon project. Hodges threatened a lawsuit, 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.

© 1991 CIBA-GEIGY Corporation, Turf and Ornamental Products, Box 18300, Greensboro, NC 27419. Always read and follow label directions.

GOLF COURSE NEWS
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 $400,000, 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 Kohala Resort near Keahole Airport.

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 Aniston-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 $50 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 San Gabriel, and now with project 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 Dafa-McCure-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 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.

Golf Course News is published bi-monthly by United Publications, Inc., P.O. Box 997, 38 Lafayette St., Yarmouth, ME 04096. The newspaper is distributed without charge to qualified golf course superintendents, greens committee chairmen, club presidents, general managers and owners, as well as builders, developers and architects.

Second-class postage paid at Yarmouth, Maine, and additional office. Correspondence should be addressed to Golf Course News, P.O. Box 997, Yarmouth, ME 04096.

We anticipate to address changes to Circulation Manager, Golf Course News, P.O. Box 1357, Elmhurst, IL 60126-8347.

Di Giacomo insightfully combines the dynamics of nature, with innovative construction techniques to construct rock formations worldwide.

Representative Projects: Tamotsu Golf Club, Nara, Japan. J. Michael Poellot Golf Design Group

J. MICHAEL POÈLLOT GOLF DESIGN GROUP

IMPERIAL WING COUNTRY CLUB, NAGOYA, JAPAN

Baltimore County Golf Course Master Plan.

The comprehensive 205-page document substantiates the 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.
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 maintenance 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.

Sawmills 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.

Golf Dome 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 sea bird 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.

BEFORE YOU BUY JUST ANY BENTGRASS, GO BY THE BOOK.

Phone 1-800-547-0255 today for your complimentary copy of the Penn Pals catalogue. You'll see why Penncross, Penneagle, PennLinks and Pennway blend set the standard for bentgrass on golf courses.

Tee-2-Green Corp.
PO Box 250, Hubbard, OR 97032
FAX 503-981-5626
1-800-547-0255
Suits don't stop Carillon project

ROMEOVILLE, 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.

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.

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 remaining 2,700 acres.

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 Createem International Alberta Corp. and the province.

Createem 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 near Portland, and invests in Dallas, and invests in the state's largest spectator event, the new course.

built to last

Built To Last

RANSOMES

CUSHMAN

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

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. If the land sale is nullified, the northern 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."
**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 $2 more for non-resident players.

"The $2 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 easily 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.

"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 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.

**IF A TRUE-LINE PUTTING SURFACE IS WHAT YOU WANT— TRY Putter® Creeping bentgrass**

With its superior true-line putting surface and dark bluish-green color, Putter creeping bentgrass is fast becoming the choice of some of the finest courses around.

Tested side by side with the best-known bentgrasses, Putter exhibited superior color and excellent growth habit. With outstanding turf vigor, fine-leaf texture and improved resistance to take-all patch and other diseases. Add Putter’s dwarf growth habit, high-shoot density and aggressiveness against Poa annua, and you have a green that’s as tough as it is beautiful.

Not to mention one that satisfies your straightest shooters.

Put Putter up against the old favorites and compare. Putter quality #1. Putter density #1. Putter color #1. Putter disease resistance #1. Now, order Putter for the new world-class greens.

**$250M project will encompass three nine-holers**

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

The $850-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 $49 million. By using landfill 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 pose 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 Emil 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.

PUTTER'S DOWNTOWN LOCATION

CITY 100 W. 5300 Riverbend Avenue, Post Falls, ID 83854-9499 TWX: 5107760582 Jacklin PFLS 208/773-7581 FAX: 208/773-4846 Jacklin Seed Company

Another fine quality-controlled product of Jacklin Seed Company

**Creeping bentgrass**

The Green Seed Co. is a world leader in turfgrass science.Written approval is a must prior to use. The Green Seed Co. is a world leader in turfgrass science.

Additional green products are available. Please consult the Jacklin Greenline 2016 Catalog. Additional green products are available. Please consult the Jacklin Greenline 2016 Catalog.

The city has constructed a new, enhanced methane gas collection system and impaced the site by placing six feet of fill over the landfill.
Citizens raise funds, then oversee building of course

PETERSBURG, Ind. — A Pike County citizens' group interested in building a golf course since 1989 but stymied by lack of money took several fund-raising approaches. As a result, they are overseeing 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.

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 Alberts 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 phone directory. Mail addressed to him is listed in care of Wilford Lau.

Developer Lynn Snyder said the course is more directed to trade sources and $20,000 from the Atheists' Museum.

Shakespeare chain club nears completion in Ga.

FLOWERY BRANCH, Ga. — An upscale 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 19-hole private course.

Construction may be finished in late spring 1992. The clubhouse will be the former Atheists' Museum.

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 Alberts 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 phone directory. Mail addressed to him is listed in care of Wilford Lau.

Developer Lynn Snyder said the course is more directed to trade sources and $20,000 from the Atheists' Museum.

Shakespeare chain club nears completion in Ga.

FLOWERY BRANCH, Ga. — An upscale 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 19-hole private course.

Construction may be finished in late spring 1992. The clubhouse will be the former Atheists' Museum.

Glenmaura will ease lack of playing time

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.

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.

FLEXBRUSH

There's never been a faster, better, easier way to top dress greens!

Now you can turn your Toro or Jacobsen greens mower into the finest top dress brushing system ever invented, with FLEXBRUSH from Standard Golf. FLEXBRUSH enables you to save time, while avoiding unnecessary damage to your greens. It's actually a set of three brushes that follow contours and undulations like no dragging method can, and it's excellent for brushing after deep tine aeration. Plus, it installs quickly and easily.

For more information, contact your nearby authorized Standard Golf distributor.
**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 and townhouses is the focal point of a dispute between developers J. Scott Lipton of Bellingham, and Bob Taylor of Kirkland.

**West Palm Beach club boasts three Golden Bear courses**

WEST PALM BEACH, Fla. — Pooled among the finest private fitness and social gathering places in the area, Ibis Golf & Country Club's Bath and Tennis Club complex the region third.

On display will be such attractions 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.

**UNEbraska will perform research at new course**

LINCOLN, Neb. — A research park project in the Highlands area in northwest Lincoln areas 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 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**


Bob Gabin, 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 168 acres of new communities which have received certification."

**City sues over county ruling**

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 Ghidinetti, 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."

---

**It Stopped Just to Have Its Pi**

You're witnessing a rare sight. Toro's Reelmaster® 450 D actually standing still. A rare sight because the Reelmaster 450 D is so dependable that it goes and goes and goes. Giving you the high capacity mowing and precise even cutting you've been looking for.

Each cutting unit is connected to a universal joint, so it can float freely in any direction, following the contour of the turf for an even, uniform cut. Or it can be locked in a fixed position.

The Toro 450 D gives you protection against hydraulic fluid leaks. Wherever possible, hoses have been replaced with strong steel lines and O-ring seals protect connections. A hydraulic warning system flashes an alarm when the fluid level drops. For easy servicing, test ports for the hydraulic system are right on the side of the machine.

The Toro Company, Commercial Marketing Services, 8111 Lyndale Ave. So., Minneapolis, MN 55420.
Long Enough

Toro's exclusive variable clip control allows you to calibrate reel speed and mowing speed to give you the highest quality of cut in varying course conditions. Combine that with faster mowing speeds, up to 7.5 mph and 12.5 mph transport speed, and you're going to witness an increase in productivity. All controls are in easy reach of the operator to provide greater comfort.

The 450-D is designed with its weight evenly distributed around a center-mounted 50 hp engine for better balance. This means more uphill climbing ability than other machines and better traction.

For faster, easier mowing with more beautiful results, call your local Toro distributor for a demonstration of the Redmaster 450-D or contact Toro at the address below. A machine built from the ground up with proven Toro design experience. And that translates into the kind of productivity no one can argue with.

"Toro" and "Redmaster" are registered trademarks of The Toro Company. ©1988 The Toro Company.
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.

Second, the Golf Course News marketing conference will take place Sept. 16-17 at the Oakbrook 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.

Best Conditioned Course.

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 — Grass Seed Producers and Researchers — Special Advertising Section.

September — Soil Amendments.

October — Irrigation and Pumping Stations — Special Advertising Section.

November — Architects, Builders, 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 or par 36 while the group ahead has not completed play.

This is a regular practice at some courses, even though it could result in constant state of stress. Pressure is exerted from all sides in this question of keeping fast greens. As superintendent, we are not entirely blameless.

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 is as much as $200 million. My beef! The scare, the evacuation and all the subsequent hallucinations were a mistake.

Dr. Vernon House, the director of Disease Control, who had recommended the evacuation, now believes it was unnecessary. He says the scientific theory and methodology that led him and others to the conclusion were not quite complete.

Keep your comments coming!

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

By Jim Gilligan

Lists attract our attention. They enumerate our problems, pleasures and accomplishments. 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 Superintendent's 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 superintendents. 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 Gilligan, USGA agronomist who presented these facts at the Maine 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 course budgets. The human element demands attention. Low wages, 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 vague. The quality of writing, speaking and listening must be emphasized.

Public relations can be easy: be courteous to everyone; give staffs staff organization. Community activities are a means of establishing a solid public relations image.

3. Green Speeds (2). An important concern because of its impact on watering, pesticide use, equipment and labor. Fast greens and low-cut fairways perpetuate the problem of maintaining the grass in a constant state of stress. Pressure is exerted from all sides in this question of keeping fast greens. As superintendent, 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 decision-making 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 pesticides are means superintendents are using to eliminate any misuse of pesticide.

Superintendents understand the complexities of pesticide use and the financial and environmental cost.
Get from tee to green in one shot
Exceptional turf safety makes weed control better by a long shot.

Apply Dimension with confidence on a wide variety of turfgrasses.

With new Dimension® turf herbicide, you can go anywhere on the golf course and expect excellent turf tolerance. You can apply Dimension on many warm- and cool-season turfgrasses—even on creeping bentgrass.

When used according to label directions, Dimension will not cause discoloration or root injury. It also offers excellent overlap safety. And turf treated with Dimension will not be subject to foliar burn. In addition, Dimension won’t harm adjacent ornamentals, trees or shrubs.

Get better control with less herbicide.

Break-through chemistry in Dimension turf herbicide gives you long-lasting control of a broad spectrum of weeds, including crabgrass, spurge and oxalis. Yet, you don’t have to put down as much herbicide as you would with other preemergence products. That means there’s less material to mix. And it’s compatible with all common herbicides and fertilizers.

Preemergence and early post-emergence crabgrass control improves application flexibility.

Along with broad-spectrum control, Dimension lets you time your applications for optimum control. The advanced chemistry in Dimension gives you both pre-emergence and early postemergence control of crabgrass. That means you can now target goosegrass and other summer annuals, without worrying about already emerging crabgrass.* No other turf herbicide gives you so much flexibility during your busy spring season.

Permits fall overseeding.

With Dimension turf herbicide, you can conduct normal fall overseeding three months after an application. So you no longer need to choose between long-lasting control and overseeding safety.

Not moisture dependent.

Dimension is less affected by moisture than many preemergence products. Therefore, it will continue to provide control under excessive rainfall conditions.

If you need effective weed control, but don’t want to sacrifice turf safety, give Dimension a shot. Contact your agent for Dimension and ask about a trial. Or, for more information, call:

1-800-323-1421

Source: Academic and Monsanto data from Southeastern U.S. (1989-90 summary)

*Application should be made prior to tillering. **Pre-M is a trademark of LESCO, Inc.

ALWAYS READ AND FOLLOW LABEL DIRECTIONS FOR DIMENSION TURF HERBICIDE. Dimension® is a registered trademark of Monsanto Company.
Don't let players go on par-3s

To the publisher:

I read with interest the article on the winter damage to the Spokane golf courses Golf Course News. It's true it an civil service employee. The remark made by the unnamed person and his/her insulting remark shows how little I know the three superintendents of 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 crew members for a day.

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

Ever 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 our liking.

We'll 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

Spokane municipal supers defended

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 Janish has created adjacent to West Friendship's Leek Road in Howard County, Md., I would sure like to know where to locate it.

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 accuracy and development rather than power. The greens, putting green and fairway are all green and they would have to be a few inches higher if the course were built for the public. Willow Springs is a fine executive course in every sense of the word.

Sincerely,

David Whelchel

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 improve 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 public, especially beginner golfers, in how to play faster. However, I think you missed the mark in a few places.

In your first point, you mentioned that more signage might help. I agree that signage should be posted to allow faster players through the slower groups. This works well if the course is not full, but on today's jam-packed courses that start players 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 tee 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 another hour to get home and you have wasted 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 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 Wheelchel

P.S. — A twosome rarely has the right of way on a 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/Landscaping 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 architecture in the July issue. It gave me an indepth 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 article, 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

Brantford, Fla.

Don't let players go on par-3s

To the publisher:

Regarding your commentary in the July issue on par-3 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 hitting your shot when it is their turn, lining up your 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 marking down scores while standing on the green.

P.S. — A twosome rarely has the right of way on a 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/Landscaping 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 architecture in the July issue. It gave me an indepth 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 article, 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

Brantford, Fla.

Don't let players go on par-3s

To the publisher:

Regarding your commentary in the July issue on par-3 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.

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

With respect,

"Stay Green" Dean Fagerlin

Superintendent, Byrnes Park Golf Course

Ellicott City, Md.

Don't let players go on par-3s

To the publisher:

Regarding your commentary in the July issue on par-3 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.

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

With respect,

"Stay Green" Dean Fagerlin

Superintendent, Byrnes Park Golf Course

Ellicott City, Md.

Don't let players go on par-3s

To the publisher:

Regarding your commentary in the July issue on par-3 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.

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

With respect,

"Stay Green" Dean Fagerlin

Superintendent, Byrnes Park Golf Course

Ellicott City, Md.
Let's face it, in this business it pays to be backed by an industry leader. Because when your pump system goes on line, so does your reputation. And Flowtronex can help you keep both your golf course and your reputation intact with our incredibly reliable, power-saving pump station.

And how do we do all this? With an engineering breakthrough called Smoothflow™. Developed in 1986 by our team of engineers, Smoothflow is a sophisticated computer software program that automatically monitors and controls our pump station. Which means you no longer have a need for a pressure control valve. And because of this precise control, our Flowtronex variable speed pump stations (VSPS™) have made pressure spikes and pump-related line breaks nearly extinct on our more than 200 golf course installations.

Smoothflow software also helps budgets by slashing energy use 15 to 50% when compared to conventional pump stations using control valves. This is one of the many reasons our VSPS is the industry's most popular. In fact, superintendents have bought twice as many variable speed systems from us as all our competitors combined.

So if you're in the market for a reliable, power-saving pump station, call Flowtronex International. We've got quite a track record for standing behind our customers. And their bottom lines.

For more information, call 1-800-537-8778 or 903-595-4785. Or write Flowtronex International, P.O. Box 7095, Tyler, Texas 75711.
HERBICIDES IN RAINWATER

A recent U.S. Geological Survey study noted traces of herbicides in rainwater samples from 23 states. Atrazine, alachlor, metolachlor 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 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 750,000 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.

GCSSA 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 and marketing for Home Box Office Services in Kansas City following a two-year stint as a HBO account executive.

Kevin Morris said a number of the best superintendents are using older varieties because 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.

Top-ranked varieties in National Perennial Ryegrass Test

<table>
<thead>
<tr>
<th>Name</th>
<th>DC1</th>
<th>DC2</th>
<th>I2</th>
<th>IN1</th>
<th>KY</th>
<th>MD1</th>
<th>MCI</th>
<th>NE1</th>
<th>N1</th>
<th>NY1</th>
<th>OH1</th>
<th>OR1</th>
<th>PA1</th>
<th>SD1</th>
<th>VA1</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>PST-250</td>
<td>3.0</td>
<td>5.1</td>
<td>7.8</td>
<td>6.3</td>
<td>6.4</td>
<td>3.1</td>
<td>6.6</td>
<td>4.6</td>
<td>5.9</td>
<td>5.8</td>
<td>6.3</td>
<td>4.6</td>
<td>6.0</td>
<td>5.7</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>PST-250 (kW)</td>
<td>2.9</td>
<td>6.6</td>
<td>6.0</td>
<td>6.4</td>
<td>6.1</td>
<td>6.2</td>
<td>6.4</td>
<td>4.4</td>
<td>6.1</td>
<td>5.3</td>
<td>5.3</td>
<td>5.0</td>
<td>6.0</td>
<td>5.7</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>PST-250 (Blazer I)</td>
<td>3.0</td>
<td>5.9</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.4</td>
<td>6.3</td>
<td>6.4</td>
<td>6.1</td>
<td>6.1</td>
<td>6.1</td>
<td>6.0</td>
<td>6.1</td>
<td>6.4</td>
<td></td>
</tr>
<tr>
<td>PST-250 (Commander)</td>
<td>4.9</td>
<td>6.3</td>
<td>6.1</td>
<td>5.8</td>
<td>5.9</td>
<td>5.8</td>
<td>5.9</td>
<td>5.9</td>
<td>6.2</td>
<td>6.1</td>
<td>6.3</td>
<td>6.0</td>
<td>6.0</td>
<td>6.1</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>VIBRANCE (Dimension)</td>
<td>6.5</td>
<td>7.8</td>
<td>7.1</td>
<td>6.5</td>
<td>6.4</td>
<td>6.3</td>
<td>6.4</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.4</td>
<td></td>
</tr>
<tr>
<td>REPELL</td>
<td>5.4</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>PICK 647</td>
<td>5.2</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>PICK 715</td>
<td>5.8</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>PICK 715 (Edge)</td>
<td>3.5</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>SELECT 1</td>
<td>2.8</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>ALLAIRE</td>
<td>3.5</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td>4.6</td>
<td></td>
</tr>
<tr>
<td>INI</td>
<td>3.7</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>INI</td>
<td>3.6</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
<td></td>
</tr>
<tr>
<td>INI</td>
<td>3.5</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>INI</td>
<td>3.4</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td>6.3</td>
<td></td>
</tr>
</tbody>
</table>

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 Tuftgrass Evaluation Program.

Kevin Morris said a number of the best superintendents are using older varieties because 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.

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.

A leader of the sod growing industry says it is a story eligible for Ripley's Believe It or Not. "If a seed company president feels it may be the beginning of a trend among older golf courses, that's the way I see it," said John Ponko of Ponko Turf, Inc.

Hague honored for open work

CHASKA, Minn. — Chris H. 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 GCSSA.

Among those attending the annual GCSSA membership meeting were Robert Trent Jones Sr. and Jr., golf course architects; Ray Anderson and Judy Bell, USGA executive committee members; and Thomas C. Fischer, Minnesota GCSSA president.
Andy Brennan puts ingenuity to work at Opryland course

NASHVILLE, Tenn. — The day Andy Brennan found out he was on the waiting list to apply for admission to Vanderbilt University, he received an invitation to apply for admission to Vanderbilt University. 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, 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," Brennan said. "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, and was working on a summer maintenance crew at 17.

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

He began at Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent. The course opened for play in September, 1990. Before that, he had been with Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent.

"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, and was working on a summer maintenance crew at 17.

He began at Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent. The course opened for play in September, 1990. Before that, he had been with Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent.

"Nothing works better at preventing noxious weeds like goosegrass, crowfoot, crabgrass, spurge, chickweed and dozens of others than non-burning, slow release Nitroform® granules with selective herbicides. One applica-

"Nothing works better at preventing noxious weeds like goosegrass, crowfoot, crabgrass, spurge, chickweed and dozens of others than non-burning, slow release Nitroform® granules with selective herbicides. One applica-

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

He began at Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent. The course opened for play in September, 1990. Before that, he had been with Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent.

"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, and was working on a summer maintenance crew at 17.

He began at Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent. The course opened for play in September, 1990. Before that, he had been with Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent.

"Nothing works better at preventing noxious weeds like goosegrass, crowfoot, crabgrass, spurge, chickweed and dozens of others than non-burning, slow release Nitroform® granules with selective herbicides. One applica-

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

He began at Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent. The course opened for play in September, 1990. Before that, he had been with Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent.

"Nothing works better at preventing noxious weeds like goosegrass, crowfoot, crabgrass, spurge, chickweed and dozens of others than non-burning, slow release Nitroform® granules with selective herbicides. One applica-

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

He began at Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent. The course opened for play in September, 1990. Before that, he had been with Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent.

"Nothing works better at preventing noxious weeds like goosegrass, crowfoot, crabgrass, spurge, chickweed and dozens of others than non-burning, slow release Nitroform® granules with selective herbicides. One applica-

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

He began at Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent. The course opened for play in September, 1990. Before that, he had been with Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent.

"Nothing works better at preventing noxious weeds like goosegrass, crowfoot, crabgrass, spurge, chickweed and dozens of others than non-burning, slow release Nitroform® granules with selective herbicides. One applica-

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

He began at Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent. The course opened for play in September, 1990. Before that, he had been with Temple Hills Golf and Country Club in Nashville, the last eight years as superintendent.
Four to seven times more pesticides per treated acre were applied to golf courses than food crops, and two times 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 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, chlordiazepoxide, a probable human carcinogen, has already been detected in some Long Island ground water wells."

"The presence of some active ingredients listed by the courses -- propoxur, DDX, oxyvin, trifluralin, fencyclidine, hexachlorobenzene, and methoxychlor -- classified as potential carcinogens in the EPA, the report states. Two other -- thiodizox, miconazole, and mepanil -- break down in the environment into substances EPA classifies as probable human carcinogens. EPA is assessing more five -- oxadiazon, benoxyl, metanilal, penta-chloro-benzene, and capron -- for carcinogenicity, the report states.

The report claims many of these pesticides have potential for migrating into ground water; Duval, 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 pencyclidine and cloroalizine 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 carcinogens containing chemicals for aesthetic purposes like golf courses; considering leachiability and toxicity of pesticides before application and avoiding those with potentially toxic effects; routine government monitoring of ground water; advising on labels of pesticides known to cause ground water contamination; prohibiting pesticides to leach into ground water; the agribusiness is particularly vulnerable to contamination; and permitting only certified pesticide applicators to use pesticides that are regulated.

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

- Full disclosure including label warnings that Agribusinesses may pose potential health and environmental risks; label statements that registration doesn't guarantee a pesticide is safe; 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.

"The primary thrust of the report seems to be, simply because these materials are applied on golf courses, they will be 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."

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. Simultaneously, "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 Sargen, 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.

Sargan added that the Cape Cod study, which indicated the presence of eight pesticides and pesticide metabolites along with two compounds of unknown or determined 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 insinuate of flowing past the well, he said.

The Cape Cod study authors acknowledged the deficiencies, Sargan said, and also recommended golf course fields be in shallow aquifers.
International. Summit Hall team up on 4-acre bentgrass plot

Continued from page 15

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."

Fender 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 Roy 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."
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 G3rd International Golf Course Conference and Show. In previous years, the show has been held in Orlando, Fla. This year, the 1992 superintendents golf championship will be played Feb. 10-11 on Sawgrass courses.

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 directly 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 USGCA Green Section program at 8 a.m., trade show opening at 9 a.m. and annual meeting and election at 1 p.m.

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 G3rd International Golf Course Conference and Show. In previous years, the show has been held in Orlando, Fla. This year, the 1992 superintendents golf championship will be played Feb. 10-11 on Sawgrass courses.

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 directly 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 USGCA Green Section program at 8 a.m., trade show opening at 9 a.m. and annual meeting and election at 1 p.m.

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 G3rd International Golf Course Conference and Show. In previous years, the show has been held in Orlando, Fla. This year, the 1992 superintendents golf championship will be played Feb. 10-11 on Sawgrass courses.

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 directly 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 USGCA Green Section program at 8 a.m., trade show opening at 9 a.m. and annual meeting and election at 1 p.m.

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 G3rd International Golf Course Conference and Show. In previous years, the show has been held in Orlando, Fla. This year, the 1992 superintendents golf championship will be played Feb. 10-11 on Sawgrass courses.
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 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-Urban 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 Halfbrook 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.

To produce the only completely proven, longest lasting, hardest working, and
**Southeast**

**LEVENTHAL ASSUMES PRESIDENCY**
Stuart Leventhal of Interlachen Country Club in Winter Park, is the new president of the Florida Golf Course Superintendent's Association's Central Florida Chapter.

Cary Lewis of Orlando's Country Club was named vice-president. Brian Jenkins of Orlando will continue as secretary-treasurer. Joe Osto of Winter Pines Golf Course in Orlando has been named as external vice-president.

New directors are Dennis Parker, Rio Pinar, Orlando; Dale Reash, La Cita CC, Titusville, and Hal Richburg, Heathrow CC, Lake Mary. 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 Wholey of Lake Mary part as board members.

$3,000 GROWS INTO SCHOLARSHIPS
CFC has allocated $3,000 from the 1991 Field Day proceeds for scholarships to these turf students at Florida colleges: Todd Bonnet, 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 Florida Lawn and Landscape 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 McKeever 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 Riggs, 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 Campus and continues until 3:30 pm. 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 Outnet Scholarship Fund for each cubic yard of any material delivered to any golf course.

The offer extends to Aug. 1, 1992, said Joe Farina, golf course division supply 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; 617-878-2865.

**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, 61 Rocky Pines 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.

---

The most incredibly versatile turf utility vehicle, you have to cover a lot of ground.

No one's covered as much ground over the last 30 years as Cushman.

As a result, all the competitive vehicles combined can't cover your needs as well as a Cushman Turf-Trackster.™

The Turf-Trackster has been continually refined and perfected to keep pace with your changing turf maintenance practices. Nothing offers you greater value or more capability. Nothing!

For all the facts, contact your Cushman dealer or call toll-free today, 1-800-228-4444. Built to Last.
Wetting agents gaining in importance as water use, we’re going to have 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, 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-bunkers, greens, which are prone to dry spots, we 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

The marketplace is filled with wetting agents — a little-used product for the first time. “Very variable. Sometimes 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 certain 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 Hier 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 wetting agents 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 a long time to work, so in our mind you could solve 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 Hier 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 wetting agents will penetrate the ground surface well, he said hard water does not. Wetting agents “allow that water to cut right through.”

RENTAL

Saffel said Michigan State’s tests have been “very variable. Sometimes we’ll get obvious results, sometimes not... We know they take a long time to work, so in our mind you could solve 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 Hier 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 wetting agents will penetrate the ground surface well, he said hard water does not. Wetting agents “allow that water to cut right through.”
water and chemical use pressures mount

spots. "That's worked really well. It has kept areas green that normally it kept on the blades of grass. That's fine if you are applying a systemic pesticide, herbicide or fungicide. But if you want to be absorbed and 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 attended to the effectiveness of wetting agents in helping localized problems. "I hope next year I'll spray for snow melt 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 respiration 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.

Survey of wetting agents in golf course market

<table>
<thead>
<tr>
<th>Company Address</th>
<th>Year introduced</th>
<th>Granular or liquid</th>
<th>Days without dew</th>
</tr>
</thead>
<tbody>
<tr>
<td>AquaAid, Inc.</td>
<td>1985</td>
<td>Both</td>
<td>3-10</td>
</tr>
<tr>
<td>P.O. Box 100,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Marsh, WI</td>
<td>21162</td>
<td></td>
<td></td>
</tr>
<tr>
<td>301-335-3702</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asperato Corp. of America</td>
<td>1954</td>
<td>Both</td>
<td>8-10</td>
</tr>
<tr>
<td>1432 Union Ave.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pennington, NJ</td>
<td>809110</td>
<td></td>
<td></td>
</tr>
<tr>
<td>800-257-7797</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greco Sierra Crop Protection Co.</td>
<td>1988</td>
<td>Both</td>
<td>16-21</td>
</tr>
<tr>
<td>P.O. Box 4000,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1001 Yosemite Dr.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milpitas, CA</td>
<td>95035</td>
<td></td>
<td></td>
</tr>
<tr>
<td>800-492-8555</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KNO, Inc. 4550 W. 109th St.</td>
<td>1971</td>
<td>Both</td>
<td>N/A</td>
</tr>
<tr>
<td>Kansas City, MO</td>
<td>64101</td>
<td></td>
<td></td>
</tr>
<tr>
<td>816-346-6602</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montrel/Surfide P.O. Box 4046</td>
<td>1976</td>
<td>Both</td>
<td>N/A</td>
</tr>
<tr>
<td>Aurora, IL</td>
<td>60522</td>
<td></td>
<td></td>
</tr>
<tr>
<td>800-356-0500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noish Co. 5627 Sponder Rd., #316</td>
<td>1998</td>
<td>Both</td>
<td>N/A</td>
</tr>
<tr>
<td>Saratoga, CA</td>
<td>94088</td>
<td></td>
<td></td>
</tr>
<tr>
<td>800-541-6662</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathway Research Corp. 13902 Christian Rd.</td>
<td>1990</td>
<td>Both</td>
<td>45</td>
</tr>
<tr>
<td>Houston, TX</td>
<td>77039</td>
<td></td>
<td></td>
</tr>
<tr>
<td>800-250-3668</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FB Gordon Corp. 1207 W. 12th St.</td>
<td>1991</td>
<td>Liquid</td>
<td>N/A</td>
</tr>
<tr>
<td>Kansas City, MO</td>
<td>64101</td>
<td></td>
<td></td>
</tr>
<tr>
<td>816-676-0462</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precision Laboratories, Inc. 333 Anthony Trail</td>
<td>1991</td>
<td>Liquid</td>
<td>N/A</td>
</tr>
<tr>
<td>Northbrook, IL</td>
<td>60062</td>
<td></td>
<td></td>
</tr>
<tr>
<td>800-323-0680</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rohm and Haas Co. Independence Mall West Philadelphia, PA</td>
<td>1901</td>
<td>Penetrant 3</td>
<td>N/A</td>
</tr>
<tr>
<td>21592-3292</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Itoh, Inc. 25 Science Park</td>
<td>1990</td>
<td>Liquid</td>
<td>N/A</td>
</tr>
<tr>
<td>Los Angeles, CA</td>
<td>90065</td>
<td></td>
<td></td>
</tr>
<tr>
<td>800-426-6713</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JF. Simplot P.O. Box 198</td>
<td>1991</td>
<td>Liquid</td>
<td>30</td>
</tr>
<tr>
<td>Baltimore, MD</td>
<td>21200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>301-8368-2511</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southern Mill Creek Products Co. 3541 N. 56th St.</td>
<td>1980</td>
<td>Liquid</td>
<td>N/A</td>
</tr>
<tr>
<td>Tampa, FL</td>
<td>33610</td>
<td></td>
<td></td>
</tr>
<tr>
<td>813-636-2111</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

"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."

Because 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.

Manufacturers look to new products in field

Guns, fertilizer blends, and dry and wettable powder formulations 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., 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 spray the wetting agent on to troublesome 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 substances 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, plant derivatives, surfactants, acids and their derivatives, solubilized 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 Painey

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

Bradley in 1974 became 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 to direct the Ben Hogan tournaments. Tour officials were searching for 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 match at a Tour stop in Palmetto, Maine. Bradley, McClure, tour agronomist Jeff Healey and 45-year Tour pro Fred Haas caused the course with keen eyes to tourney stake placement.

After Haas dunked a chip shot for par, McClure shot at the winning birdie, McClure calmly hit a tricky 15-foot downhill putter 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 Filsick.

Because of uncertain course situations last year, Bradley was required to be at 28 of 30 tour stops a year and 22 tournament stops. But it's a long way from removing tree stumps at $2.75 a piece.

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

This list made a difference

Continued from page 12

associated with any misuse.

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 management priorities, causing short and long-term goals impede workable equipment. When maintenance goals are established, buy-in from the wrong people (think about it).

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 for a maintenance rate to insure the golf course is properly maintained.

When cultural practices are in the mix 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. 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, nominations left of deserve recognition. The problems that didn't make the top ten include: superintendents unable to read tests (it takes a degree in agronomy), poor record keeping (can assistants type), inappropriately timed maintenance (did you verify a member's 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 disagrees 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 — itself 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 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 754 international members.

Tom Atkins, GCSAA director of planning, will head the newly created department.
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 development 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 participating 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 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 develop- ers and managers of golf courses in the country. We finance their plans to develop acquire a series of courses over the next seven years." Seventy percent of new courses are parts

More industrial, commercial projects adding golf
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 community developments complete with residential and commercial developments, according to Tom Jackson, a Hollywood, Fla.-based residential marketing consulting company.

"My skepticism comes from the fact that half of those (50-60 residential projects) are troubled properties," said Dan Levitan, Greenman Group. "Some courses have been built over land- fills, why are so many residential

TOKYO, Japan — The Country Club Glenmoor, located in the Chiba Prefecture, was Mariya Country Club, opened in 1987, the second of four Dye golf courses in Japan. 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." Langford and Moreau's design was purchased 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 administration offices.

Franklin & H Construction of Stockton is the project's general contractor. Jackson Associates designed the clubhouse.

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.

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 prospective tenants 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 head- quarters on golf course property," he said.

So, with demographics and demand solidly in place to meet and entertain clients, Clark said. "Since decisions often are made on the golf course and commercial projects, why not gain a competitive advantage?" Clark said. "That's the concept behind the hybrid course concept."

Another reason for the growing popularity of hybrid golf courses is that they help pre- sell commercial projects. "Fuel-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 ex- citement 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 de- velopments.

"Some courses have been built over land- fills, eliminating an eyesore to the community and possibly reducing further environmen- tal risks," said Clark. "Golf courses will ben- efit 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 associ- ates?"

Clark cites Windsor Parke Golf Club, Jacksonville, Fla., as an example of a course built in conjunction with a commercial project. Said ASCGA 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 com- munity and a campus-like 200-acre commer- cial development. Those interested in the master plan concept should write the American Society of Golf Course Architects, 231 N. LaSalle St., Chicago, Ill. 60601."

September 1991 25
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 500,000 or more where play comes primarily from residents. The project must address an underserved 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 project success. Lenders, 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 $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 be overbuilt.

Most current syndication activity is not on specific projects. The focus instead is on raising equity for companies that are willing to take the time to do it. Dunn said. His company is working on a project that will provide a collateralized, pay-as-you-go 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 projects, 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."

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

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_

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 Thompson. The company is financed primarily by corporations.

"The end product, in a phrase, will be a Winged Foot Country Club in Paris," Thompson 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 $4,900 over eight years are expected to raise $1.1 billion. Some of which is expected to come from foreign investors, Thompson said. Capital costs for land, development and start-up are estimated at $500 million. That will leave common stockholders, who will invest about $75 million, with assets of improved properties of $900 million and cash in the bank of $500 million to $800 million.

Two pieces of property are under contract. One is in Chicago and has all the building permits. The other 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 $85 million. Small, foreign entrepreneurs have kicked in another $20 million. The Persian Gulf War, U.S. recession and drying up of Japanese capital has slowed investment somewhat, Thompson said. The''billion-dollar bandwagon of foreign capital may not 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. Carl said negotiations were complex.

"Our negotiating is with the high-net-worth individuals in Japan. That fact the project is in California and involves Japanese companies considerably, makes it unusual."  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 in California and involves Japanese companies considerably, makes it unusual.

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

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_
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 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 stonewalls of the family farm they had tinkered with since 1964.

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

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 stones for drainage, sand for tee and green mix, coarse stone for brook beds and screened lean 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 planned 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 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 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 construction 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. "Businesspeople are willing to do deals they wouldn't do in good times. You just have to reach out for the opportunities."

---

Our Approach
To Boosting Potash.

For your turf to receive a balanced feeding, it needs a source of potash that offers more than just potash.

Enter Country Club 8-4-24. Designed to complement your IPM program by improving disease tolerance. And creating less clippings, enhanced drought resistance and more upright growth. All in a homogeneous mixture for uniform nutrient distribution.

For more about 8-4-24 formulations, contact your local Country Club distributor. Or call Lebanon Turf Products at 1-800-233-0628.

Because when it comes to raising potash levels, 8-4-24 will always outdistance the competition.
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 concluded. "The government 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."

Most transactions with foreign capital in the next three years will be under $1 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 and 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-
Oregon owner intends to be ‘a major player’ in region

COTTAGE GROVE, Ore. — The 18-hole par 72 Middlefield Village Golf Course is the newest addition in 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 surroundings 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 Foster, is Salt Lake City’s newest 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 6,000-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.

Developed 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. Shaw 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 Marc 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 play-able at Snowshoe Mountain Resort's Pocahontas County facility by mid-summer, 1992.

Snowshoe long has been recognized as a premier skiing facility.

At the base of Snowshoe Moun-tain 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 Carangi 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.

They shine on any surface

VACUUM SWEEPERS

Debris never falls where you want it. That's the problem. And that's why it makes sense to have debris cleanup machines that can work anywhere.

Machines like the John Deere 142, 152, and 162 Vacuum Sweepers. They shine because they don't have wear parts hitting the ground. And that's why it makes sense to have debris cleanup machines that can work anywhere. Machines like the John Deere 142, 152, and 162 Vacuum Sweepers.

All three work equally well on turf or pavement because they don't have wear parts beating the ground. They use vacuum power.

A heavy-duty steel impeller is the key. It creates tremendous suction and can handle everything from leaves and clippings to cans and bottles — actually crushing and mulching the material before it goes into the hopper.

Talk to your John Deere distributor today for more information on all we have to offer. Or write John Deere, Dept. 956, Moline, IL for free literature. We know you're going to like what you see.
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 1,000 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
The odds — Continued from page 30

They are:

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

2. Evaluate site carefully — Investigate the surrounding area; quality of access, character of the surrounding 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, ambiance 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 course front loaded and early operating losses must be considered.

12. Balance housing products — Make certain to have product for all viable markets and to soon purchase a regular golf membership. 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 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.”

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 membership benefits 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, are going to wear Bermuda shorts and T-shirts no matter what the developers say because that’s what they’re used to wearing.

15. 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.

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 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 7,006 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 Claeyssens, 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 Alddeen course, which is all bentgrass from tee to green.

“ULTRA” Unibody Swing Joint

The #1 Choice

Since its introduction 2 years ago, the “Ultra” Unibody Swing Joint has become the #1 choice of the worlds leading Golf Course Builders.

Durability, ease of installation and adjustment to grade are the key features of the “Ultra”. Here’s why:

• Double O-ring seals
• Schedule 80 construction
• One piece Unibody construction
• Rated to 315 psi per ASTM D3139 Std.
• Full 360° swing
• Vertical adjustment thru 8 1/4"  
• Four year limited warranty

DURA PLASTIC PRODUCTS INC. BEAUMONT, CA. USA. 92223
(714)845-3161 FAX: (714)845-7644

DURA

CIRCLE #126

GOLF COURSE NEWS
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.

Courses planned...

<table>
<thead>
<tr>
<th>Location</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>205-381-4452</td>
</tr>
<tr>
<td>California</td>
<td>203-999-5555</td>
</tr>
<tr>
<td>Farfield</td>
<td>Robert Groves</td>
</tr>
<tr>
<td>Kent County</td>
<td>Robert Copus</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>Oakridge American Co.</td>
</tr>
<tr>
<td>Las Vegas</td>
<td>Newhall Land &amp; Farming</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>Red Stevenson</td>
</tr>
<tr>
<td>Oak Hills</td>
<td>Michael Gallagher</td>
</tr>
<tr>
<td>Oxnard</td>
<td>Jack Nicklaus</td>
</tr>
<tr>
<td>Phoenix</td>
<td>Silver Real Estate</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>Kenneth Roberts</td>
</tr>
<tr>
<td>Portland</td>
<td>Kenneth Roberts</td>
</tr>
<tr>
<td>Portland City</td>
<td>PortlandGC.com</td>
</tr>
<tr>
<td>Rochester</td>
<td>Chris Borgen</td>
</tr>
<tr>
<td>Waterford</td>
<td>Roland Leitweiner</td>
</tr>
<tr>
<td>Delaware</td>
<td>Rehoboth Beach Ault, Clark &amp; Assoc.</td>
</tr>
<tr>
<td>Minnesota</td>
<td>Minnesota State University</td>
</tr>
</tbody>
</table>

Courses approved...

<table>
<thead>
<tr>
<th>Location</th>
<th>Course Name</th>
<th>Type</th>
<th>Holes</th>
<th>Address</th>
<th>Architect/Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>Birmingham Liberty Park</td>
<td>P</td>
<td>18</td>
<td>1459 &amp; Liberty Park</td>
<td>Tom Fazio/Jerry Pate</td>
</tr>
<tr>
<td>Moulton</td>
<td>Deer Run GC</td>
<td>M</td>
<td>9</td>
<td>N/A</td>
<td>Earl Stone &amp; Assoc.</td>
</tr>
<tr>
<td>Shool Creek</td>
<td>Chee Creek</td>
<td>P</td>
<td>9</td>
<td>New Wiliamsburg</td>
<td>Jack Nicklaus</td>
</tr>
<tr>
<td>Austin</td>
<td>Ft. Wainwright</td>
<td>D</td>
<td>9</td>
<td>Ft. Wainwright</td>
<td>U.S. Army Engineer Dist.</td>
</tr>
<tr>
<td>California</td>
<td>Beaumont Oak Valley GC</td>
<td>D</td>
<td>18</td>
<td>Oak Valley GC</td>
<td>Landmark Signature</td>
</tr>
<tr>
<td>Fairfield</td>
<td>N/A</td>
<td>M</td>
<td>9</td>
<td>1000 Webster St.</td>
<td>City of Fairfield</td>
</tr>
<tr>
<td>Fresno</td>
<td>New Fresno Airways GC</td>
<td>D</td>
<td>18</td>
<td>5440 E. Shields Ave.</td>
<td>209-486-1478</td>
</tr>
<tr>
<td>Maine</td>
<td>Manhasset Lakes</td>
<td>P</td>
<td>18</td>
<td>2997 Manhasset Lakes Dr.</td>
<td>Ted Robinson</td>
</tr>
<tr>
<td>Colorado</td>
<td>Loveland</td>
<td>M</td>
<td>9</td>
<td>N/A</td>
<td>Dick Phelps</td>
</tr>
<tr>
<td>Florida</td>
<td>Boca Beach</td>
<td>M</td>
<td>9</td>
<td>Tom Warner Blvd.</td>
<td>Charles Ankor</td>
</tr>
<tr>
<td>Naples</td>
<td>Olde Naples GC</td>
<td>D</td>
<td>9</td>
<td>643 NE 131st Ln.</td>
<td>Larry Scott Steenblik</td>
</tr>
<tr>
<td>Fort Orange</td>
<td>Cypress Head GC</td>
<td>D</td>
<td>18</td>
<td>N/A</td>
<td>Pamela Models</td>
</tr>
<tr>
<td>Georgia</td>
<td>Ocean Course</td>
<td>M</td>
<td>9</td>
<td>Tom Warner Blvd.</td>
<td>Charles Ankor</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Lanikai Beach</td>
<td>D</td>
<td>9</td>
<td>1000 Wai'ale Ave.</td>
<td>Larry Scott Steenblik</td>
</tr>
</tbody>
</table>

Courses approved...

<table>
<thead>
<tr>
<th>Location</th>
<th>Course Name</th>
<th>Type</th>
<th>Holes</th>
<th>Address</th>
<th>Architect/Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>Birmingham Liberty Park</td>
<td>P</td>
<td>18</td>
<td>1459 &amp; Liberty Park</td>
<td>Tom Fazio/Jerry Pate</td>
</tr>
<tr>
<td>Moulton</td>
<td>Deer Run GC</td>
<td>M</td>
<td>9</td>
<td>N/A</td>
<td>Earl Stone &amp; Assoc.</td>
</tr>
<tr>
<td>Shool Creek</td>
<td>Chee Creek</td>
<td>P</td>
<td>9</td>
<td>New Wiliamsburg</td>
<td>Jack Nicklaus</td>
</tr>
<tr>
<td>Austin</td>
<td>Ft. Wainwright</td>
<td>D</td>
<td>9</td>
<td>Ft. Wainwright</td>
<td>U.S. Army Engineer Dist.</td>
</tr>
<tr>
<td>California</td>
<td>Beaumont Oak Valley GC</td>
<td>D</td>
<td>18</td>
<td>Oak Valley GC</td>
<td>Landmark Signature</td>
</tr>
<tr>
<td>Fairfield</td>
<td>N/A</td>
<td>M</td>
<td>9</td>
<td>1000 Webster St.</td>
<td>City of Fairfield</td>
</tr>
<tr>
<td>Fresno</td>
<td>New Fresno Airways GC</td>
<td>D</td>
<td>18</td>
<td>5440 E. Shields Ave.</td>
<td>209-486-1478</td>
</tr>
<tr>
<td>Maine</td>
<td>Manhasset Lakes</td>
<td>P</td>
<td>18</td>
<td>2997 Manhasset Lakes Dr.</td>
<td>Ted Robinson</td>
</tr>
<tr>
<td>Colorado</td>
<td>Loveland</td>
<td>M</td>
<td>9</td>
<td>N/A</td>
<td>Dick Phelps</td>
</tr>
<tr>
<td>Florida</td>
<td>Boca Beach</td>
<td>M</td>
<td>9</td>
<td>Tom Warner Blvd.</td>
<td>Charles Ankor</td>
</tr>
<tr>
<td>Naples</td>
<td>Olde Naples GC</td>
<td>D</td>
<td>9</td>
<td>643 NE 131st Ln.</td>
<td>Larry Scott Steenblik</td>
</tr>
<tr>
<td>Fort Orange</td>
<td>Cypress Head GC</td>
<td>D</td>
<td>18</td>
<td>N/A</td>
<td>Pamela Models</td>
</tr>
<tr>
<td>Georgia</td>
<td>Ocean Course</td>
<td>M</td>
<td>9</td>
<td>Tom Warner Blvd.</td>
<td>Charles Ankor</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Lanikai Beach</td>
<td>D</td>
<td>9</td>
<td>1000 Wai'ale Ave.</td>
<td>Larry Scott Steenblik</td>
</tr>
</tbody>
</table>

We would appreciate your help in updating this section. To contact us call 207-846-6000 or write Golf Course News, P.O. Box 997, Yarmouth, Maine 04096. Under "Type" — D = Daily Fee, P = Private, and M = Municipal.
who play eight or more rounds a year, increased 4.4 percent to 11.8 million. Core golfers, occasional golfers, those 18 or over and 8 percent, or 2.1 million, juniors. Golf is three times higher than any other player category on average. Their direct spending on rounds, but private club players played more often (24.6 vs. 16.2 rounds per year.)

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.

The course will offer more controlled play and, at the same time, have a greater level of interest," 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." The tax was originally intended to cover just health clubs, Brantley said. But a sub-committee 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.

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 decided that figure must be doubled.

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.

As a Pasco County course claimed that taking a special assessment used to buy 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 $80,000 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."

"If we could get the state to give us a similar exemption," said a Georgia course director, "we might be able to make it worthwhile.

"This article deals with the conversion of private courses to munis. "It will be a better all-around course for the public," he said. "It will be more challenging and it will be open to the public."
Our control of SUMMER PATCH in the last two years has been near perfect...we had a few spots on one green this season (1990).

For the New Jersey area you must start April 1st with 4-oz/M of BANNER and 2 to 3 quarts of SURF-SIDE 37 per green. Our greens are 60% bent and 30% poa annua...they average 5 to 7000 sq. ft. We apply monthly for a total of 4 treatments. We mix on site in a 7 gal. bucket and use a siphon hose proportioner. It takes about ten minutes to do a green...we don't water-in the treatment. IF YOU HAVE NOT BEEN ON A PREVENTATIVE PROGRAM and develop SUMMER PATCH we'd suggest using a 4 to 8-oz/M DUPONT 1991 plus a minimum of ½ gallon SURF-SIDE 37 per acre, watered-in.

Our middle-of-the-month spray program varies, however, we use a minimum of ½ gallon of SURF-SIDE 37 per acre with our tank mix which could include any of the following: Bayleton, Banol, Dacthal, 26019, Prograss.
**Golf Course News**

**Supplier Business**

**Lighting will always present major problems despite technological advances**

By Vern Putney

The latest lighting tragedy, electrocution of a spectator at the PGA Championship Crooked Stick Golf Club in Carmel, Ind., underscores the vulnerability of the golf course audience.

Unlike most spectators at major sports events, golf fans are out in the open if not the cold, subject to Nature's whims. Baseball followers can get under a roof comfortably, and football fanatics caught in a sudden storm may get hit with plenty of snow and rain, but are rarely exposed to lighting.

One way stock 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 lighting 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 like doses of black powder. What could they do when there are few trees and practically all-open area?

The most sophisticated man-made device is a homing device when Mother Nature beats up.

A viewer couldn't help but be sympathetic to a broadcast team explaining the intricacies of the field's hand-held, battery-operated M-01 Intracloud Lightning Detector purchased 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 radar 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.

Rain gauges were used well when invited by the USGA to assist in lighting detection at the 1990 U.S. Open. Times, weather and course conditions change, however.

Suddenly-savvy Nature wasn't in the mood.

Continued on page 35

---

**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 Walter A. Peck, vice president of the Lawns & 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 grounds care equipment, "he added.

"We now manufacture 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**

GLENDALE, 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, said training of customer service reps and working closely with all the firm's markets and divisions.

She received Golf's Right Stuff award in 1989. She resides in Brandon, Fla.
Mobay Corp. fined record amount by EPA

Continued from page 1

Enforcement 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 date 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 raises exposure of the community and the environment to hazards associated with potentially harmful chemicals."

Lightning plagues golf courses

Continued from page 35

Lightning 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 clouds 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?

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 us 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 sanitization of fields, experimental ribbons and trailing choppers are being tried which may take the debris out of the plant crowns. Chemical methods are being investigated. And there are huge fields of vacuum cleaners, complete with brushes and fans 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.
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 Weed Grass Control, specially developed for pre-emergent weed control on southern turfgrasses, is now 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 Prosystem fungicide to reduce resistant turf disease strain build-up, including dollar spot, brown patch, powdery mildew, 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. Augustine grass, 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/granular snow mold.

Contact The O.M. Scott & Sons Company, 14111 Scottslawn Road, Marysville, Ohio 43041.

CIRCLE #307

GOLF COURSE NEWS

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, dimethrin, 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 broadleaf 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. 63147 or telephone 800-323-1421.

CIRCLE #305

CIRCLE #130

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 77335.

CIRCLE #306

CIRCLE #206

HOW TO EXTINGUISH A FIRE ANT.

1. It's taken forty years and counted less ill-conceived attempts for mankind to come to grips with one fundamental truth about imported fire ants.

2. 94 percent of 11 active in the treated weeks, depending on the target pest.

3. No matter how concerted the effort, no matter one week how ingenious the application, they cannot be eradicated. Better.

4. However, they still, unlike now can be controlled with Triumphant® active in the soil for up to 10 weeks, depending on the target pest.

5. Which means time, remembering that instead of more applications, instead of more callbacks, what you can plan on making more of with Triumphant is money.

6. And with Triumph is money.

7. 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 10,000 gallons and is ideal for almost any liquid or semi-liquid that is not regulated by the EPA. Contact Bill Watkins at ThermaFab, Inc., 200 Rich Lex Drive, Lexington, S.C. 29072 or call 803-794-2543.

Ciba-Geigy markets first larvicide

GREENSBORO, N.C. — Exhibit, Ciba-Geigy’s first biological, nematode-based larvicide, is now 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 the 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 mixes with juvenile nematodes, which then leave and seek out a new host. If they cannot 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 919-832-6000.

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 Greene Pike Drive, Exton, Pa. 19341 or call 215-524-0974.

Lebanon adds new fertilizer

LEBANON, Pa. — Lebanon Turf Products recently introduced a granular homogeneous starter fertilizer for use on professionally maintained, low-curb turf areas such as greens and tees. Country Club 10-18-16 A. O. S. (Aerification-Overseeding-Starter) assures successful seeding and provides even nutrient distribution. This 10-18-16 ratio contains 30 percent organic nitrogen and 2.2 units WIN for sale 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 193, Lebanon, Pa. 17042 or call 800-233-0628.

Our Job Is Keeping You 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 committed 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.

© 1989 The Andersons

ThermaFab portable hazardous waste storage system

So You Can Keep Them Happy.
**NEW PRODUCTS**

**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 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

**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 superintendents, 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. 7/0, 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

**Growth enhancer compatible with many herbicides**

MEMPHIS, Tenn. — Floratine Products Group has introduced Profi-RC, a biostimulant-based growth enhancer compatible for programmed use in conjunction with turfgrass regulator products and herbicides.

A variation of FPGs widely-used Astro 5000 product, Profi-RC contains high anoxins and cytokinins but no gibberelllic acids which might contradict the anti-gibberellin activity of the regulators.

Profi-RC is designed to enhance the health and color of the desired turfgrass while not inhibiting the killing effect of the undesired 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 formulation, Chipco Ronstar brand oxadiazon herbicide now is easier to handle and use.

Chipco Ronstar G now is carried on granules 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.

Reduced calibration settings accommodate faster flow.

For more information call 919-549-4689.

CIRCLE #314

**GOLF COURSE NEWS**

**Signs That The New Cushman Turf Master Has Arrived.**

**GOLDFRANCE TRUCKSTER ™**

**ELECTRIC TRUCKSTER ™**

**Johnny Blue TRUCKSTER  ™**

**Electric controller is standard instead of hand valves.**

**Exclusive ground speed governor control.**

**Unmatched three-wheel maneuverability.**

**Tank design leaves less than 1/2 gallon of unuseable material.**

**All pressurized chemical hoses are isolated for greater operator protection.**

**Unique boom design delivers more consistent nozzle pressure.**

**Large tires for minimum ground pressure.**

**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 Hydro polypropylene pump, mechanical and bypass agitator, 15' or 20' booms, three pressure gauges — only a few of the many features the competition doesn't offer.

**RANSOMES BUILT TO LAST**

**Chipco Ronstar easier to handle**

As a result of a new granular formulation, Chipco Ronstar brand oxadiazon herbicide now is easier to handle and use.

Chipco Ronstar G now is carried on granules 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.

Reduced calibration settings accommodate faster flow.

For more information call 919-549-4689.

CIRCLE #314

**GOLF COURSE NEWS**

**GOLDFRANCE TRUCKSTER  ™**

**ELECTRIC TRUCKSTER  ™**

**Johnny Blue TRUCKSTER  ™**

**Electric controller is standard instead of hand valves.**

**Exclusive ground speed governor control.**

**Unmatched three-wheel maneuverability.**

**Tank design leaves less than 1/2 gallon of unuseable material.**

**All pressurized chemical hoses are isolated for greater operator protection.**

**Unique boom design delivers more consistent nozzle pressure.**

**Large tires for minimum ground pressure.**

**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 Hydro polypropylene pump, mechanical and bypass agitator, 15' or 20' booms, three pressure gauges — only a few of the many features the competition doesn't offer.

**RANSOMES BUILT TO LAST**

**Chipco Ronstar easier to handle**

As a result of a new granular formulation, Chipco Ronstar brand oxadiazon herbicide now is easier to handle and use.

Chipco Ronstar G now is carried on granules 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.

Reduced calibration settings accommodate faster flow.

For more information call 919-549-4689.
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- 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.

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 smoother 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 “cling” 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.

Quality Turf-Seed varieties developed and produced for turf professionals.

<table>
<thead>
<tr>
<th>Species</th>
<th>Variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved turf-type</td>
<td>Challenger</td>
</tr>
<tr>
<td>Kentucky</td>
<td>Columbia</td>
</tr>
<tr>
<td>Bluegrass</td>
<td>Midnight</td>
</tr>
<tr>
<td>Imp. Common Ky.</td>
<td>Galaxy blend</td>
</tr>
<tr>
<td>Improved turf-type</td>
<td>Birdie II</td>
</tr>
<tr>
<td>perennial</td>
<td>Charger</td>
</tr>
<tr>
<td>ryegrass</td>
<td>Citation II</td>
</tr>
<tr>
<td>Improved creeping fescue</td>
<td>Manhattan II</td>
</tr>
<tr>
<td>ornamental</td>
<td>Omega II</td>
</tr>
<tr>
<td>Alliance blend</td>
<td>Remington</td>
</tr>
<tr>
<td>CBS II blend</td>
<td>Saturn</td>
</tr>
<tr>
<td>Improved bent fescue</td>
<td>Aurora</td>
</tr>
<tr>
<td>Improved Chewing fescue</td>
<td>Shadow</td>
</tr>
<tr>
<td>Improved Sheeps fescue</td>
<td>Bighorn</td>
</tr>
<tr>
<td>Improved creeping fescue</td>
<td>Fortress</td>
</tr>
<tr>
<td>ornamental</td>
<td>Shademaster</td>
</tr>
<tr>
<td>Improved tall fescue</td>
<td>Apache</td>
</tr>
<tr>
<td>ornamental</td>
<td>Bonanza</td>
</tr>
<tr>
<td>ornamental</td>
<td>Eldorado</td>
</tr>
<tr>
<td>ornamental</td>
<td>Monarch</td>
</tr>
<tr>
<td>ornamental</td>
<td>Marietta</td>
</tr>
<tr>
<td>ornamental</td>
<td>Olympic</td>
</tr>
<tr>
<td>ornamental</td>
<td>Silverado</td>
</tr>
<tr>
<td>ornamental</td>
<td>Trihalalawn blend</td>
</tr>
<tr>
<td>Improved creeping bentgrass</td>
<td>Penncross</td>
</tr>
<tr>
<td>ornamental</td>
<td>Pennagle</td>
</tr>
<tr>
<td>ornamental</td>
<td>PennLinks</td>
</tr>
<tr>
<td>Creeping bentgrass blend</td>
<td>Pennway</td>
</tr>
</tbody>
</table>

Quality Turf-Seed

Carl Aebersold, harvesting crew foreman at Pacific Sod, Camarillo, CA, is pleased with the above-, and below-surface performance of dwarf Monarch turf-type tall fescue.

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 smoother 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 “cling” 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.

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 reseeding. For information contact 612-941-4180.

PROMPT receives EPA registration

PROMPT herbicide, now registered by the Environmental Protection Agency and labeled for use on turf, is a low-aerosol 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 spraying or plugging.

It is effective on two dozen annual broad-leaf weeds, in addition to controlling tough perennial weeds.

For more information contact 940-363-0722.
By Peter Biais

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-golfing golfing experience and the talents of internationally known photographers Stephen Snurel 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 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. Snurel and Morgan succeeded admirably. Of a reward-winning caliber is a shot through the cacti behind the ninth green and leading back along a wooded 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 architect in matching these tapestries from the past, and of the important environmental role played by superintendents.

"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 glistening 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 Pockets Books.

DON'T MISS THE NATION'S LARGEST REGIONAL TURF SHOW

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!

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

Name
Company
Address
City State Zip
Phone

DETACH AND MAIL TO: Ohio Turfgrass Foundation
2021 Coffey Road
Columbus, Ohio 43210
614/297-2601

September 1991 41

GOLF COURSE NEWS
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."

"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 $550,000. 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 "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, buffalograss, bentgrass, rye grass and zoysia.

"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 base our 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.

Golf Course Marketplace

ADVERTISING INFO:

2X 6X 12X
Per col. inch: $45.00 $40.00 $35.00
Add-on per 1/4": $11.25 $10.00 $8.75
Logo incl. in ad: $20.00 $20.00 $20.00

• Minimum 2-time insertion.
• Prepayment is required.

Send prepayment and ad copy to:
Golf Course News
7901 4th St. N., Ste. 311
St. Petersburg, Fl. 33702
813-576-7077 • Fax 813-579-9788

Golf Course Marketplace

Golf Courseopher

2X 6X 12X
Per col. inch: $45.00 $40.00 $35.00
Add-on per 1/4": $11.25 $10.00 $8.75
Logo incl. in ad: $20.00 $20.00 $20.00

• Minimum 2-time insertion.
• Prepayment is required.

Send prepayment and ad copy to:
Golf Course News
7901 4th St. N., Ste. 311
St. Petersburg, Fl. 33702
813-576-7077 • Fax 813-579-9788

Did you know?

CB Commercial, formerly Coldwell Banker Commercial, the nation's largest commercial real estate brokerage has a Golf Properties Marketing Group that works only with buyers and sellers of golf properties. We specialize in golf properties and do not work in other areas of commercial real estate. For information call:

Roger Garrett
602/262-5511

Tom Harris
602/262-5521

CB COMMERCIAL GROUP

...has golf courses for sale in:
1) Denver, Colorado
2) Philadelphia, Pennsylvania
3) Milwaukee, Wisconsin
4) Northern Virginia

For information call:
Roger Garrett
602/262-5511

Tom Harris
602/262-5521

Positions WANTED

POSITION WANTED
Golf Course Architect (designer, project manager), 10 years experience in all areas of golf course architecture.

(404) 498-8878

Educational Opportunities

ADVANCE IN THE GREEN INDUSTRY!
Two-year AAS degree in Golf Course Superintending, Irrigation Management, Landscape Contracting & Landscape Equipment Repair & Maintenance. Full accredited, VA approved, excellent facilities & new equipment. Graduate job placement. For information contact: Golf Course Operations - Landscape Technology Dept., Western Texas College, Snyder, TX 79549.

Real Estate

TEXAS GOLF COURSES
9 & 18 holes — Statewide. Some with extra land, dev. lots. Descriptive list available.

TEXAS GOLF PROPERTIES
1603 Lightsay — Austin, TX 78704
512/442-7105 • Fax 512/442-1812

FOR SALE

POND LINERS
Buy direct from fabricator 20 & 30 mil. P.V.C. Made to order. Under 20 cents per ft. Installation or supervision available. Call...
COLORADO LINING COMPANY
(303) 841-2022

PENNNSYLVANIA GROWN SOD
Penncross Bentgrass — soil free
(Very adaptable to any medium).
Bluegrass/Rye grass blend shipped via our trucks, fork lift unloaded.
VICNOR FARMS, INC.
Connomquenessing, PA 16027
(800) 842-0461

For more information, references or samples, contact:
From Tee to Green, Inc.
1707 Brandwyine Trail
Pt. Wayne, NJ 07484
(800) 932-5223

Customized Yardage Markers

✓ Sprinkler head yardage tags to fit all automatic systems
✓ Highest quality bronze markers for tees, 100, 150 & 200; & cart paths
✓ Yardage books — 1 & 4 color
✓ Laser measure per USGA standards

LASER MEASURING

LASER MEASURING TEE TO GREEN

Custom Granite or Marble Tee/Fairway/Direction Signs

(813) 646-3351

Golf Course Marketplace

Laser measuring and sprinkler yardage markers

We do it all. Laser measure & installation (same day) of custom metal yardage markers for all types of sprinkler heads. Warranty included. Also tee to green measurements for granite fairway markers. Sprinkler yardage markers may be purchased separately. Contact Nick for samples & references. Fairway Designs of Florida, 800-36-TAGIT.
Golf Course Marketplace

To reserve space in this section, call Simone Lewis, 813-576-7077

ALERT
Warning sirens are becoming top priority on the golf course. Don't get STRUCK without one! Protect your guests.

Federal Signal Corporation/Community Warning Systems
Call 1-800-548-7229 (in Illinois, 708/534-4713)

EMIL PAVELEC
V New Construction
GOLF COURSE CONSTRUCTION CO., INC.
Don't get STRUCK without one!

Federal Signal Corporation/Community Warning Systems

sprinklers, valves and clogs. pipes, made of PVC, ABS, steel and cement. Finds priority on the golf course.

12001 SHOEMAKER AVENUE, SANTA FE SPRINGS, CALIFORNIA

Golf Course Bridges!
1-800-328-2047
Continental BRIDGE
Route 5, Box 178, Alexandria, MN 56308 • (612) 852-7500

willadsen scale models
Specializing in Golf Course and Residential Development Models
• STUDY TOPOS
• SINGLE GOLF HOLES
• MASTER SITE PLANS
555 whitehall street sw. atlanta, ga. 30303
(404) 658-1704 (404) 659-5041 fax

MOWER MATE®
U.S. & Foreign Patents Pending. Canadian Pat. #66679 Protect your greensmower from damage due to transport from green to green. Our exclusive 3-point clamping system suspends your reel, bed-knife, verticutter & differential. Call or write for details.

BELL TURF EQUIPMENT
316 Blossom Hill Rd. San Jose, CA 95123 (408) 572-5081

We sell tournament-quality fairways, aprons, collars and lawns... by the roll or by the bag.

Warren's TURF PROFESSIONALS
Northern California (888) 872-0850 FAX (707) 478-0402
Southern California (800) 426-4610 FAX (714) 806-9237
New York (617) 347-5067 FAX (978) 355-5002
Maryland (410) 202-0100 FAX (410) 202-0223
Indiana (317) 778-0256 FAX (317) 778-7677
Texas (800) 763-5668 FAX (713) 885-5448

402-548-0054
12001 SHOEMAKER AVENUE, SANTA FE SPRINGS, CALIFORNIA 219/64-0701 FAX 219/64-4023

Golf Course News
November
25 — 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 404-788-8176.
3-5 — Kansas City Spring Nursery Trade Show. Contact 1-800-777-UNIT.
5-6 — Indiana State Lawn Care Association Conference and Show in Indianapolis. Contact ISLCA at 317-575-9010.
7-8 — New York State Turfgrass Association Turf and Grounds Exposition in Rochester, N.Y. Contact NYSTA at 800-673-TURF.
7-10 — Golf World '91 in Dusseldorf, Germany. Contact Monika Waraczynski at (0211) 4500-543.
10-12 — Canadian Seed Trade Assn. semi-annual convention in Ottawa, Ontario.
14-16 — Landscape Maintenance Association Meeting and Demo at a site to be announced. Contact LMA at 813-354-2112.
17-19 — Ohio Seed Dealers Assn. winter meeting in Columbus. Contact Richard Moore at 614-456-1018.
17-21 — Green Industry Expo in Tampa, Fla. Contact PLCAA at 813-584-2312.
19-21 — Inland Northwest Turf and Landscape Conference and Trade Show in Spokane, Wash. Contact show producers at 800-725-5904.
21 — Pennsylvania Golf Course Owners general membership meeting in Monroeville.

December
2-6 — 6th Your Home Turf at Michigan State University in East Lansing. Contact Dr. Frank Rossi at 517-353-9600.
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 800-523-7702.
3-5 — Rocky Mountain Turf Conference in Denver. Contact 303-488-3440.
6-7 — GCSSA regional seminar in Fort Worth.
9-11 — 22nd Annual Georgia Turfgrass Conference & Trade Show in Atlanta. Contact Extension Conference Office at 706-680-3699.
9-11 — Texas Turfgrass Conference in Fort Worth. Contact David Byrd at 914-685-7363.
22-24 — Annual Florida Turfgrass Conference & Trade Show in Orlando. Contact show producers at 800-523-7702.
Golf Course Marketplace

To reserve space in this section, call Simone Lewis, 813-578-7077

Birds or Animals a PROBLEM??
Scare them away with SHELLCRACKERS®
a Pest Control Device
that safely disrupts eating & nesting habits.

CALL 800-USA-TURF (872-8873) or 717-898-5000

3 North Main Street • P.O. Box 289 • Watkinsville, GA 30677

CIRCLE #154

"NOVATEE"
The NOVATEE is a combination of specially manufactured synthetic grass of commercial quality. Its patented design, featuring top dressing imbedded between the fibers, allows golfers to tee up just like on natural grass.
The NOVATEE is the state-of-the-art synthetic turf surface for all courses & driving ranges.
Dealers inquiries requested.

POC: 533 CSL
Montreal, PQ, Can. H4V 2Z1
814-886-1696
Fax: 814-886-9927

CIRCLE #155

Keep Your Divot Seed Mixture Where It Is Used...
... in Divot Seed & Soil tee buckets next to the tee markers.
Available in Cedar or Redwood slats and with companion TrashM debris buckets.

Ask Your Golf Course Distributor for
INNOVATIVE MAINTENANCE PRODUCTS

CIRCLE #156

Golf course design.

M I K E
Y O U N G
D E S I G N S
3 North Main Street  P.O. Box 289  Watkinsville, GA 30677
Phone: (404) 769-7852  FAX: (404) 769-8538

CIRCLE #158

Timber Bridges
by Western Wood Structures, Inc.
Call Chuck Schmokel - 503/692-6900
1-800-482-4004

CIRCLE #161

Fix Your Dry Spots

This Handi Airifier™ has seven 1/2" tines and attaches to your old cup cutter.
800-456-4351

Miltona Turf Products
P. O. Box 164  MILTONA, MINNESOTA 56354

CIRCLE #162

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."

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 pruned 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.

Golf Course Marketplace

To reserve space in this section, call Simone Lewis, 813-578-7077

Birds or Animals a PROBLEM??
Scare them away with SHELLCRACKERS®
a Pest Control Device
that safely disrupts eating & nesting habits.

CALL 800-USA-TURF (872-8873) or 717-898-5000

3 North Main Street • P.O. Box 289 • Watkinsville, GA 30677

CIRCLE #154

"NOVATEE"
The NOVATEE is a combination of specially manufactured synthetic grass of commercial quality. Its patented design, featuring top dressing imbedded between the fibers, allows golfers to tee up just like on natural grass.
The NOVATEE is the state-of-the-art synthetic turf surface for all courses & driving ranges.
Dealers inquiries requested.

POC: 533 CSL
Montreal, PQ, Can. H4V 2Z1
814-886-1696
Fax: 814-886-9927

CIRCLE #155

Keep Your Divot Seed Mixture Where It Is Used...
... in Divot Seed & Soil tee buckets next to the tee markers.
Available in Cedar or Redwood slats and with companion TrashM debris buckets.

Ask Your Golf Course Distributor for
INNOVATIVE MAINTENANCE PRODUCTS

CIRCLE #156

Golf course design.

M I K E
Y O U N G
D E S I G N S
3 North Main Street  P.O. Box 289  Watkinsville, GA 30677
Phone: (404) 769-7852  FAX: (404) 769-8538

CIRCLE #158

Timber Bridges
by Western Wood Structures, Inc.
Call Chuck Schmokel - 503/692-6900
1-800-482-4004

CIRCLE #161

Fix Your Dry Spots

This Handi Airifier™ has seven 1/2" tines and attaches to your old cup cutter.
800-456-4351

Miltona Turf Products
P. O. Box 164  MILTONA, MINNESOTA 56354

CIRCLE #162

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."

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 pruned 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.
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 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 tee in two directions. Germination occurred in soil temperatures between 38 and 43 degrees.

"The dormant-seeded areas were mowable 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 Fescue to bentgrasses, Ross said. This could be accomplished in two ways.

Continued on page 35

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.

Call for free estimate
Southern Concrete Pavers, Inc.
800-833-3014 FL; 800-368-7890 CA
Pumping Systems, Inc. manufactures custom made prefabricated water pumping systems that provide maximum efficiency and low operating cost exclusively for turf grass managers. Extensive research has been conducted by PSI engineers over the past seven years to seek improved water pumping techniques including the design and construction of Variable Frequency Drive (VFD) controlled pumping systems. Since 1988, PSI has delivered VFD systems to turf grass irrigation projects across the United States.

Today, PSI continues this research and development effort in order to provide the most reliable systems available. Some standard features include: U.S. manufactured, state-of-the-art VFD; custom designed computer control software; dehumidified air cooler for the control panel; power filter; and system capacity relief valve. These features ensure the durability, reliability and operator confidence required for today's turf irrigation pumping systems.

PSI has a factory trained national service network. For prompt service or more information about the finest turf irrigation pumping systems available, contact your nearest dealer or:
Until now, most utility trucks have been better known for carrying repair bills than materials. Our new line of four utility trucks—built Jacobsen tough from end to end—changes all that.

For example, the 2315 has a durable 23.5 liquid-cooled diesel, 5-speed transmission with reverse and heavy-duty automotive type clutch, creating a new standard of dependability.

The 2315 packs a 1,500 lb payload. Unlike other utility trucks, it comes complete with heavy-duty hydraulic dump box, removable panels and tailgate, implement PTO, light full hydraulics and complete instrumentations.

Our rugged line also includes the 20 hp gas model 2015 and the 1,000 lb payload, gas powered 810 Express and electric 610 Express. For maximum versatility and productivity, the 2315 and 2015 can be outfitted with sprayer, top dresser, aerator and spreader attachments. If you already have attachments, our universal mounting kit lets you use them on either truck.

To see them in action, ask your Jacobsen distributor for a demonstration today.