

GOLF COURSE NEWS

THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY

A UNITED PUBLICATION
VOLUME 8, NUMBER 7
JULY 1996 • \$4.50

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Poa triv problems widespread & serious

By MARK LESLIE

Poa trivialis infestations of "epidemic proportions" are being reported in bentgrasses and some Kentucky bluegrasses, affecting golf courses across a broad portion of the United States. The question is, has it always been present?

A rough bluegrass, *poa trivialis* is "very aggressive," said Terry Buchen, The Legends Group director of agronomy. "It will take over bentgrass. Even when the seed is blue tag-certified, it's getting

through [inspections]."

"If you talk to the seed companies, the problem doesn't exist. But if you see new golf courses out in the field, it's absolutely a shame how much *poa trivialis* is there," said Stan Zontek, director of the U.S. Golf Association Green Section's Mid-Atlantic Region. "It's a huge problem. There are some supers who are fit to be tied."

"I totally disagree with Stan and his statement on [new golf courses]," said Dr. Rich Hurley, director of re-

search at Lofts Seed and perhaps the nation's foremost expert on *poa trivialis*. "You take me to 120 old courses and I'll find *poa triv* in fairways, greens and tees. I'm not saying it can't come in the seed, but it's all over. Take me anyplace from Georgia north, coast to coast, blindfolded and I'll find it and I'll find it quick."

"It's a hysteria pointed at the seed companies when, if there is a hysteria, it should be: 'This stuff is everywhere.'"

According to Zontek, the situation

Continued on page 30

OB Sports: Turnkey managers

By PETER BLAIS

PORTLAND, Ore. — Bringing resort golf to urban areas is the goal of O.B. Sports, an Oregon-based, full-service management firm that recently began construction of a new golf project on the western outskirts of this city.

"We're focusing on high-end, public golf," said company President Orrin Vincent. "Country clubs and municipal courses have traditionally been the only choices in Western [U.S.] cities. We want to bring that resort golf experience to the city."

The 36-hole Reserve Vineyards and Golf Club, the fifth facility in the O.B. portfolio, is a good example. The Reserve will operate under an unusual format. Alternating each day, one 18-hole course will be dedicated to public/resort play with the other course reserved for private members and their guests.

The courses, which should open in August

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The 7th green at Rush Creek Golf Club, a John Fought design located in Maple Grove, Minn. Fought's design firm is now a division of Aurora, Ore.-based OB Sports.



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Forum focus: Customer service

By HAL PHILLIPS

CHICAGO — The golfers couldn't be happier. With more than 400 new courses opening their doors each year, there's an increasing variety of playing options. It's another story for the golf course management team, however, as record development numbers mean more competition in an already tight marketplace.

Sophisticated operations that emphasize customer service, manage efficiently, market aggressively and maintain for quality will thrive in this atmosphere, while those content with the *status quo* will fall by the wayside. The application of these sound business principles to public-access course operations will dominate the four-track education conference at The Public Golf Forum, a two-day seminar and trade show sponsored by

Continued on page 41

Participation, rounds back up, says NGF

By HAL PHILLIPS

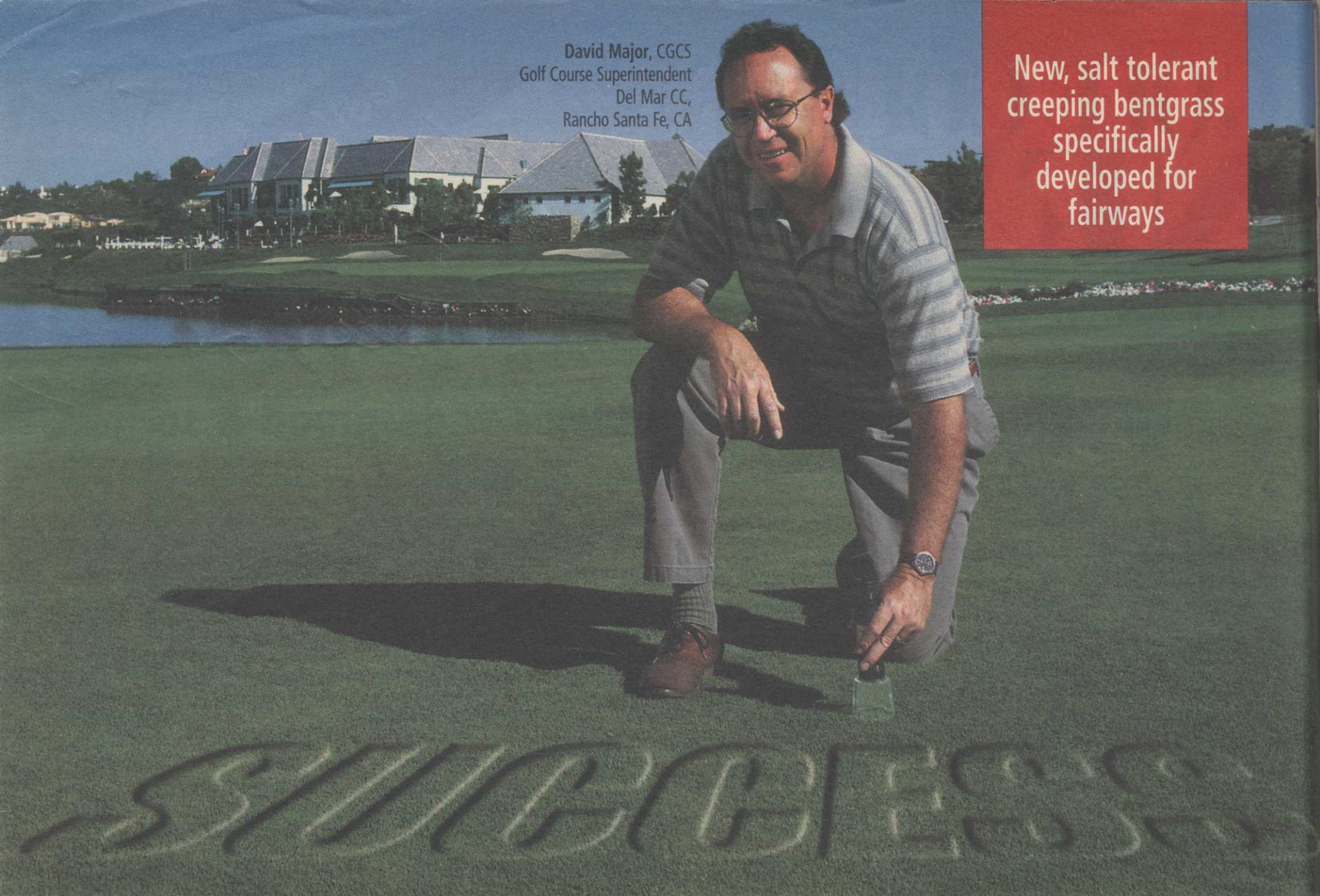
JUPITER, Fla. — That giant sucking sound you hear is actually a collective sigh of relief. According to the National Golf Foundation's (NGF) annual report on golf participation, rounds played increased 5.5 percent during 1995, pushing the total to 490 million. The report also shows the total number of golfers grew by 3 percent, pegging the current playing population at 25 million.

Following on the heels of last years study which indicated troubling decreases in both rounds and players, the 1996 report comes as welcome news to a golf industry building courses at a record pace. Four hundred and sixty-eight courses, an all-time high, opened for play dur-

Continued on page 62

David Major, CGCS
Golf Course Superintendent
Del Mar CC,
Rancho Santa Fe, CA

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Ninth hole, Del Mar CC; Joe Lee, architect

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Seaside II has success written all over it.
- David Major

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IN BRIEF

EDMONTON, Alberta, Canada — Nine more holes have opened at Lewis Estates Golf & Country Club, making it a full 18-hole layout. The new nine and the original nine, which opened in 1992, was designed by golf course architect William Robinson. The new nine has its own version of Augusta National's Amen Corner and, like the original nine, plenty of water lurking off and around the fairways.

♦♦♦

JACKSONVILLE, Fla. — Timuquana Country Club is planning a six-month, \$3.5 million renovation of its 80-acre golf course in west Jacksonville. Area golf courses have offered their facilities to Timuquana members during the renovation. The city has okayed a \$175,000 site-clearing permit. Construction is expected to be finished by Nov. 1. The club is renovating the golf course, installing new drainage and irrigation systems.

♦♦♦

BRIDGEWATER, Mass. — Work is underway here on the upscale, daily-fee Olde Scotland Links project. The municipal course, designed by Cornish, Silva & Mungeam of Uxbridge, Mass., is scheduled to open in August 1997. Olde Scotland Links will be a classic links-style golf course on a large open meadow site. The would-be course is located in the Scotland Village area of Bridgewater, which dates back to the 1700s.

GOLF CONTINUES TO COLONIZE WILLIAMSBURG



Colors contrast on the 17th hole at Stonehouse Golf Club, a Mike Strantz design just opened for play in Williamsburg, Va. In photo top right, the first hole at Royal New Kent, Stonehouse's sister course. Strantz employed classic Irish design features at RNK, which includes no less than 130 bunkers.



WILLIAMSBURG, Va. — With the christening of two new courses and this summer's scheduled grand openings for a pair of recently opened facilities, this city continues to gain prominence as a major East Coast golf destination.

Royal New Kent and Stonehouse Golf Club, both designed by Mike Strantz for the Legends Group, opened in mid-June. These two courses are the Legends Group's first golf ventures outside South Carolina.

Forrest Fezler, former PGA Tour player, is the director of golf operations for both courses. Terry Buchen, late of the Double Eagle Club in Galena, Ohio, is the director of agronomy.

Williamsburg National, designed by Jim Lipe and Jack Nicklaus Design, opened for limited play in last fall and had its grand opening in late June. The course is owned and operated by Legacy Golf Management of Atlanta, Ga., and is the first of two courses planned for this location. The second 18 is scheduled to begin construction in the fall.

The Colonial Golf Course, designed by Lester George and Robert Wrenn, opened for limited play in summer 1995 and is planning its grand opening for mid-September.

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New course owners set S.C. links on road to recovery

BLYTHEWOOD, S.C. — The former Crickentree Golf Club is recovering after years of neglect and the effects of bankruptcy.

The new owner is Links & Land Group of Florence, S.C., which also operates the Country Club of South Carolina. Links & Land took over the former Crickentree Golf Club in March for \$2 million and is in the midst of a \$500,000-\$700,000 renovation project that's expected to take the next four to five years.

The name of the 7-year-old facility has been changed to the Golf Club of South Carolina at Crickentree. The club's 18-hole course was designed by Ken Killian. Mike Holland, an original

member and former PGA Tour player who became head pro at Crickentree for 1993-94, has been hired as the club's executive vice president.

Links & Land has led successful renovations in the past. The Country Club of South Carolina was reportedly in worse condition than Crickentree when it took over there in 1988. Today, the Country Club of South Carolina is home to the Nike Tour's South Carolina Classic, U.S. Open qualifying and the second stage of PGA Tour qualifying. Links & Land said it expects the course to be in prime condition by early fall. Improvements to the clubhouse and grill are also underway.

TPC has S. Car. in uproar

MYRTLE BEACH, S.C. — Myrtle Beach Golf Holiday plans to build two Tournament Players Club (TPC) golf courses and the proposal is threatening to break up the organization.

Golf Holiday — an advertising cooperative made up of 96 hotels and 86 golf courses in and around Myrtle Beach — wants to build two 18-hole courses in a 50-50 partnership with the TPC on about 450 acres of land owned by Canal Industries. More than two-thirds of Golf Holiday's 182

members voted recently to proceed with plans.

But a substantial number of Golf Holiday members have criticized the plan. They say the organization has no business getting into the golf business and developing golf courses that would compete against its members.

Brad Blair, executive vice president of The Legends Group which includes six Grand Strand golf courses, told *The Sun News* of Myrtle Beach, "Golf Holiday should do what it does best, and that's promote the golf industry in the same context they have in the past."

Blair helped write a five-page memo detailing 42 concerns that many Golf Holiday members have with the TPC project. Blair, like others, said the organization should focus on marketing and advertising Grand Strand golf packages.

Golf Holiday and the TPC would reportedly have to borrow \$6 million to build the first TPC course, which would open in 1998. The PGA Tour is negotiating with golf course architect Tom Fazio to design the first course, which would be in the "stadium" style and feature spectator mounds and other amenities for tournament play. The first course would become the permanent host of the Senior Tour Championship, which is now held at The Dunes Golf and Beach Club.

A second course would be built within six years after the first course opens. There are also plans for an upscale residential development that would be an official TPC neighborhood.

Non-profit Golf Holiday would have to restructure its organization to run a for-profit golf course and would borrow another \$2.5 million as seed money for the TPC. Several members unhappy with the plan said Golf Holiday shouldn't be putting itself at risk by borrowing money and operating a business that might not be successful.

The Legends Group and several other premium golf courses have threatened to pull out of Golf Holiday because of past differences. Some course owners complained two years ago that Golf Holiday was keeping greens fees artificially low by advertising cheap golf packages. Golf Holiday also spent about \$1 million over the last two years to cover losses in the Senior Tour Championship tournament, which it co-sponsors. That money, said some golf course owners, should have been used to advertise and promote vacation packages.

Blair and other owners have questioned whether the TPC courses will be as successful as Golf Holiday claims. "If this is such a good idea," said one owner, "then (the TPC courses) ought to be able to secure the financing without going to Golf Holiday."

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Florida Open site prepares for reopening

LAKELAND, Fla. — International Golf Management (IGM) is supervising a major redesign and improvement project at The Palms, the oldest of the five courses at Palm Aire Spa & Resort in Pompano Beach, home of the Florida Open.

The \$700,000 project — which should be finished by the end of this month — included the redesign and rebuilding of the 18-hole course's greens, bunkers, select tees and fairways, as well as major irrigation and drainage improve-

ments. It is the first facelift for the Robert von Hagge-designed layout since it opened in 1959. Work began on the project in April.

The project was designed by golf course architects Karl Litten and Lorrie Viola and overseen by Doug Frasier of Frasier Turf Consultants of Atlantic City, N.J.

IGM, which provides ongoing maintenance services for all five Palm-Aire golf courses on a contract basis, is installing irrigation around the greens as well as an Osmac irrigation system by

Toro, while Tifton Turf is handling improvements to the fairways and tees and installing USGA-approved greens mix.

In addition to The Palms, Palm-Aire Resort includes four other 18-hole courses — The Pines, The Cypress, The Oaks and The Sables. The latter is an executive course that features four contiguous practice holes called The Regency. All five courses at Palm-Aire are scheduled for upgrades, with The Cypress next in line beginning in early 1998.

Two Dye courses set to tee off in Md.

BEL AIR, Md. — Construction has started on the first of two Pete Dye-designed 18-hole courses to be built at the 550-acre Blenheim Farm.

First-year construction will include the first 18-hole south course, a 21,200-square-foot clubhouse and maintenance facilities.

In the second year of development, builders will prepare the Pete Dye Guest House in the existing Victorian-style

house on the property. There will be 12 double-occupancy suites.

The 18-hole north course, which will complete the complex, will be built in the third year of development.

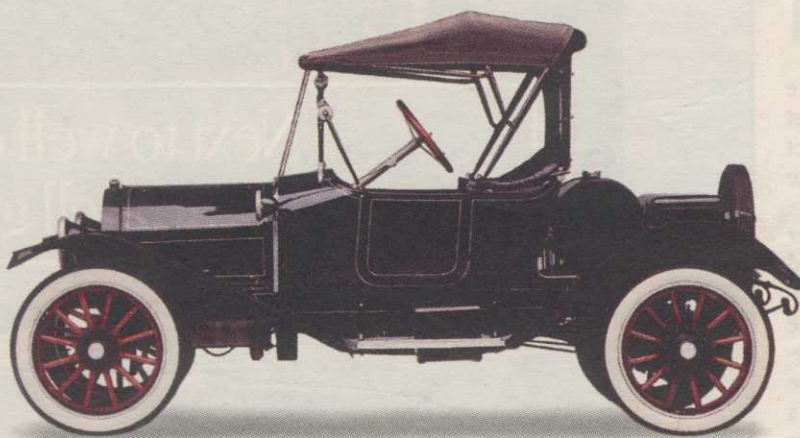
The complex is scheduled to open by spring 1997 and Abel hopes the courses will be selected to host a PGA tournament in the future. Greens fees are expected to be about \$100.

Ohio track gets new nine and new moniker

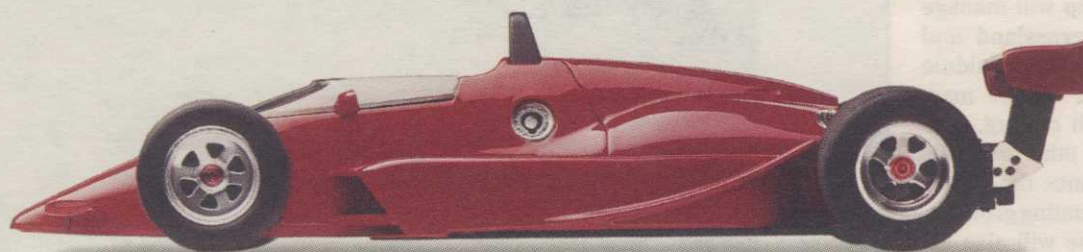
DELAWARE, Ohio — Not only is the nine-hole, 72-year-old Delaware Golf Club getting nine new holes, it's also getting a new name.

The soon-to-be expanded course, which will be part of a new 282-acre housing and golf development, will be known as The Dornoch Golf Club. Dornoch is a town in northern Scotland where legendary golf architect Donald Ross was born and raised. Ross designed the existing nine holes at the Delaware Golf Club in 1924.

PGA Tour player Fuzzy Zoeller and golf course architect Michael Hurdzan are working together on the design of the new nine holes.



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Second-class postage paid at Yarmouth, Maine, and additional mailing office. *Golf Course News* (ISSN 1054-0644) is published monthly by United Publications, Inc., 38 Lafayette St., P.O. Box 997, Yarmouth, ME 04096. Phone number is 207-846-0600.

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Golf Course News is distributed in the U.S. without charge to qualified personnel of golf course facilities and to golf course builders, developers and architects. Subscriptions to Canadian golf facilities cost \$25 annually; other paid subscriptions to the U.S. and Canada cost \$45. All foreign subscriptions cost \$125 annually to cover air delivery. All payments must be made in U.S. funds drawn on a U.S. bank. **For subscriber services, please call 215-788-7112.** Send address changes to *Golf Course News*, P.O. Box 3047, Langhorne, Pa. 19047-3047.

Golf course helps save Cape Cod lighthouse

NORTHTRURO, Mass. — The saga of Cape Cod Light at the Highland Golf Links in this Cape Cod town is creeping toward a happy ending.

Work has started on a new home for the 109-year old lighthouse commonly known as Highland Light. The 65-foot high landmark structure, which sits 110 feet away from an eroding cliff that rises 130 feet from sea level, was slowly being threatened by the encroaching sea and erosion.

Last year, town and course offi-

cial and local preservationists worked out an agreement to move the lighthouse and keeper's house to a safe home 450 feet inland — in the rough off the seventh fairway of the Highland Golf Links, a nine-hole municipal course.

Workers expected to move the lighthouse in late June and early July. To move the lighthouse, workers will use hydraulics to jack the structure up on a system of steel beams. The lighthouse will then be rolled along the beams to its new site 450 feet

away. Merl Copeland, a site superintendent from the International Chimney Corporation, said the actual move should take about two weeks.

A local rumor says the lighthouse will move about an inch per day. But Copeland said the lighthouse will probably move more like 10 or so feet per hour. The new site is 9 feet lower in elevation than the original one and it will require careful navigation in places to get the lighthouse safely home.

The lighthouse is expected to be operational again by late September or early October.

"Undoubtedly it's going to mess up a few people who like to come off the tee in that direction," said Copeland of the lighthouse's new home.

A Cape Cod National Seashore official said the average yearly erosion rate has been 3 to 6 feet over the past 100 years, but the erosion could be much more at any given time — as much as 25 feet — which spurred the move. Construction costs for moving the lighthouse, the second oldest on the East coast, will be \$1.5 million.

MICHIGAN TURFGRASS CONFERENCES SET

EAST LANSING, Mich. — The 1996 Michigan Turfgrass Field Day will be held Aug. 15 at Michigan State University in East Lansing. Details will be mailed in July. Meanwhile, the 67th Annual Michigan Turfgrass Conference will be Jan. 20-23, 1997 in Lansing. Literature will be mailed in early November. For more information contact 517-321-1660.

Mass. developer promises top quarters for endangered bird

NANTUCKET, Mass. — The developers of the new Siasconset golf course will finance a project to improve the habitat for the northern harrier, a rare hawk.

The Partnership for Harrier Habitat Preservation was formed as part of the golf club's environmental permitting process. The private links-style course designed by Rees Jones, is in the first stages of development on a 250-acre piece of land in the middle of the island.

The course is next to the largest single piece of conservation land on Nantucket, 3,000 acres.

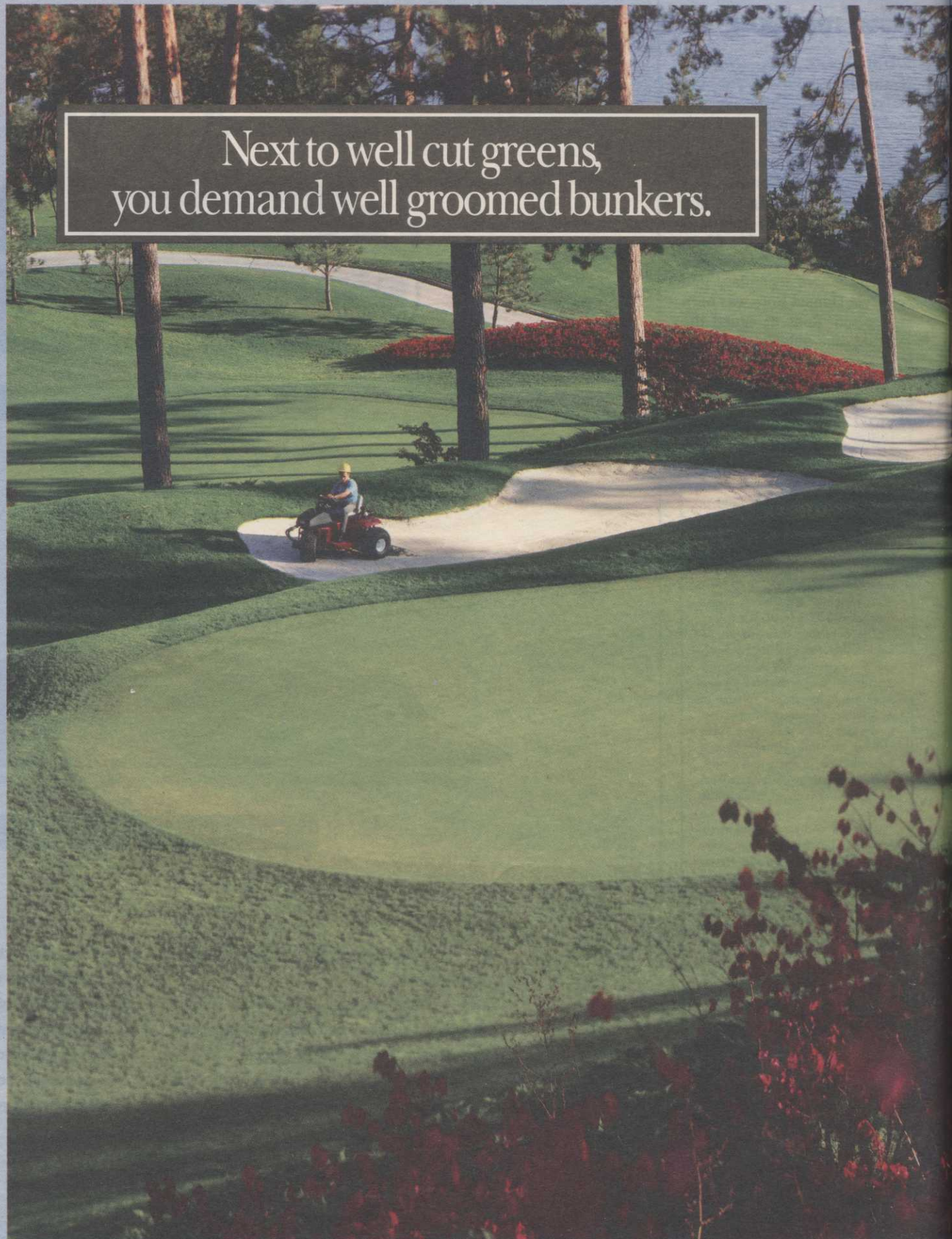
Some of the land is important habitat for the harriers. The birds are listed as a rare and endangered species in Massachusetts. They are ground-nesting birds. Their natural habitat is moorlands, annually mowed grassy fields and recently burned areas.

The partnership will manage 1,100 acres of grassland and heathland, mainly in the middle moors. The land will be managed using brush cutting, controlled burns and other methods designed to enhance the hawks food source and hunting grounds.

The golf course will also establish a nursery and native vegetation restoration plan for species listed as endangered in Massachusetts.

DEVELOPER SAVES ABANDONED MASS. GOLF PROJECT

TOWNSEND, Mass. — For the last eight years, half-finished Northern Spy Country Club lay abandoned, its fairways worn by dirt-bikers, hunters, vandals and weeds. Fourteen holes and the frame of a 15,000-square-foot clubhouse had been completed before two different developers bailed out on the project. A year ago, developer Fred Daley secured the property and has set about to turn it into a first-class golf facility. After months of construction and reconstruction, the freshly-named Townsend Ridge Country Club opened for play in late May.



Next to well cut greens,
you demand well groomed bunkers.

Public Bethpage still in hunt for 2002 U.S. Open

BETHPAGE, N.Y. — The Black course at Bethpage State Park in Long Island is still in the running to host the 2002 U.S. Open, which would make it the first public, non-resort course to ever host a U.S. Open.

A U.S. Golf Association (USGA) committee led by Judy Bell was expected to visit the course sometime in late June for another site inspection. A group visited Bethpage's Black course earlier in the spring.

During last month's U.S. Open at Oakland Hills, the USGA formally announced Southern Hills in Tulsa, Okla., will host the 2001 Open.

But it did not announce the host site for 2002. Bethpage's Black course — designed by A. W. Tillinghast in 1935 and perennially ranked as one of the best public courses in the country — had been under consideration for 2001, but a New York state parks official said he is hopeful 2002 will be Bethpage's year.

The sites for the upcoming U.S. Opens include Congressional Golf Club in Bethesda, Md., for 1997, Olympic Golf Club in San Francisco for 1998, Pinehurst No. 2 in Pinehurst, N.C., for 1999 and Pebble Beach (Calif.) Golf Links for 2000.

TPC course underway in N.J.

PRINCETON, N.J. — The transformation of the lush, sprawling Jasna Polana estate into a Tournament Players Club golf course is underway.

Construction of the \$15 million, 18-hole tournament-caliber course designed by Gary Player started in April. The club is expected to open in fall 1997, although the facility won't be in tournament condition until 1998, according to Wayne Millar, project manager and coordinator of planning for the Tournament Players

Club, the developer.

Work has started on the excavation of a 12-foot deep, three-acre irrigation lake that involved removing 50,000 cubic yards of earth. Millar said that 20 specialized golf course builders, contracted by Country Golf of Traverse City, Mich., are working on the project.

A recent groundbreaking invitation-only ceremony had a guest list that included Player and Prince Albert of Monaco, a friend of Barbara Piasecka Johnson, the pharmaceutical heiress who owns the estate.

Starting in September, workers will begin converting the existing \$28 million mansion into a clubhouse. The main building of the mansion will remain largely intact, but two wings will be renovated. One will be turned into a locker room and the other into a dining room. An outdoor rose garden atrium will become a golf shop.

Smith to design new 18-hole Oneida Indian layout in N.Y.

VERONA, N.Y. — With its multi-million-dollar hotel under construction, the Oneida Indian Nation has turned the next phase of making the Turning Stone Casino into a full-family entertainment facility with the addition of a 27-hole golf course that is expected to be ready for play by June 1998.

The contract to design The Center for Golf at Turning Stone has been awarded to Rick Smith of Gaylord, Mich., who has designed three 18-hole courses at the Treetops Resort in Gaylord. Smith has also been contracted to design a nine-hole, par-3 course along with a practice facility.

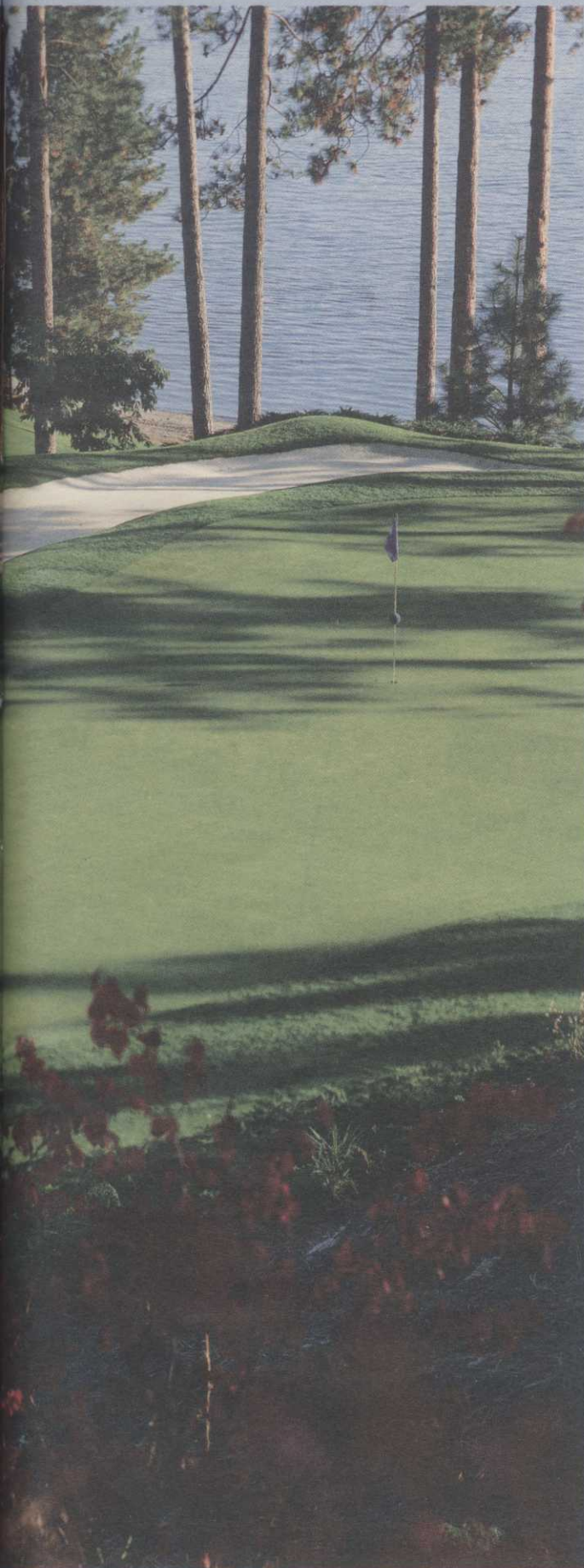
The Center for Golf will be built on 240 acres adjacent to Turning Stone, the only legal gambling casino in New York. A hotel is being built next to the casino, which is just off Route 365 near Exit 33 of the New York State Thruway.

The 18-hole championship-level course will be approximately 7,000 yards from the championship tees and designed to accommodate tournament play.

Smith has said one of his goals in designing the course was to cut the average playing time from five hours to four.

The course will be semi-private, catering to the guests of the casino and hotel. Future plans are to develop clubhouse cottages along the course for guests.

Construction is scheduled to begin in September and be completed in 12 months.



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CIRCLE #105



Golf ass'n course plans stir debate in Minn.

MINNEAPOLIS — The Minnesota Golf Association (MGA) is proposing an ambitious 700-acre golf complex near Rosemount that would combine instruction and turf research by the University of Minnesota and two new upscale, 18-hole golf courses.

The not-for-profit joint venture with the university's College of Agriculture, Food and Environmental Sciences would be built with private money on part of an 8,000-acre tract owned by the university. The group is also seeking to involve the United States Golf Association in the as-yet unnamed enterprise.

Several golf course owners around the state have expressed concerns about the plan. They question whether the state's golf association should be collecting dues and reservations from member clubs and courses and then building new courses that would compete with them.

Project manager Richard Howell has said the new courses would relieve other championship-caliber courses in the state from heavy tournament obligations. Howell said the proposed MGA courses at the complex would also be higher-priced than most public courses and would attract a different following.

Mike Martin, the dean of the university's College of Agriculture, Food and Environmental Science, said the venture would create a world-class education and research center for the study of turfgrass and grounds. The plan calls for three to six "research holes" for turfgrass and landscaping experimentation. The holes could simultaneously be used for research and played for practice or used for lessons.

According to plans, the first phase of construction would cost \$7 to \$9 million and include an 18-hole championship course designed by Rees Jones, club-

house/conference center, maintenance facility with classroom, and a golf practice and teaching facility to include dormitory rooms for summer camps. Howell said there would be a heavy emphasis on teaching golf to financially disadvantaged children.

The proposed second phase would include 10,000 square feet of office space for the MGA and allied groups and a second 18-hole golf course.

The university also said it

hopes to someday attract private businesses to the periphery of the complex. Lawn care companies, for example, could lease land for experimentation.

The proposed site is near the southern tip of an 8,000-acre tract that was deeded to the university more than 40 years ago by the U.S. Department of Defense. About 3,200 acres within the tract are already used for experimentation. Project officials said the complex wouldn't be open until at least mid-1998 or 1999.

Matthews to design Mich. resort links

HARBOR SPRINGS, Mich. — Birchwood Farms Golf and Country Club near Michigan's Upper Peninsula is hoping to add a \$3 million, 18-hole golf course at its upscale facility.

The golf course architecture firm of Matthews and Associates of Lansing, which designed Birchwood Farms current 18-hole layout, will design the course. The club has tentatively reached a purchase agreement with

Birchwood Development Co. to purchase 190 acres of land for the course, according to Linden Mills, the club's general manager.

Mills said the club would like to begin this year on the first nine holes. The next nine holes would be built at a later date. When Birchwood Farms is completely built, it could potentially have 1,054 home sites, condominiums and single family residences.

Stick to News

Inexpensive option?

GOLF COURSE NEWS

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INSIDE

Upfront Prep

Dr. William Torello has ideas on sparing turf the effects of harsh winters. Start in the fall 17

Sod So... ?

High demand for sod production philosophy stock 53

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ALL IN THE FAMILY

Robert Trent Jones Sr. (left) has teamed with elder son Bobby to form a new architectural entity, RTJ Golf Ventures. For story, see page 37.

COURSE MAINTENANCE

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Putting green research: Top 10 projects

COURSE DEVELOPMENT

PLAYERS SURVEYED ON SUPERS' ROLE

Image enhanced but golfers insist on 'green' look

BY PETER BLAIS

ORLANDO, Fla. — Most golfers see superintendents as trained professionals and the person most responsible for course conditions — news course superintendents should find encouraging course conditions to elevate their image. Disturbingly, however, few golfers recognized the Golf Course Superintendents' Association of America (GCSAA) as the superintendents' national organization. Also troubling was the unwillingness of most golfers to accept poorer playing conditions in exchange for reduced maintenance and water use on their courses. According to a recent survey conducted by the National Golf Foundation.

STUDY SHOWS:

Name designers pull higher dues and green fees

BY PETER BLAIS

HARRISBURG, Pa. — Private courses designed by signature architects command higher initiation fees.

MAKE THE CALL!

Mich. golf pro enters course design field

MUSKEGON, Mich. — Muskegon Country Club golf professional Mile Sruba has turned his hand to the drafting board.

Sruba designed Muskegon County's newest golf course, the nine-hole Eagle Island Golf Club. The par-34 course, which is expected to open in August, will be near a driving range called First Tee which Sruba owns. Sruba also plans to build an 18-hole natural bentgrass putting course as part of the multi-use golfing facility.

The course will have one par-5 and three par-3s with three sets of tees on each hole and play from 2,800 to 3,000 yards. The average size of the greens will be 6,500 square feet.

Local environmental groups file suit against proposed Texas muni

LAKE JACKSON, Texas — A long-expected lawsuit aimed at stopping Lake Jackson's golf course project has been filed against the U.S. Army Corps of Engineers and the city.

The lawsuit was filed in federal district court in Galveston by a local environmentalist, Sharron Stewart, the Houston Audubon Society and the Sierra Club. The defendants named include the Corps' Galveston district, the city of Lake Jackson and Mayor Jim Martin.

The lawsuit was filed after the Corps is-

sued Lake Jackson a wetlands permit last February for its long-awaited 18-hole course on land containing wetlands. The permit allows Lake Jackson to fill wetlands with a forested area known as the Columbia Bottomlands.

The suit seeks to suspend or revoke the permit and to halt any construction or awarding of contracts.

The city's proposed course is part of a contiguous 1,600-acre forest that is one of the largest mature hardwood tracts remaining in Texas, according to the suit. The suit also states direct losses through wetlands

filling and clearing forests will adversely affect birds as well as numerous native amphibian, reptile and mammal species. It further says that additional development will take place around the course.

The lawsuit also claims that U.S. Rep. Tom DeLay wrongly tried to influence the outcome of the permit process. DeLay inserted a provision into a recently-signed appropriations bill that prohibited the U.S. Fish and Wildlife Service from delaying or impeding the issuance of the wetlands permit to Lake Jackson.

Miller to craft links on Hearst family property

SAN SIMEON, Calif. — Johnny Miller may get a chance to design a golf course on the Hearst family's San Simeon Ranch, a spectacular coastal site that is comparable to Pebble Beach or Cypress Point.

Miller has done a preliminary design plan for 27 holes at the proposed San Simeon Ranch resort. The resort and 27 holes are part of an overall development plan for Hearst property on the North Coast.

Miller has called the property the kind of land where the Alister MacKenzie and Jack Neville were able to design golf courses earlier in the century. MacKenzie designed Cypress Point and Neville designed Pebble Beach, both among the most scenically dramatic courses in the world.

Miller said if a course is built, it would have potential to host a major golf tournament.

Whether the course and the rest of the proposed resort get built in the near future is another question. The golf layout and the accompanying luxury resort are the most controversial aspect of the Hearst proposals. The plan will be debated by county planning commissions in a process that could take years.

Irrigation experts to hold conclave in mid-September

PLEASANTON, Calif. — The American Society of Irrigation Consultants (ASIC) will hold their 1996 conference here Sept. 12-15. The conference will kick off with an 18-hole ASIC/Bob Cloud Memorial Golf Tournament the afternoon of Sept. 12.

On Sept. 13, a series of educational presentations will explore working relationships between irrigation consultants and developers, landscape architects, installation and maintenance contractors and other industry members. The all-day program for Sept. 14 will focus on technical topics. A reception and banquet will be held the evening of Sept. 14 at a historic Livermore Valley winery.

For more information on the program and registration forms, contact Wanda Sarsfield of the ASIC at P.O. Box 426, Byron, CA, 94514, or by phone at 510-516-1124, or by fax at 510-516-1301.

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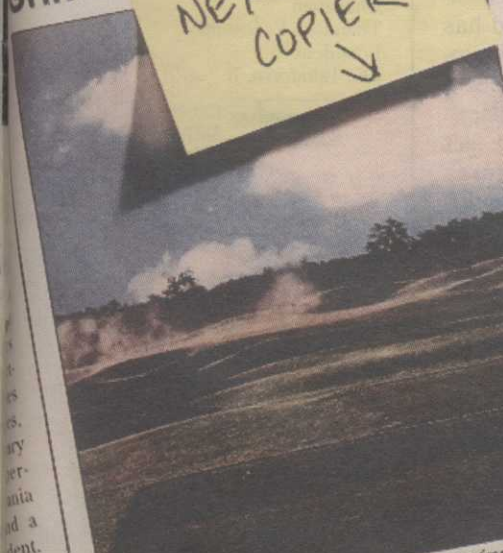
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SENSITIVE STROKES
Architect Ron Carl worked sensitively around wetlands at the newly opened Indian River Club. Located in Vero Beach, Fla., Indian River is only the third course in the world to be granted Audubon Signature status. The course also embodies the Environmental Principles for Golf Courses recently issued at the conference on Golf & The Environment (see page 16).

on course costs

By MARK LESLIE
Worried the cost of golf is starting to drive people from the game, the incoming and outgoing presidents of the American Society of Golf Course Architects have presented arguments that would lead developers to make harsh choices about their projects.
Picking sides in a point-counterpoint atmosphere, Past President Jeff Brauer of Golfscapes in Houston and new President Denis Griffiths of Braselton, Ga., agreed construction costs have escalated too high but disagreed over the cure.
"Ten years ago there were few upscale daily-fee projects," Griffiths said. "Everyone today is doing

Continued on page 46



design from incoming

Rounds are up! No, they're flat

Before you get all worked up, let me reconcile what appears to be a contradiction here in the pages of *Golf Course News*. I know what you're thinking: "That simply isn't possible!" Well, you're right.

On the front page this month we published a story regarding an increase in golfer participation and rounds played, according to a just-released National Golf Foundation report. Yet on page 47, in the Management Section, we published a "man-on-the-street" set of responses to the following question: "Assuming rounds and participation levels will remain relatively flat over the next 10 years, how will you compete for market share in your areas of business?"

Rounds and golfers did increase during 1995 — comforting news following a 1994 decrease in both categories. However, rounds played and participation **have** remained flat for the better part of five years. Certainly, they have not kept pace with the golf course stock, which has jumped by nearly 15 percent since 1990.

This is why we posed our rather pessimistic question to management company executives, who have seen this disparity in supply and demand result in frenzied competition for the daily-fee golf round. If course openings continue at their record-setting pace — and judging from the number of facilities under construction, there's no reason to believe they won't — it will only get more competitive.

By the way, we plan to pose similarly compelling questions to management company representatives on a monthly basis. If you have any suggested queries, contact us via e-mail at hphillip@biddeford.com, or fax to 207-846-0657.

•••

It had to happen sometime: A major shoe manufacturer has finally hooked up with a maker of spike alternatives. Softspikes and Reebok International will team to provide the golfing consumer with a ready-to-wear spikeless golf shoe, i.e.

Continued on page 41



Hal Phillips,
editor

Good deeds making a dent?

Truly, have we bridged the gap, proven the point and affirmed it with environmental bureaucrats, that golf courses are indeed good for the earth's health? Have the national Golf & The Environment Summits, the state wetlands hearings, the small-town public land-use meetings finally educated folks who heretofore wouldn't even listen to golf's claims of white-hatted good-guymanship? Has all this made a dent in the cerebral armor of even staunch no-growthers?

Well, maybe that last bit's going too far. But apparently progress has and is being made — perhaps even as you read this column. Look over your shoulder: You may not see a Sierra Clubite weeping over the tale of how well-served the snail darter is by a local golf course; but he may be considering that possibility. And a year ago the thought had no chance to even exist in that person's gray matter. He/she would have dismissed it outright, and probably with a curse.

But listen to Maine Department of Environmental Protection Director of Policy Development and Implementation Brooke Barnes: "Whether it's golf or the paper business, the environmental ethic really is becoming part of corporate America. That's our experience.

These corporate people we deal with aren't just talking the talk, they're walking the talk. It's refreshing and it makes our job easier."

Got an example, Mr. Barnes? Yes, you say? And a paper company at that? Naw, come on!

Listen again: "The Cinderella story I think of is International Paper Co. in Jay," Barnes said. "They were hit with massive fines in the early '90s, and they basically went from a real environmental 'bad actor' into an absolute leader. They are way, way out in front trying a lot of new, innovative technologies, going beyond compliance, instituting pollution-prevention programs that are cutting emissions by 60 percent. It's exciting. It can happen. It's a success story all the way around."

Now, if a state environmental official, whose "mission" is "to protect the environment," says this about a paper company... I mean, it just boggles the mind to think how highly thought-of golf courses could be in some circles — even the circles that in



Mark Leslie,
managing editor

Continued on page 14

Letters

NTEP FUNDING RAISES QUESTIONS

To the editor:

Thanks for printing my letter concerning the proposed cancellation of funding for the National Turfgrass Evaluation Program (NTEP) by the U.S. Department of Agriculture (USDA). This letter generated a flood of letters to USDA officials supporting NTEP. We are very appreciative of the support of so many in the turfgrass industry [see follow-up story on page 15].

Your editorial brought up an important point concerning federal funding of programs important to "special interest groups." What programs should the federal government fund? Isn't the general public telling their congressional representatives that we need less and more efficient government? Initially, I struggled with these same questions.

Concerning funding of NTEP, the following information is important:

1. The USDA provides NTEP with less than 10 percent (\$50,000) of its operating budget. The remainder is funded by entry fees charged to companies or individuals that test grasses through NTEP. About 50 percent of this money is given back to the university scientists (in the form of research grants or contracts) who test grasses for NTEP.

2. The funding by USDA for

Continued on page 14

WEB OVER-SITE

To the editor:

I appreciated reading the article on Internet marketing ["Marketing on the 'Net' wave of golf's future," *GCN* May 1996]. However, there were two errors in it about our on-line website mentioned therein.

First, the correct address is <http://www.iquest.com/michigangolfer>. Secondly, it's incorrect to say that the content is "golf courses only." In fact, our print edition of *Michigan Golfer*, now in its 14th year covering golf, is also found on this website. Such content as an exclusive Q&A with Corey Pavin, the treacherous greens of Oakland Hills, a feature on "spikeless" golf shoes, a preview of the Ford Senior Players Championship, and golf travel in Ireland all may be found there in current or archived form.

I enjoy reading your informative newspaper. You do a fine job on covering diverse subjects and topics in the industry. Continued success.

Terry Moore, editor
Michigan Golfer
Grand Rapids, Mich.

A WORD ABOUT OZONE

To the editor:

I read your article regarding ozone systems and golf course ponds with some interest. The article left much unsaid and contained quotations which might

tend to confuse or misinform your readers. The article states that a one surface acre lake would require 5 to 10 horsepower of surface aeration. Otterbine has recommended 1.5 horsepower per surface acre for the 17 years that I have been employed here. How this requirement could have been overstated from 300 to 600 percent is of question.

Further the article refers to the relative efficiencies of bottom-diffused aeration or ADS. The relative efficiencies of any bottom aeration system are related to depth. As the air bubble rises to the surface, it will tend to entrain water and circulate from bottom to top. Secondly, the deeper the water the greater the rising air bubble's contact time and the higher the oxygen transfer rate. In fact, research indicates that bottom-diffused systems operate at peak oxygen transfer efficiencies in depths of 15 feet. For every 3 feet the depth is increased, transfers decrease a corresponding 50 percent. Hence, in 6 feet of water, a bottom-diffused aeration system is only working at 12.5 percent peak efficiencies, making a surface spray aerator far more effective and efficient.

Lastly, ozone generation is not a new concept. The first commercial application was documented over 90 years ago in Nice, France. There it was used to clean water for human consumption. There are two basic meth-

ods of generating ozone; corona discharge and ultraviolet [UV] radiation. UV radiation generation is usually achieved by passing water or air past a special type of light bulb similar to a black light. As the bulbs age ozone output drops. Corona discharge systems use a permanent electrode system.

A major problem with using ozone for lake-management purposes is the high demand for ozone in large bodies of water and the relatively short half life of ozone in water (20 to 30 minutes). Due to the high degree of biological material and runoff often found in golf course ponds, ozone demand is extremely high. Corona discharge systems are used for large volumes of water (i.e. clean municipal drinking water and municipal waste). UV systems are better suited for small volumes of water (i.e. aquariums, etc.).

As Otterbine has been in business for over 40 years and has over 5,000 golf course customers, I believe we speak with a degree of experience unparalleled in the industry. The fact that Otterbine manufactures ozone generators, bottom-diffused aerators, horizontal aspirators and surface spray aerators allows us to speak with more objectivity than a manufacturer who has specialized in one type of product.

Charlie Barebo, president
Otterbine Barebo, Inc.
Emmaus, Pa.

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THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY

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Subscription Information
Golf Course News
P.O. Box 3047
Langhorne, PA 19047
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THE FIRST OF TWO PARTS

Documented irrigation plans define your absolute functional necessities

By LARRY RODGERS

A well-written irrigation plan, like a construction blueprint, instructs users on how to create the best system for their exact needs. The plan reflects current course watering demands, as well as irrigation requirements 20 to 30 years in the future. It defines pressure zones, sprinkler coverage, electrical wiring, communications cable routing and a host of other essentials.

Perhaps most important, the plan specifies the absolute functional necessities of how your station affects the total irrigation system.

Absolute functional necessities. What does that mean? It translates simply: Your irrigation plan should tell you in complete detail exactly how your pump station must perform to appropriately irrigate your course. Further, it explains what components and features that station must include to meet those performance levels.

As an irrigation designer and consultant who has worked on more than 300 golf courses around the world, I can say with great confidence that ignoring or misunderstanding pump

station specifications is one of the worst mistakes course owners and superintendents ever make. And, allowing that to happen is one of the worst mistakes a consultant ever makes.

Pump stations lie at the heart of every irrigation system, and are one of its most complicated components. The best irrigation piping and sprinkler heads available make no difference without water. Simply put, the pump is the heart, the piping is the arteries, the controls are the brains, and the sprinklers are the muscles.

Consider this example: A golf course project in Indonesia receives its set of pump station specifications. Two pump station manufacturers submit bids. One follows the plan exactly and returns with a price. The other insists it can reach the performance standards without precisely meeting specifications and offers a lower price.

The course owners accept the lower bid. A dark comedy of errors unfolds, highlighted with problems like the following:

- Key station components are missing. The manufacturer blames the local dealer for their absence. The local dealer cuts all ties to the manufacturer

Continued on page 13

Larry Rodgers is an irrigation consultant based in Lakewood, Colo.

Golf should take the initiative & beef up environmental principles

By ERIC S. HOWARD

The Environmental Principles for Golf Courses in the United States — voluntary guidelines for golf course design, construction and management — were presented at the March 1996 Conference on Golf & the Environment [*Golf Course News* March 1996].

While the Principles are an important step in the right direction, they could have gone further. For example, buffer zones are called for in sections dealing with development. But the focus is on a narrowly defined component of environmental protection, rather than buffers having environmental and social benefits that far exceed the ecosystem benefits. Environmental guidelines should be seen as living documents. As golf course managers review these principles and begin to implement them in collaboration with their local communities, some amendments will certainly be necessary.

The Principles for Golf Courses are one of many national and international efforts aimed at reducing the environmental impact of recreation and tourism. In 1995, investment for travel and tourism in North America was more than \$100 billion, and the capital investment is expected to grow significantly here as well as in Latin America, Asia and the Pacific during the next decade. A host of hotels and resorts will be built, requiring infrastructure and associated development.

For the golf industry, this will mean more opportunities to build courses and more opportunities to manage and maintain them. While environmental guidelines or codes of conduct used by businesses or industry associations are often shorter than the Principles for Golf Courses, they may cover a broader set of issues [see box].

Continued on page 12

Eric Howard is an associate at Portland, Maine-based Benchmark Environmental Consulting which specializes in the trade-offs between environment protection and economic development. Howard concentrates on the review of environmental guidelines used by businesses. He is also co-author of the book, "Self-Regulation of Environmental Management," an analysis of guidelines set by industry associations for their member firms (UN Publications, 1996). Howard, who has been involved in soil protection and land-use police for more than a decade, can be reached at 207-775-9078.

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Howard comment

Continued from page 11

Environmental principles and codes of conduct should be like the 10 Commandments — short, to the point, and covering a range of behaviors. Guidelines for the recreation and tourism industry typically cover issues such as environmental assessment, pollution and waste, energy conservation, staff training, local planning and community involvement. The Principles for Golf Courses mention a majority of these areas.

As might be expected, there is much discussion on water management and plant protection and nutrition. But there is also mention of the role individual courses can play in research to build a better mousetrap — or get rid of skunks, non-migratory Canada geese and deer. Golf course aren't necessarily doing this. These are areas where courses should be active and share their experiences.

The participating golf and environmental organizations are committed to a set of basic precepts — 11 commandments — which provide a foundation for the principles. These precepts include providing green space benefits and supporting ongoing research to establish new and better ways to develop and manage courses in harmony with the environment.

After outlining the 11 precepts or basic guidelines, the rest of the document is divided into five major sections that address 1) Planning & Siting, 2) Design, 3) Construction, 4) Maintenance (with subsections for Plant Protection & Nutrition, Water usage, Waste management and Wildlife management) and 5) Facility operations.

The sections on course planning & siting and design note the need to involve communities and other stakeholders in the early planning process, but these sections are significantly weakened by phrases such as "if appropriate", "seek opportunities" or "be encouraged". On the positive side, these sections recognize that some areas are just not suitable for development, paralleling the "Precautionary principle" noted in many other environmental codes, a concept that essentially means "do nothing that will or could cause harm."

Further, human activities associated with golf courses could have been highlighted further. As noted in the Precepts, a golf course is not a stand-alone development, so adjacent land use must be respected when planning, constructing, maintaining and operating golf courses. Other developments, including

OTHER CODES OF ENVIRONMENTAL CONDUCT

- American Society of Travel Agents — 10 Commandments on Eco-tourism
- Australian Tourism Industry Association — Environmental Guidelines for Tourism Developments
- European Golf Association — Environmental Strategy for Golf in Europe
- Mauritian Code of Ethics for Tourism
- World Travel & Tourism Council — Environmental Guidelines
- World Wildlife Fund — Principles for Sustainable Tourism

hotels, time-share or retirement communities, even shopping centers, have a profound influence on the natural, economic, social and cultural resources in the host community. Here buffer zones are given only cursory attention.

The Principles recognize the long-term benefits of incorporating environmental concerns into the design and pre-construction. Choices regarding irrigation systems, drainage and vegetation can have positive or negative impacts in the long-term for environment

as well as financial bottom line. The Principles help assure that decision makers consider issues. For example, the section on construction says "integrate sustainable maintenance practices in the development, maintenance and operation of the course," thereby linking the immediate construction phase with the long-term operation.

Ongoing course maintenance has a high potential for environmental impact, so this section is the most extensive of the five. While the Principles

provide examples for good environmental practices — including "the selection of chemical control strategies should be utilized only when other strategies are inadequate" — other statements are less strong.

The Principles indicate golf courses should merely "manage water use effectively to prevent unnecessary depletion of local water resources." The full document could have been enhanced by a stronger focus on lowering resource use, rather than a

Continued on next page



MICHAEL LEE TALKS:

GREENS MOWERS

"We just hosted the Andersen

Consulting World Championship of Golf this summer and are gearing up for the U.S. Women's Open in 1998.

Like we do all year, we used John Deere 220s on our greens. They did an excellent job—even at the low cutting

heights we mowed at during the tournament. We've

used John Deere walkers here since

1988. We like

them

because

they provide a

quality cut over our undulating surfaces. We also have 2653s mowing around greens, tees, and some areas of the rough. They're great machines for mowing contours. We do all our maintenance ahead of play, so it's important for us to have equipment we can count on. We like the reliability of our John Deere machines, plus the fact that we can get parts for them overnight if we have to."

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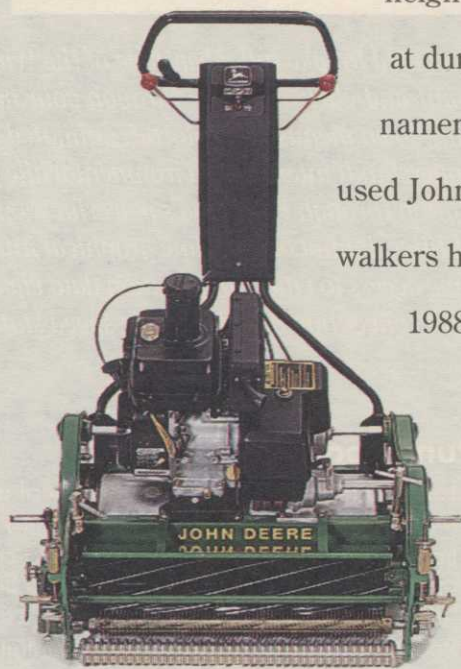
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Head Superintendent Michael Lee oversees maintenance for both the Meadow Valley and River Course at Blackwolf Run.

Rogers comment: Irrigation plans

Continued from page 11

and refuses to respond to the course's questions. The owner is stuck with a system that can't be operated;

- Power conditioners for the irrigation satellites were left off the bid. Now, owners must hire a private electrician to purchase and wire a stabilization system;

- Instead of following the initial specification that called for the pumps to be built and shipped in 5-foot sections, pumps arrive in 20-foot

sections. The shafts are bent during shipping and no one will take the responsibility to fix them;

- Programmable logic controller (PLC) control software was provided on the station without an operator interface. Now, simple adjustments, like setting the correct default values or modifying design pressures create major headaches. The owner must get the manufacturer to re-burn the existing microchip and wait for it to be shipped

from the United States;

- And, the list goes on.

What's the punch line? These nightmarish problems could have been avoided. It all starts with knowing and following your pump station specifications. Pump station vendors or local manufacturers can always find ways to short circuit specifications and show a lower up-front cost. However, the shorter, cheaper route may turn out as the longest and most expensive venture you can undertake.

Take my advice:

The plan and specifica-

tions should be written in plain English; avoid techno-jargon. They should include information on issues like U.L. (Underwriter's Laboratory) approved, and explain exactly who the Underwriter's Laboratory is and what it means for equipment to be given that approval.

Simply taking boiler-plate specifications from a manufacturer/ assembler is a mistake because they were written around equipment they sell which may or may not meet the projects needs.

Navigating the plan/

specifications: There are 10 to 20 items of significant importance to review. It's important to ensure they are part of the final manufacturer's bid submission.

Some of the most important sections focus on items such as: variable frequency drive (VFD) and the software to operate it, including operator interface; industry-standard testing and the agencies that evaluate components, U.S. N.E.C., Uniform Plumbing Code, ASME, NEMA; warranty, including issues like what it does and what it does not warranty, who determines what is covered, training for end-user, etc.; the pumps themselves — what style, what components, what speed, local service, support for system 5-15 years down the road; the motors; metal components; structural supports; surface preparation before painting; valving; in VFD, manufacturer, enclosure rating, short circuit protection and series of electrical components.

Next month, we'll discuss items to focus on when navigating the plan specifications.



Blackwolf Run in Kohler, Wisconsin, features two 18-hole Pete Dye-designed championship courses.

Beautiful landscaping and attention to detail define both the Blackwolf Run golf courses and nearby 5-diamond-rated American Club hotel—both owned by The Kohler Company.



This Norwegian farm building was disassembled, numbered, and shipped to Blackwolf Run to serve as a rest station.

Principles

Continued from previous page

broad commitment in the Precepts to "using natural resources efficiently."

Use reduction should be the primary focus, followed by re-use and recycling. Waste management also needs a stronger statement on following applicable laws and regulations and on limiting the purchase of agrochemicals, in particular pesticides, to the amount needed in order to reduce the amount of toxic chemicals amount stored on-site.

A means for recognizing environmentally proactive courses may be useful as well, analogous to the Blue Flag program for beaches in Europe or the Green Leaf program run by the Pacific Asia Travel Association.

Such recognition should be linked to formal adoption of a formal environmental management system by each individual golf course that would integrate sustainable development into the entire business operations, thereby assuring that actions to implement the program are carried out on the greens, in the clubhouse, and in conjunction with the community and other stakeholders.

NTEP letter

Continued from page 10

NTEP is indirect support only. Office and greenhouse space, seed storage, equipment storage, etc. are "rented" on paper out the money set aside by USDA. No USDA employees work for NTEP. Therefore, no federal money is actually paid to NTEP.

3. This elimination of funding for NTEP does not save taxpayers one dollar. The money normally given to NTEP would be redirected into "higher-priority" research such as Integrated Pest Management, genetic resources and sustainable agriculture.

4. The USDA has had a relationship with the turfgrass in-

dustry since the 1920s. Many people may know that the USGA Green Section was initiated with the USDA when the USDA's research facility was located at the Arlington Turf Gardens (where the Pentagon currently stands). This funding has dwindled over the last two decades to a proposed zero dollars in fiscal year 1997. Please keep in mind that during this same period most states have increased funding of turfgrass research.

5. Federal funding for other aspects of the green industry has not dwindled but increased dramatically over the last decade. A new, state-of-the-art, 50,000-square-foot greenhouse facility at the USDA's Beltsville, Md.,

facility was built with joint funding from the green industry and the USDA. At Beltsville and the National Arboretum in Washington, D.C. (as well as other locations in the United States), several million dollars annually are dedicated to research on ornamental, nursery and floral crops.

This partnership between NTEP, USDA and the private sector is what many feel has made NTEP successful. Private industry has supplied most of the funding, NTEP has provided the expertise and the federal government has given support in the form of facilities and an unbiased, neutral organization. This unbiased neutrality lends NTEP data the credibility needed

for consumers to believe and utilize this information.

Why doesn't NTEP fit into USDA priority areas such as IPM and sustainable agriculture? What is it that taxpayers want from their government? Less government, accountable government, efficient government? My feeling is that the general public wants government that works, whether at the local, state or federal level. After working at this government facility since 1978, I know what inefficiency looks like but I assure you it is not NTEP.

Without federal funding, would NTEP survive? Most likely, because there is a large need for the work we do. Can it be accomplished as well in an-

other location? Possibly. The larger issue here is the relative non-importance the USDA places on the turfgrass industry. Are we not worthy of at least token support? How come research on orchids and poinsettias is more important to USDA than turfgrass? As pesticide and water issues on turfgrass become more critical to the urban population, who can deliver a national perspective based on sound science to politicians and the general public?

Thanks for giving me this opportunity to clarify some issues related to NTEP. *Golf Course News* is an excellent publication that I enjoy reading each month. Keep up the good work!

Kevin N. Morris
National Program Coordinator
NTEP

Leslie comment

Continued from page 10

the 1970s and '80s decried the mere suggestion that nine holes be built near their backyard, or, for that matter, the desert (especially the desert).

Now, listen: I realize my example here is just this one government environmental agency — Maine's DEP. But it's not insignificant that these folks are seeing the light (that the business community consists of people who live and breathe the same air, walk the same fields and woods, and don't want to rape God's green earth) ... just as developers are seeing the light that being kind to the environment is beneficial to business.

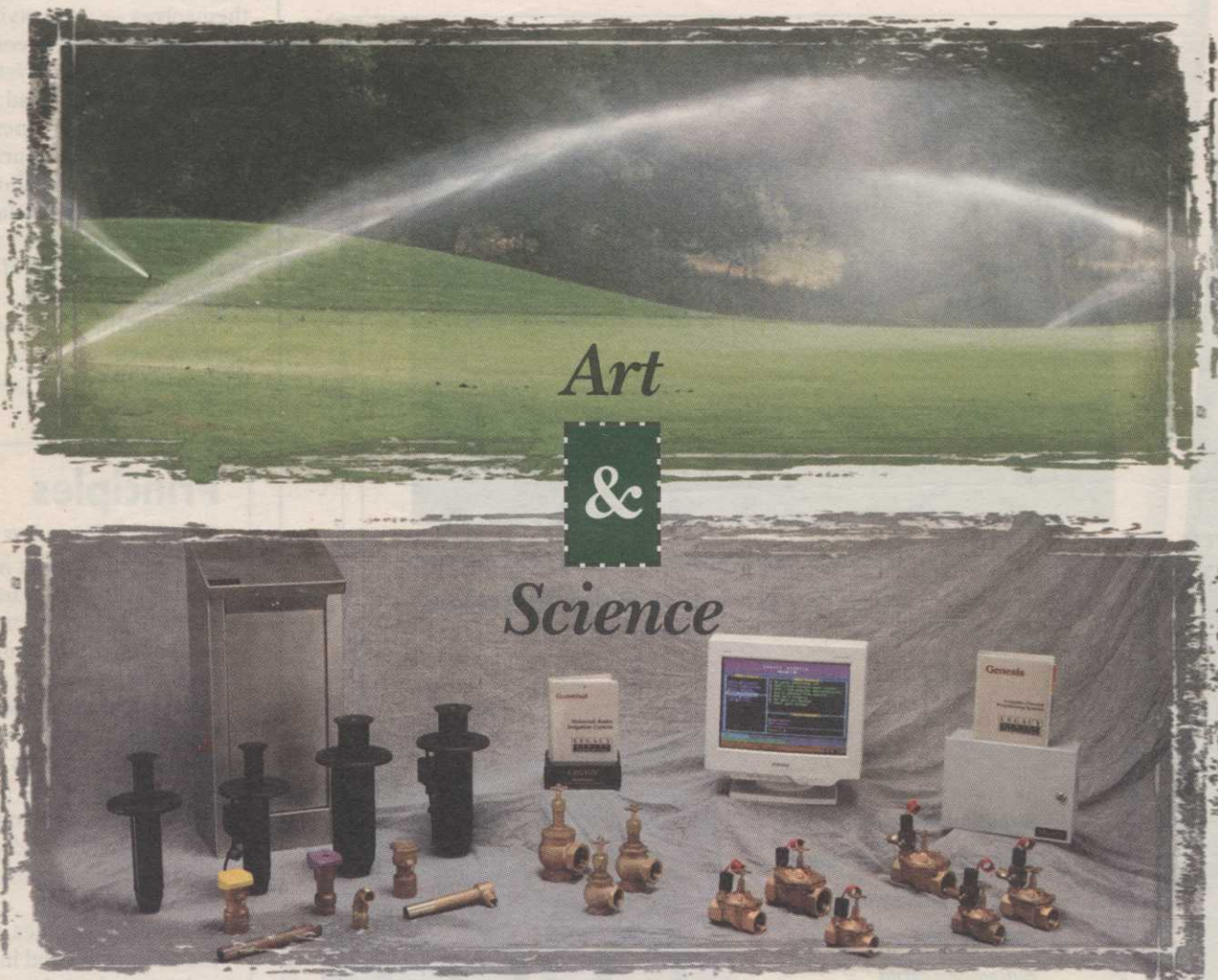
Yes, this new relationship "doesn't mean our answer is always going to be yes," said Barnes, "but we're certainly willing to work with you."

Writer and philosopher George Santayana said before he died in 1952: "Government is the political representative of a natural equilibrium, of custom, of inertia; it is by no means a representative of reason."

Along this line of thought, I have railed in the past against this silly government action and that foolish regulatory notion. If this change in Maine and some other states is indeed part of a nationwide shift in directions, perhaps it is time to re-think my point of view. All hail the evolution of thought in this realm! (on both sides).

...

An interesting aside: Among the Unabomber's possessions was a copy of Vice President Al Gore's book "*Earth in the Balance*," with several parts of the text underlined and with margins filled with copious notes. This was reported by the *Washington Spectator* which discovered that the Gore tome was omitted from the FBI's report to the public. You might remember Dr. Eliot Roberts' review in these pages of this diatribe of a badly mis- and uninformed politician.



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BRIEFS



CRENSHAW TO GET OLD TOM AWARD

PGA Tour great Ben Crenshaw will receive the 1997 Old Tom Morris Award from the Golf Course Superintendents Association of America. The presentation will take place Feb. 11 in



Ben Crenshaw

Las Vegas at a banquet during the association's 68th International Golf Course Conference and Show. GCSAA President Bruce R. Williams said Crenshaw's actions over the years "exemplify what is best about the game. From his activities as a collector to his passion for the integrity of the game, Ben's obvious love of golf is an inspiration."

SOUTHWEST SHOW SCHEDULED

PHOENIX, Ariz. — The 19th annual Southwest Horticultural Trade Show will be held here Sept. 5-6, featuring a full-day seminar on reclaimed irrigation water and several educational sessions. Sponsored by the Arizona Nursery Association, the event will display products specifically designed for the desert areas of Arizona, New Mexico, California and west Texas. The annual Xeriscape Conference, continuing education units, marketing panel and grower short course are part of the event.

FOUTY OVERSEES EXPANSION

NORTHVILLE, Mich. — Expansion is underway here at Downing Farms Golf Course and Michigan State graduate Mike Fouty has assumed the position of superintendent. Work on an additional nine holes began in January along with improvements on the original course. The 3,120-yard Harry Bowers design will incorporate wetlands and hardwoods. A 3,000-square-foot clubhouse is scheduled to open in July.

GCSAA OPENS WEB SITE

A new World Wide Web site makes information available to the general public about course management. The Golf Course Superintendents Association of America site address is <http://www.gcsaa.org/gcsaa>. The initial phase will focus on the environment. Starting July 1, GCSAA members will have a private Member Services area they can log into at their convenience. GCSAA has also added a new e-mail box — infobox@gcsaa.org — to gather feedback and answer questions.

Budget-cut threat to NTEP awaits Congress

By MARK LESLIE

BELTSVILLE, Md. — The air of neutrality and objectivity surrounding the National Turfgrass Evaluation Program would be in jeopardy if the U.S. Department of Agriculture redirects its support to other areas of its Agricultural Research Service (ARS), according to NTEP National Director Kevin Morris.

The reason, Morris said, is that NTEP would have to move to new quarters outside USDA's research station here, where it uses office, laboratory and greenhouse space and feed and equipment storage areas.

NTEP first observed the threat of lost funding when President Clinton submitted his 1997 budget to Congress in April. While it gave the USDA a small increase, it cut NTEP support.

The USDA gives no actual funds to NTEP, which in effect is a subcontractor whose employees are paid entirely through fees to its users. Rather, USDA's support is indirect, in that \$55,900 is set aside on paper to pay rent and indirect costs at the facilities here.

More important than the finances, Morris said, is "this partnership

between us and the USDA. The USDA puts out a small bit of support and they get a lot of benefit from it, being able to say how much they've done for research. What NTEP gets is the credibility of running a national program associated with an unbiased, neutral organization — not for industry. It's a danger that people perceive us to [work for industry]."

"There is a whole air of neutrality that is hard to put a value on and could be threatened by moving from here."

With many domestic and foreign visitors coming to the facility, NTEP

Continued on page 22

Old vs. new ryes like night and day

By MARK LESLIE

BELTSVILLE, Md. — Rest on your laurels in the ryegrass breeding industry and you'll get run over. That's the message from the latest National Turfgrass Evaluation Program (NTEP) trial results which show the top ryegrass cultivar in the previous test is ranked 23rd in 1996.

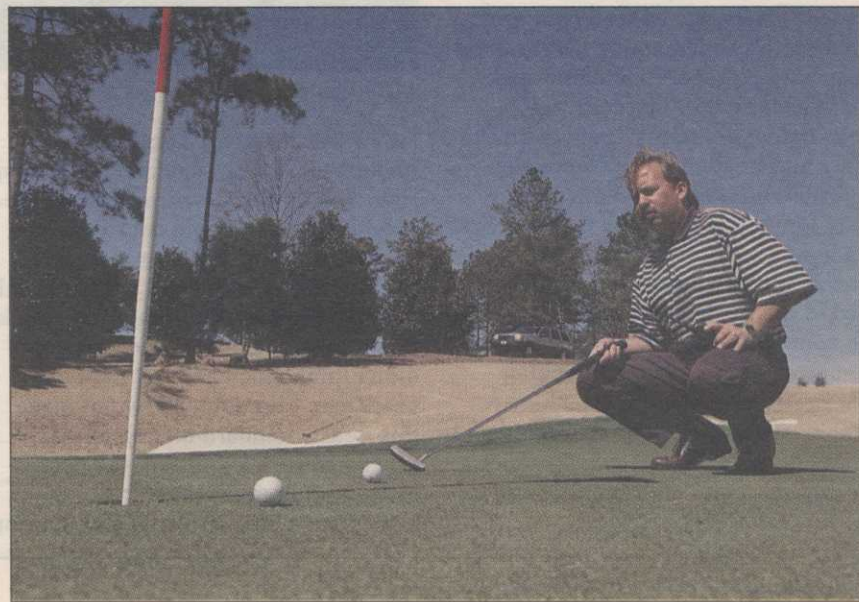
"The difference between those [new and old tests] is like night and day," said NTEP National Director Kevin Morris. "They're improved aesthetically (dark green and dense) and some have better persistence" — that is, in relation to disease resistance.

"Mow ryegrasses at one-half inch, using no fungicides in Maryland and you will kill a lot of them," he said. "But ours persisted quite well through last summer. We do irrigate them... But just looking at them this spring, most people are surprised at the differences — even besides color and density. It's easy to see."

The No. 1 ryegrass in the previous trials — Prizm — ranks 23rd this year, and the previous 4th-ranked cultivar — Brightstar — is 37th this time around. None of the other leaders are even in sight except the previous 7th-ranked Cutter, now 42nd.

Asked if the higher ratings in this latest test are due to more use of endophyte in the ryegrass cultivars, Morris said: "Endophyte relates to insect resistance, and surviving under adverse environmental conditions like low water use. My guess is, it's more that they are generally improved for disease resistance and persis

Continued on page 26



Randy Waldron makes it a daily chore to check the consistency of the roll in his greens.

Waldron's aim: Picture-perfect

By TODD L. SENTELL

ALPHARETTA, Ga. — Eighteen holes in the morning, another in the afternoon, perhaps a third 18 on the way home, dinner, then a Little League game. It's all in a day's work for Randy Waldron, director of golf courses and landscaping at The Golf Club of Georgia.

His walkie-talkie surgically attached and his sharp eyes are constantly on the peel, Waldron oversees the club's

Todd L. Sentell is a golf writer and the Golf Club of Georgia's director of sales and marketing.



54 holes of golf, managing all this incredible nature and for making sure it's all perfect. Very, very perfect.

There are Creekside, Lakeside and — up the road where he lives overlooking the 18th fairway, White Columns Golf Club.

"I hate it when he [Waldron] plays golf," says golf courses superintendent Tim Reinagel, shaking his head. You'd think Reinagel and his lieutenants would love it when the boss is out of the office for a few hours. But that's not the way it works around here. If

Continued on page 23

Georgia's Carrow the Doctor of Stress for turf

Dr. Robert Carrow is a professor of turfgrass science in the Crop and Soil Science Department at the Griffin Station of the University of Georgia and is an integral part of the university's nine-member turf research team. He received a Ph.D. in Soil Science from Michigan State University in 1972 and has done research at the University of Massachusetts and Kansas State University. His areas of research emphasis are turfgrass drought resistance mechanisms and water conservation, plant nutrition/soil fertility and turfgrass wear/soil compaction stresses. He has written more than 200 articles and is co-editor of two turfgrass science books.



Dr. Robert Carrow University of Georgia

Golf Course News: What has your work shown in terms of such environmental stresses as drought and salinity? Traffic stress? Water conservation strate-

gies? Why are these issues important?

Robert Carrow: Whether a turfgrass persists in the field depends on its tolerance to the stresses imposed on it. Environmental stresses include high/low temperature, excess/lack of water and low light intensity. Pest stresses include diseases, insects/nematodes and weeds. Use stresses include close mowing, soil compaction from traffic and wear from traffic.

I have concentrated on two primary areas and within each tried to develop several strategies to cope with the stress.

Drought resistance/low water use is the first. We've identified which turfgrass spe

Continued on page 27

Collar sticks solve uniformity problem on collar widths

By KEVIN J. ROSS

EDWARDS, Colo. — Uniformity on the golf course is something that always seems to attract the eye in many areas. But keeping things uniform is not as easy as we would hope. One area on the golf course that I wanted to simplify was the collar definition around the greens.

Collars seem to grow in and out and often lose that nice uniform width we strive to see. I developed a method that has worked very well for my staff when mowing greens to achieve the perfect collar width each time the clean-up rings are mowed. I call it simply: The Collar Stick.

When I was involved with the grow-in of Falmouth Country Club in Maine, I decided to mow the entire green area, including the collar, at one height. I did this to save the operation of mowing collars and thought that four to six weeks before opening I could mark the collars and let them grow to proper height. When it came time to mark these, I invented what was then the first edition of a very crude collar stick.

It was simply a wooden dowel duct taped to the bucket on a greensmower, with some flagging hanging off the end. The object was to have the flagging

Kevin Ross is director of golf course management at Country Club of the Rockies in Edwards, Colo., and an editorial adviser for Golf Course News.



Kevin Ross' collar stick is simple to make and attach to the ordinary greensmower.

follow the bluegrass rough and bentgrass fairway edge on the clean-up ring. The dowel was measured off the outside of the reel and cut to our desired collar width. This method proved very efficient and worked nicely.

After that first use of the collar stick, it just collected dust in the shop and I didn't think much about it until a few years ago. I thought, "Why not make this item a standard unit on all our greensmowers for cutting the perfect clean-up ring every time?"

So, with a little research and develop-

ment, and the help of my equipment manager, Mike Koehn, we devised the present collar stick, which is a permanent part of all our greensmowing units.

Making these is simple. First, we drilled one hole on each side of the grass clipping bucket and bolted a wire-holder clip to each side. Inside the wire clip, we inserted a .5-by-2-inch roll pin (using Locktite to prevent slippage). We positioned the outside of these to match the edge of the reel cut. We then cut up some old flagsticks (36 inches long) and machined one end to an 11/



ON THE GREEN

32-inch diameter by 6 inches long (making our collar width 30 inches). It is important to make a square shoulder when machining to achieve an accurate measurement.

Then we drilled small holes (1/8 inch for a small presto pin to be inserted to keep the stick in place), 2 inches from the shoulder (created from sanding).

Lastly, we cut strips of rubber, 1 inch wide by 12 inches long, to use as our marker at the end of the stick. This rubber was attached to the stick by a No. 4 hose clamp.

We have also found that some yellow or white tape at the base of the rubber pointer is easier to follow than the black color of the rubber.

These devices are simple to put together and are very helpful to my staff. Even if your collar width is different than ours, you can custom-make these to fit your needs. I know the collar stick has greatly helped the uniformity of our collars. If you decide to use this idea, I think you will find it helpful as well.

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DuPont CC sets supers' safety standards

By MARK LESLIE

LANDENBERG, Pa. — Ergonomics, safety and environmental friendliness. In the world of Earl Shafer, they add up to improved efficiency, a healthier crew and overall efficiency.

"People are first and equipment is second, and you're only as good as your equipment can produce," said Shafer, head superintendent at the 54-hole DuPont Country Club here.

Shafer's maintenance complex, built five years ago, draws raves from his colleagues, one of whom said: "DuPont Country Club has set the world's safety standards. They have thought of everything."

And one of Shafer's favorite accomplishments is the repair shop, where the crew deals with more than 300 pieces of equipment — from weed eaters to dump trucks.

"We wanted to get off of creepers and concrete floor," Shafer said, "and we didn't have enough room to do anything."

Going the extra mile to make chores safer, easier and less time-consuming, DuPont CC's repair shop certainly has the room now. It includes:

- Two 5-by-7-foot lift tables, so that a triplex mower or other equipment can be driven onto one and raised to a working height.

"Ergonomically, it's a big advantage to mechanics," Shafer said.

- A big-truck lift.
- Oil-separating drains. If oil spills in the shop, or equipment is washed off with solvent, the drain separates oil from water and puts the oil in a reservoir so it can be handled like waste oil.
- Outlets in the floor all over the shop, with hoses that can be put into equipment exhausts to handle carbon monoxide.

- Two overhead traveling crane lifts — one for heavy jobs and one for lighter. "When we have to take tractors apart, or take a motor out of a truck or tractor, we can do that. We have one large one and a second one that goes into the grinding room," Shafer said. "The smaller lift allows you to bring in a set of 30-inch mowing drag units, lift them up onto a repair table and disassemble them."

- A separate room for the grinding operation for cleanliness and with an air-handling exhaust system to remove the grinding particulate. There are four grinders in that room: automatic-bed knife, conventional hook-type reel, spin and rotary-blade grinders.

Keeping the grinding room out of the main repair area, Shafer said, "also accomplishes the safety and health and ergonomic features we wanted. The crane travels to each of these machines, so you don't have to hoist mowers in and out of the machines."

- A parts washer in the grinding room.
- A parts storage area with a flammable cabinet for aerosols and where spare parts are kept "for things that need fairly repetitive replacement, or that may be difficult to get or that would keep a piece down for a long time." A mezzanine level to the parts room holds irrigation supplies, tires, etc.
- An overhead lube and oil system as

well as air stations for air tools.

- A 20-by-12-foot welding area (not separate room), with a welding hood to exhaust it, welding table with fire brick and two welders as well as the ability to brace gas welding.

- Such other necessities as a press for pressing bearings and seals, etc.; tire repair area; workbench; tool boxes.

"It's a drive-through building, so you don't have to move things to get in and out. And it has two 14-foot-high double overhead doors," Shafer said.

The maintenance coordinator's office adjacent to the repair area contains a second desk for the mechanic who reports to him as well as controls and

data recording for the fuel system and underground storage tanks (USTs). The fuel system records diesel and gasoline used by each piece of equipment, keeping an eye on usage and helping with monthly reconciliation. The UST monitor keeps track of current inventory as well as watching out for leaks.

Five years after building the shop, does Shafer know of anything he would have added or changed if he could do it again? "Can't think of a thing," he said.

Enough said.



IDEAS WELCOME
Superintendents, their grounds crews and mechanics spend a major portion of their lives in maintenance buildings. Creating the most

SHOP TALK

cost-effective, space-efficient and time-saving operation possible is a goal of many. To that end we use this *Shop Talk* column to share ideas that work for some. We welcome your contributions. Just write: *ShopTalk* editor, *Golf Course News*, P.O. Box 997, Yarmouth, Maine 04096; telephone 207-846-0600.



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I say, you say, they say — we all say: The cliches of golf

By TERRY BUCHEN

All of us in the golf business hear many "clichés" in our day-to-day operations and we also use them as well in our dealings with golfers all the time. I have listed them per job title and hope that you have fun reading them and thinking of some other classic comments heard throughout a typical day out on the links:

SUPERINTENDENTS:

- Golf is played on grass, not on color.
- A person can usually tell the condition of the golf course by looking at the cleanliness and organization of the golf course maintenance building.
- The ultimate objective is to have the golf course look good and play good.
- The Stimpmeter was not designed to be a speedometer to judge one golf courses green speeds with another.
- I have never seen the flag stick there before!
- Did it rain last night? (about overwatering).
- That hole location is illegal.
- Why do you always aerify the golf course when it is in its best condition?
- Why are they always aerifying when I bring out a guest?
- Aerifying is a superintendents revenge!
- Why do they always do maintenance on Ladies Day?
- I want the sand firm enough so I can hit a fairway wood from a fairway bunker.
- The dead grass will come back.
- We water 1 million gallons a day.
- Can't they turn off their motors while I am putting?
- The greens are as smooth as butter.
- The spike marks are as big as the Empire State Building.
- The greenkeeper can be found over at the barn.
- Can't you make these cups

a little bigger?

- I want more roll on the fairways.
- What's the Stimpmeter reading on the fairways?
- This course looks like a cow pasture.
- He/She can grow grass in the back of a pickup truck.
- The clubhouse wouldn't be here without the golf course.
- How can we get rid of these Canada geese?
- Please keep off of the grass!

ARCHITECTS:

- This course was designed by Frank Lloyd Wrong!
- This golf course was made in heaven.
- Everyday is a holiday at _____ golf course.
- This golf course is going to be the Augusta National of _____.
- This course will definitely play much better backwards.
- Once you start making a mound, when do you stop.
- Make the golf course easy to maintain (usually ending-up

- with a boring designed course)

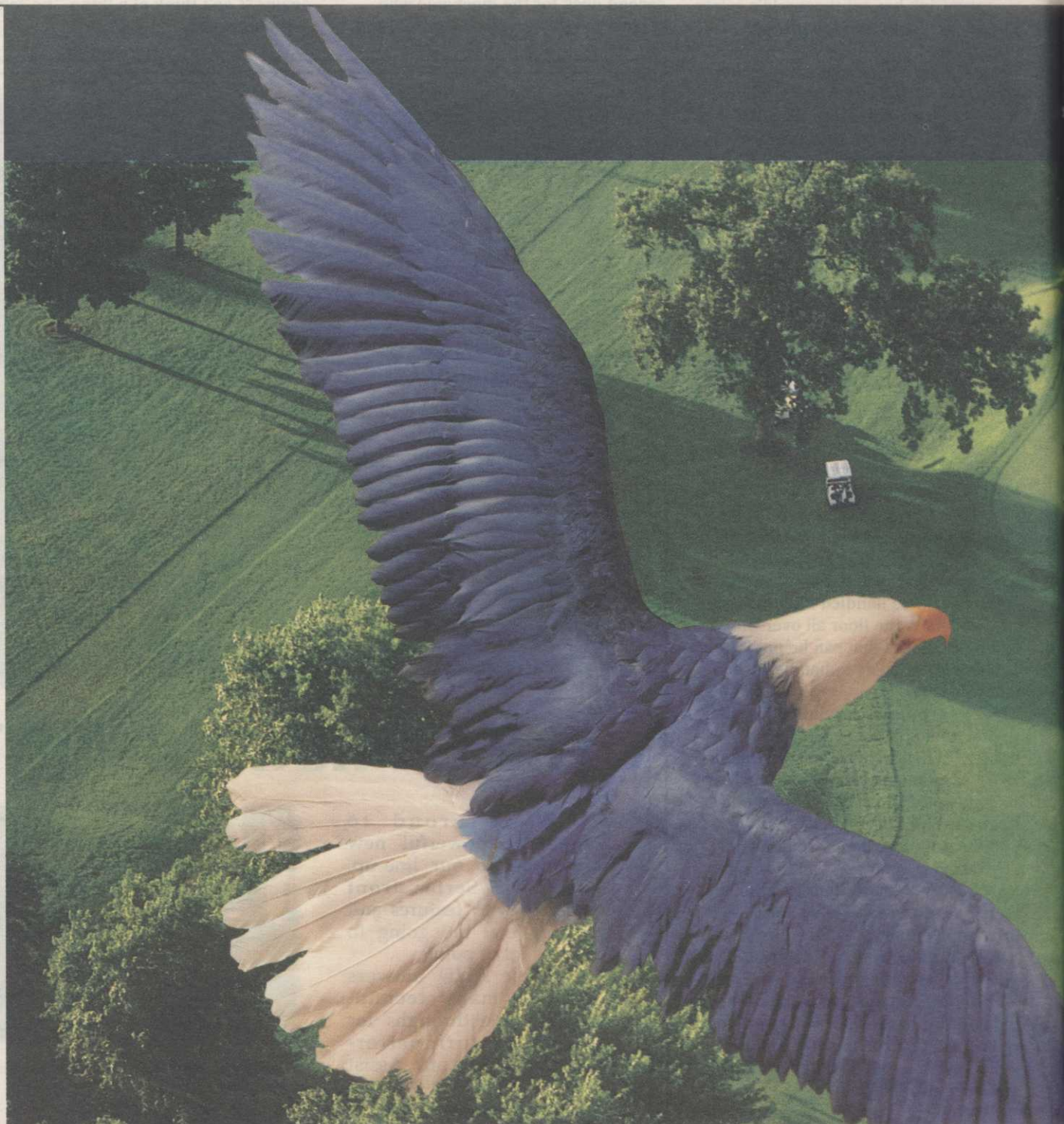
GOLF COURSE OFFICIALS:

- If members of the board of directors ran their businesses like they run the golf course, they all would be failures.
- The green chairman should serve five years and his/her successor should serve as the assistant chairman for years.
- The green committee chairman should never build a monument to himself/herself.
- Golf course management companies are nothing more

SAVVY SUPERINTENDENT



- than a cattle-call, at best.
- A consultant is an expert that lives more than 90 miles away.
- Do not ever assume anything and you will be a success.
- Golf course operations have turned into a business!



Landscapers plan 35th field day in Illinois

CONARGA, Ill. — The Illinois Landscape Contractors Association will hold its 35th annual Summer Field Day, Aug. 7, at Bork Nurseries, Inc. here.

Demonstrations of lawn care, spray, heavy and small equipment will be available all day, with exclusive times featured for each.

Guided tours will be given of Bork Nurseries Inc., 30 to 45 minutes each throughout the day. One will be by wagon through fields, the Pot-n-Pot area and the loading dock, the other by bus of the Wholesale Plant Center, some of the firm's other farms and the office.

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IGM names Witt to Palm-Aire CC maintenance post

POMPANO BEACH, Fla. — **Jim Witt** has been named director of grounds maintenance for International Golf Management at Palm-Aire Country Club. Formerly the superintendent at Avila Country Club in Tampa, Fla., Witt brings two decades of golf industry experience to Palm-Aire.

A graduate of Lake City Junior College, he apprenticed as an assistant superintendent at Carrolwood Village Golf and

Country Club in Tampa before accepting a superintendent's job with Professional Golf Management in Naples. For seven years he was involved with construction of courses at Foxfire Country Club (CC), Countryside CC, Tara CC and Kelly Green CC on Florida's Gulf Coast. Between 1990 and 1995 he worked at Tampa's Avila Country Club.

••• PALM DESERT, Calif. —

Randy Damon has been named superintendent for the private Bighorn Golf Club here. In addition to supervising the maintenance of the existing Arthur Hills-designed championship course, Damon oversees construction of Bighorn's new 18-hole facility.

Damon brings more than 10 years of experience in golf course management, including stints at The Vintage Club in Indian Wells and Pebble Beach in

Monterey, Calif. In Bangkok, Thailand, he developed a golf course for Hills. Along with supervising golf courses from the planning stages to end product, he has also been involved with tournament preparation for the AT&T Pebble Beach Invitational and the Vintage Arco Senior Invitational.

Damon holds an associate science degree in turfgrass management from College of the Desert.



WHERE THEY'RE GOING

••• CHARLESTON, S.C. — **Scott Ferguson**, a 32-year-old Charleston native, has been named superintendent at Wild Dunes Resort. Ferguson has spent the past eight years as superintendent at Crowfield Plantation in North Charleston, which recently played host to the South Carolina PGA Chapter Championship.

••• SPRING VALLEY, Colo. — **Brett Lockard** is growing in Ute Creek, a new 18-hole golf course here. Lockard had been the assistant superintendent at Ptarmigan Golf Course in Fort Collins.

••• STATESVILLE, N.C. — **Al Lassiter**, has been named head superintendent here at the semi-private Buffalo Shoals National Golf Club, a Gene Bates design now under construction. Lassiter, who has served as superintendent at Raleigh, Sandy Ridge and Beechwood country clubs, anticipates a late-fall opening.

••• CARBONDALE, Colo. — **Daryl Dinkel** has accepted the head superintendent's position at Jay Morrish-designed River Ranch Golf Club here.

••• LA PLACE, La. — **Jerry Anderson** is the new superintendent here at ClubCorp-managed Belle Terre Country Club. Anderson arrived via Live Oak Country Club in Rockport, Texas, where he maintained all aspects of the club's golf course operations.

••• DENVER — **Brett Armstrong**, formerly of Greenwich (Conn.) Country Club, has taken the head superintendent's position here at Green Gables Country Club.

PGA GOLF CLUB HONORED

PORT ST. LUCIE, Fla. — The PGA Golf Club at The Reserve here has been selected as a 1996 Best of Golf Award winner for its preservation of natural resources and in wildlife conservation. The award was presented by Audubon International (AI) and Links Magazine during the U.S. Open in Bloomfield Hills, Mich. The Reserve's two 18-hole golf courses place golfers among buffers of wildlife sanctuary, 80 acres of water and other preserve areas covering 430 acres. "Through their [PGA Golf Club's] involvement, golf is being recognized as a truly important component of our national efforts to improve the quality of life and the environment," said AI President Ron Dodson.



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CIRCLE #112

COMMENTARY

Highland, colonial bentgrasses have dominated in the UK for ages

By SKIP LYNCH

In a recent *Golf Course News* article, I read with incredulity that the courses of the British Isles have been seeded to Chewings fescue and creeping bentgrass for over a century ["History proves benefits of chewings/fescue/creeping bentgrass combination," *GCN*

Skip Lynch is a technical agronomist for Corvallis, Ore.-based Seed Research of Oregon.

May 1996]. The author writes, "this combination was first made popular in Scotland and England more than 100 years ago."

In fact, the bentgrass components of these fairway mixes have always been predominantly Highland (*Agrostis castellana*) and colonial bentgrasses (*A. capillaris*, or *A. tenuis*). It is not splitting hairs to say that the differences between creeping bentgrass and colonial bentgrass are substantial. Creepers are

stoloniferous; colonials are bunchgrasses. Creepers tend to grow aggressive laterally; colonials tend to grow more upright. Creepers tend to require more water and nitrogen fertility than do the colonials.

I asked Mr. John Hughes, agronomist for British Seed Houses Ltd. to address the issue of creeping bentgrasses in the British Isles. He wrote, "The combination of grasses within the UK golf courses has tradi-

tionally been fescue with Highland or colonial bentgrass." Although there may be some native creeping bentgrasses found on the coastal courses, he went on to write, "Where creeping bent has been used with fescue in the UK and Ireland, it tends to form an irregular sward. The (creeping) bent eventually dominates, leaving patches of fescue — especially in fairways."

Mike Robinson, president of Seed Research of Oregon, has

traveled extensively throughout the UK and collected germplasm from some of the finest courses in England, Scotland and Ireland. "We've made several collection trips to the UK, and only a couple of times have we ever found creeping bentgrasses under fairway conditions."

And what of the new courses that have tried these fine fescue/creeping bentgrass mixes? "They're very patchy. The bentgrass is segregated-out into large patches. Creepers and fine fescues don't make an acceptable playing surface at fairway height in the UK."

It is important to note that the courses of the UK and Ireland manage fairway turf at a much lower monetary and material cost than we do in North America. Still, this does not diminish the quality of the playing surfaces, or the demand for tee times.

The idea of planting fairways with something other than a species monostand of creeping bentgrass, perennial ryegrass, or Kentucky bluegrass is indeed an older concept. In the days before improved varieties, many grasses were sold on the basis of genus collections. For instance, the term "South German Bent" actually meant *Agrostis* sp., including colonials, Highlands, velvets and creepers. Technological advances changed management practices, eventually culling out those species that were not complementary with the management goals, the climate, and the other grasses in the sward.

It was not uncommon for fairways in the U.S. to be planted with fescues, bluegrasses, ryes and bentgrasses 100 years ago. The advantage of mixing these different species was that it provided an extremely broad genetic pool. Eventually, nature would decide which species and genotypes were best suited for the site and use. When combining species of grasses in a mix, it is important to realize the inherent needs of each, and in so doing, allow them to complement each other.

Both the fine fescues and colonial bentgrasses are low-water, low-fertility, upright grasses. The combination of fine fescue and colonial bentgrass at fairway height forms a very fine textured, upright turf that performs best when water and nitrogen fertility are kept to a minimum.

Colonial bentgrasses have been the victim of some very bad press. Colonial varieties in the time of Dr. James Beard's book *Turfgrass: Science and Culture* (Prentice Hall, Inc., 1973) were not as well developed. Dr. Beard writes that colonial bentgrasses have a comparatively slow spring green-up. In fact, colonials are consistently earlier in every NTEP bentgrass fairway/tee tests; significantly earlier than the creeping bentgrasses. He goes on to write that colonial

Continued on next page
GOLF COURSE NEWS

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Lynch comment

Continued from previous page

bentgrass "... requires a relatively intense level of culture..." and that they are, "... susceptible to a large number of diseases."

Under high intensity maintenance, colonial bentgrasses are very susceptible to disease. Turn this equation around, and under low intensity maintenance, they are extremely resistant to disease pressure. As a result of Dr. Beard's book, many of us went through turf school thinking that colonials were somehow inferior to creepers. The truth of the matter is, they are neither better or worse: just different.

Today, great improvements are being made. SR 7100, Bardot and Tendenz are a far cry better than their parent material. We have been advocating these fine fescue and colonial bentgrass polystands for years.

Turfgrass trials installed by Tom Cook at Oregon State University in June of 1992 were seeded with 11 such mixes and one plot of perennial ryegrass as a check plot. Some of these mixes also included Kentucky bluegrasses or perennial ryegrasses with the fine fescue/colonial bentgrasses. The plots have received no additional fertility beyond preplant and no pesticide applications whatsoever. They have been mowed at 0.500" with the clippings removed. Through four summers, the combination (90 percent Chewings fescue/10 percent colonial bentgrass) has performed best, followed very closely by those plots that added strong creeping and hard fescues to the polystand.

These plots have remained relatively weed free and have shown very little sign of disease. These combinations of the fine fescues and colonial bents have stayed extremely well integrated and have provided a firm, dense, uniform playing surface. By contrast, those plots with Kentucky bluegrass or perennial ryegrass in the mix have been very prone to Red Thread, Pink Snow Mold and weed invasion, and segregated almost immediately. The perennial ryegrass check plot has shown the worst performance of all under these low input conditions.

We applaud the movement in the golf industry that is trying to maintain the traditional look of the Scottish links courses. We are also encouraged that our industry is making great strides to reduce the chemical, mechanical, and monetary inputs required of golf course maintenance. Mixing fine fescues with colonial bentgrasses is an excellent way of reducing pesticide applications, lowering water use and minimizing fertility requirements.

Although the turfgrass/golf industry has been slow to break from the "conventional wisdom", more and more superintendents are realizing what's new isn't always better, and what's old isn't always bad.

GOLF COURSE NEWS

Musser Foundation names President Dobie and new directors

SHARON CENTER, Ohio — Musser International Turfgrass Foundation has announced its 1996 board of directors.

The Musser Foundation is a non-profit organization dedicated to fostering turfgrass as a learned profession and supporting education and research in turfgrass development and management. The board is composed of turf professionals who volunteer their time and efforts.

This year's board officers are President Frank Dobie of The Sharon Golf Club in Sharon Center, Ohio; First Vice President Dr. Joseph Duich; Second Vice President Tom Burrows of Tom Burrows Turfgrass

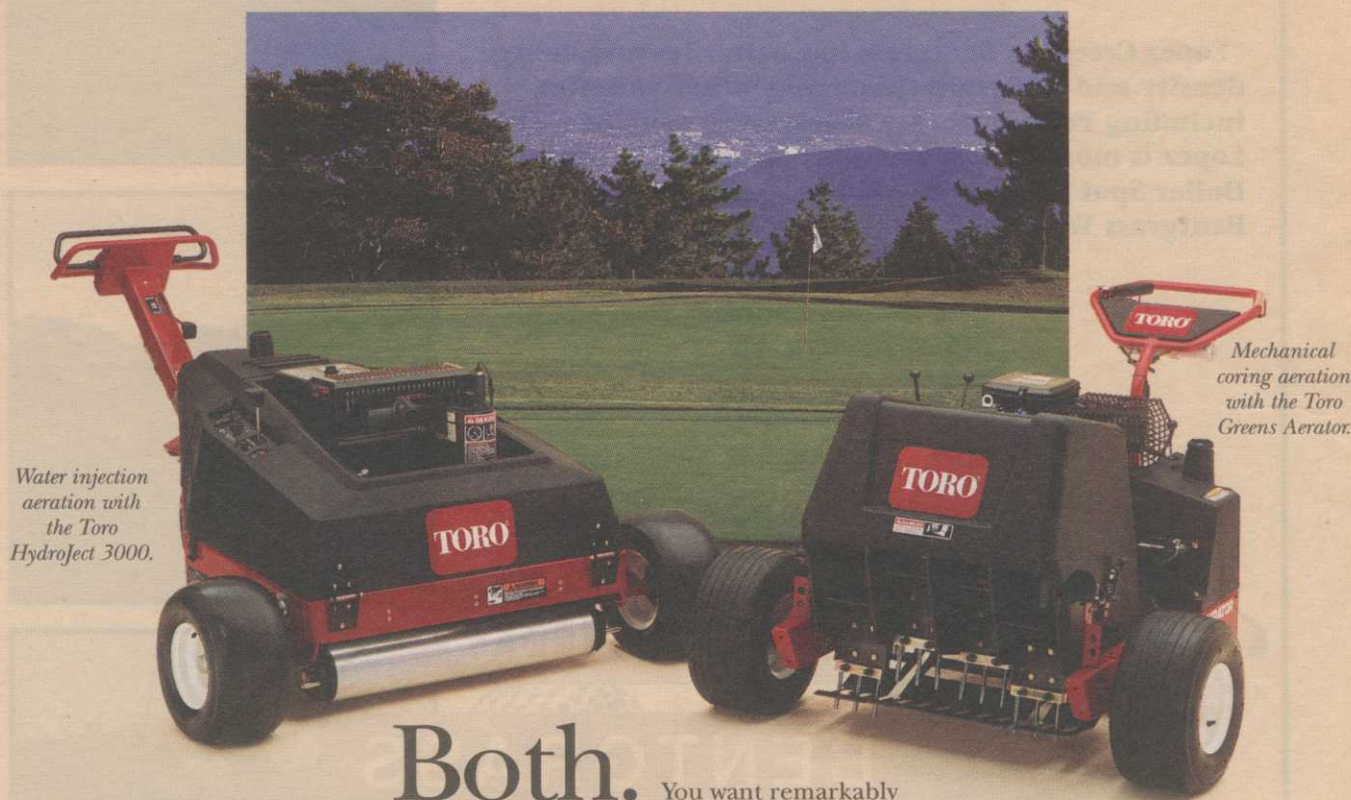
Services in Stuart, Fla.; Treasurer John Spodnik of Westfield Center, Ohio; and Secretary Dudley Smith of Silver Lake Country Club (CC) in Orland Park, Ill.

Elected to the board are Joseph Baidy of Acacia CC in Lyndurst, Ohio; Michael Bavier of Inverness Golf Club in Palatine, Ill.; Dr. James Beard of International Sports Turf Institute in College Station, Texas; Michael Hurdzan of Hurdzan Design Group in Columbus, Ohio; James Loke of Bent Creek Golf Club in Lancaster, Pa.; Jeffrey Markow of Cypress Point Club in Pebble Beach, Calif.; Don Maske of AgrEvo in Parkville, Mo.; Dr. Harry Niemczyk of

Ohio State University; and Dr. Tom Perkins of American Cyanamid Co. in Wayne, N.J.

The remaining board members are Terry Plagman, Penncross Growers Association, Albany, Ore.; Dr. Paul Rieke, Michigan State University; William Rose, Tee-2-Green Inc., Hubbard, Ore.; Dr. Robert Shearman, University of Nebraska; John Souter, Souter of Stirling Ltd. of Scotland; Eberhart Steiniger, Laurel Springs, N.J.; Brent Wadsworth, Wadsworth Golf Construction Co., Plainfield, Ill.; Dr. James Watson, Littleton, Colo.; Norm Whitworth, Whitworth Associates, Oak Grove, Ore.; and Stanley Zontex, U.S. Golf Association, West Chester, Pa.

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Communication cited as No. 1 issue in renovations

WOODSTOCK, N.H. — Superintendents' roles vary dramatically during renovation projects, but "the most important responsibility shared by all is communication," according to Marvin Armstrong.

Armstrong, a golf course architect from Franconia, told a joint meeting of Maine and New Hampshire superintendents at Jack-o-Lantern Resort here:

"The essence of any project is communication. Plans and specifications are the architect's tools for communicating with the contractor. The superintendent can

use these and other tools to keep players or members and particularly pro shop staff informed."

The pro shop staff has "the greatest opportunity to discuss the course with players and members," he said. "If they understand and are happy with the plans, there's a better chance the project will be successful."

The size and type of project can influence the scope of the contract documents required and the extent of the superintendent's involvement, Armstrong said.

However, although "municipal jobs require the most extensive documents," they sometimes remove the superintendent entirely from responsibility, he added.

"The other end of the scale might be a privately owned course that would do much of the work themselves and 'sub-out' shaping or other tasks which they lack skills or equipment to do. Most often, the superintendent is asked to be the owner's representative and the general contractor or coordinator of the entire work," he said.

Endangered NTEP draws support

Continued from page 15

also gains stature by being located at the largest agricultural center in the world, Morris said.

"Could we do this work somewhere else?" he asked. "Probably. Would it be as effective? I don't know. Are we going to go out of business because of this? No, probably not, because there is a need for what we do. But leaving here would be a major disruption."

Morris is considering other options for his offices and turf testing plots. But he does not like the prospect of moving to, say, a university.

"We could go to a university," he said, "but we pay universities to do work for us. Universities are very competitive and I don't know how it would work to have a group associated with a university paying other universities."

Meanwhile, "the House or Senate could restore [the cut]," said Dan Domingo, budget development branch chief for the ARS here. "It's just a proposal to fund some of our high-priority research we have in the agency."

"We are asking for increased research in food safety, genetic resources and biodiversity, biological control of pesticides in soil biology, waste management and IPM [Integrated Pest Management], trying to find alternatives to methyl bromide, increase work in integrated farming systems..."

"I question why we didn't fit into IPM," said Morris, explaining that NTEP's testing of turfgrasses greatly affects plant maintenance practices.

"My justification is the bigger picture," he added. "The turfgrass industry is a \$30-\$35 billion-a-year industry and they think so little of it that they've reduced the funding to a proposed zero in 1997. It doesn't make sense. We have at least 50,000 square feet of brand-new, state-of-the-art greenhouse space built with joint funding from the USDA and the green industry."

"More than 30 people here are working on crops and ornamentals. They're here because the USDA thinks they are important. We don't have one turfgrass person in all of USDA."

Domingo could not corroborate the number of USDA crop and ornamental researchers, but did say: "When this project was proposed for termination, the topic of the importance of the turfgrass industry was not discussed. It is not a question of whether turfgrass is important. We feel the federation [NTEP] has the ability to assume these costs now."

The USDA has received "a lot of pressure" to restore support to NTEP, Domingo said. "We have answered a lot of letters. Those letters have been forwarded to the House and Senate, who will have to make the decision."

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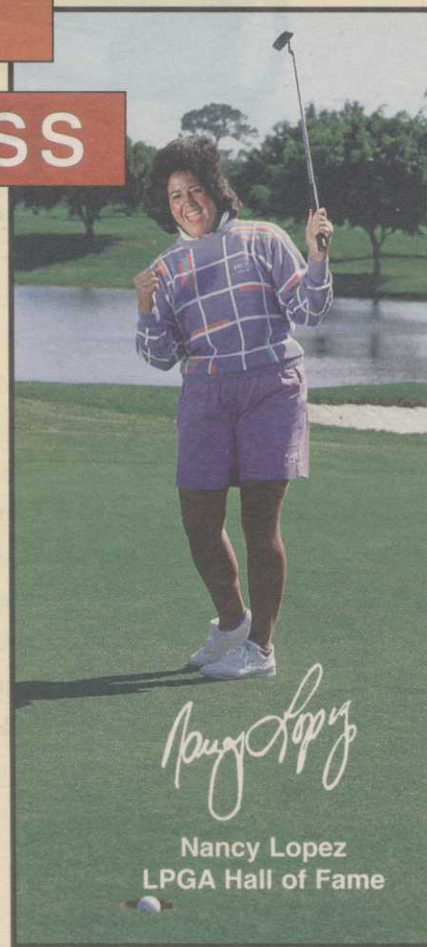
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Nancy Lopez
LPGA Hall of Fame

Waldron keeps GC of Georgia immaculate

Continued from page 15

Waldron's not satisfied with the way things look, he presses his walkie-talkie key and barks. But it's the bark of a professional who works just as hard as his crews do and is as fair as he is firm.

Talk with Waldron about this place and his profession: There is deep passion and commitment there. "My guys trust me," he says, "because they know how much I love this place."

When Waldron and his walkie-talkie play golf, the 4-handicapper usually stays right in the middle of the fairway, and somewhere on the green, where the game and a large percentage of maintenance work is performed.

"Actually, as a superintendent," Waldron says, "it is extremely valuable to play our golf courses. You do see things when you play golf. I urge Tim and his guys to play more golf to constantly see it from the golfer's perspective as well."

FIRST IMPRESSIONS

Waldron came to the Art Hills-designed Golf Club of Georgia from the flat, sandy lands of West Palm Beach, leaving his position as superintendent of Aberdeen Golf and Country Club. It was April 1989 when he came up for a weekend look-see at what was then a primitive Golf Club of Georgia, when the property was on fire with azaleas and dogwoods in bloom. The wide-eyed 30-year-old was overwhelmed: in West Palm Beach, the only thing that frequently blooms is a good sunburn. "I'm a guy who's been in flat Florida all my life," Waldron says. "That was my first impression. How pretty everything was."

A month later, faced with many year's worth of concentration on a world-class, 36-hole project that would require everything he had, Waldron knew he had to bring with him a personal determination, in his words, not to fall on his face. He would come to command 50 employees and a substantial annual budget.

But he was armed with an enormous amount of experience, beginning at 19 when he worked in the backyard of Jack Nicklaus' Palm Beach Gardens estate to when he finished his associates of science degree in golf course operations from his hometown Lake City (Fla.) Community College.

Positions at Los Tree Club, the Landings at Skidaway Island, Palmetto Dunes, Gulfstream Golf Club and Boca West prepared him well. Waldron knew what he was doing, and how to do it, but here's what he faced when he came north while wife Tami packed up the house and baby Michael: a wildly enthusiastic Japanese developer who was setting up the club's eternal reputation by chunking down some big dough, but more importantly, he was offering up some stratospheric standards of quality and design: their names would be Lakeside and Creekside. Waldron had not yet met Hajime Yamazaki, and he was a little nervous. In May 1989, only holes 10 through 14 on Lakeside had been cleared. Indeed, there was a lot to do. A lot to do right.

"It was kind of scary on some days," Waldron says.

Waldron knew this was a magnificent piece of golf property: enormous oaks, pines, dogwoods, wildlife, ponds, lakes, and ancient wetlands covered the landscape and creeks ran through each course like sparkling spider webs. But the mud. The red, wet, sticky mud. Everywhere, the red Georgia mud.

"I had never been exposed to this red mud," Waldron says. "I can remember having to get used to that and how wet it was and all the different elevation changes."

Waldron can remember his first impressions well, but he'd surely like to forget almost flipping over his pick-up truck one day during construction. It was one of them good ol' Georgia mud banks he was screaming down.

Welcome north, brother.

PUTTING LESSONS

His Jeep Cherokee quietly roams the courses — cart path only — in the early morning and late evening. Waldron uses the time alone, with his walkie-talkie, to think and observe the golf courses. He

stops, greenside, and takes his ever-present putter and ball up to the green. He aims anywhere. Tap. He watches the ball roll. "I feel that the greens are where everything starts on a golf course," he says. "I'm constantly out looking for changes, too. If the green doesn't look like it did yesterday — why? Is it a normal environmental condition that affected it?"

Tap. Waldron watches the ball roll again. "As a golf course superintendent, that's what we strive for — perfect ball roll. So when I'm out putting on the green I'm out there to also confirm that we have quality surfaces. And I guess that's one thing I'm known for, and that's being out there alone, looking around and putting the greens. I simply get a lot of satisfaction from looking at the product and seeing my staff do a great job."

Look around. Look at the clean, pristine fairways and greens. The crisp edge of the bunkers and the creeks. To the casual observer, Waldron says, "they think it's all been done." But it isn't done. In his mind, there's more to do. Much more.

"It really never ends," he says. "Our courses are in tremendous shape. In my professional opinion, I just don't think you're going to get any better than this. But right now we're continuing our drainage projects which have been very successful over the last two years. I'd like to put a drain under every wet spot out here because drainage is a big, big goal of ours, so our members can play under all conditions."

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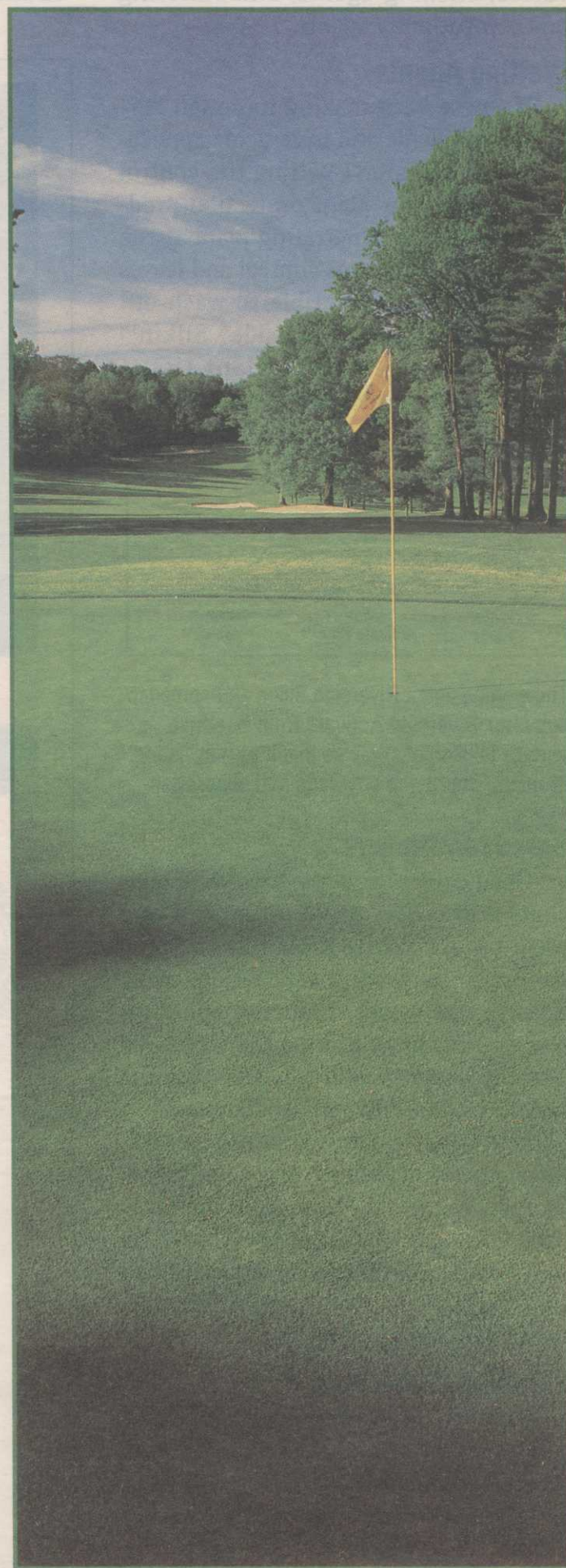
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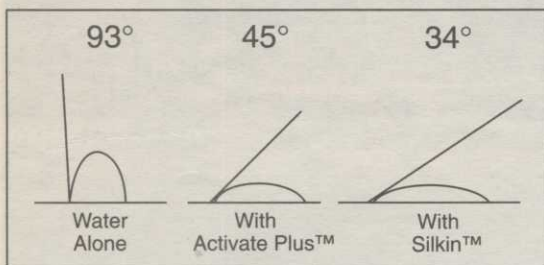
Using Adjuvants In Your Plant Protection Program

Here's how adjuvants can improve the performance and coverage of your plant protection product applications.

Using adjuvants in your turf management program can help you improve plant protection product performance. They can even make the difference between peak and poor performance. The starting point is to find the right adjuvant for the job. The most commonly used adjuvants for turf are: wetting agents; spreader/stickers; spreader/activators; sticking agents, and buffering and compatibility agents.

Wetting Agents

If you've been making thorough herbicide, fungicide and insecticide applications but still aren't getting the control you expect, your plant protection product may not be penetrating plant tissue surfaces. This reduces control and leaves spray residue susceptible to wash-off. The wetting agent Riverside® Silkin™ helps sprays penetrate plant tissue quicker for improved overall performance.



The wetting agent Riverside Silkin and spreader/activator Riverside Activate Plus™ reduce surface tension of spray so that it forms "flatter" droplets, improving coverage and absorption.

Spreader/Stickers

Good control in some areas and poor control in others could mean drift and wash-off are taking their toll on spray performance. During application, spray droplet size varies, reducing adhesion and causing spray to miss the target. To improve coverage and adhesion, use the spreader/sticker Riverside Complex™. It adjusts droplet size for better performance, even under adverse conditions. By reducing surface tension in the spray droplet and keeping the spray mixture suspended, Complex can dramatically improve the efficiency of herbicides, fungicides and insecticides.

Spreader/Activators

Droplet size varies during applications, making retention and distribution more difficult. Spreader/activators work in much the same way wetting agents

do. They deliver more uniform droplet distribution, quicker wetting and increased spray retention on leaf and stem surfaces when used with herbicides, fungicides and insecticides.

The spreader/activator Riverside Activate Plus improves performance and efficiency by moving the spray into plant tissue more quickly. By speeding up penetration, you get increased pest control.

Sticking Agents

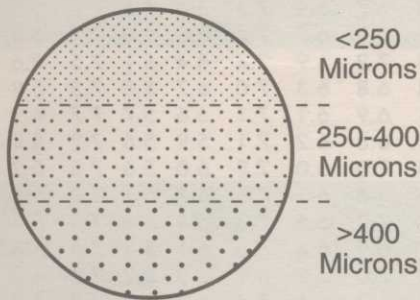
Contact herbicides, and non-systemic fungicides and insecticides can sometimes be washed away by rain, irrigation or even dew. Plant protection product sprays are also affected by drift. The sticking agent Riverside Plex® helps plant protection products penetrate the vegetation canopy and stick to plant tissue. That also helps control drift. Using



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Plex will help you make applications that will last longer, even in wet conditions.

Approximate Actual Size



Spray droplets under 250 microns are susceptible to drift and poor coverage. Using Riverside Plex or the spreader/sticker Riverside Complex to control droplet size effectively controls drift and

improves coverage. Both maintain droplet size near 400 microns, ideal for the best application.

Buffering and Compatibility Agents

If you're not getting the control you want but have followed label directions to the letter, it could be a pH problem in your tank mix. The buffering agent Riverside Combine® will help you correct the pH level for maximum performance from your spray mixture. If you're unsure of your pH level, use a pH test kit or, if you don't have one, contact your Terra representative.

Combine® pH use chart.

		Starting pH			
		9	8	7	6
Desired pH	8	2	0	0	0
	7	4	2	0	0
	6	16	12	8	0
	5	20	16	12	8
		Oz/100 gal. water			

A chart like this one makes it easy to adjust pH level for optimum results. For example, if your desired pH is 7 and your starting pH is 9, you would need to mix 4 ounces of Combine per 100 gallons of water to get the proper pH.

In addition to buffering, Combine also works as a compatibility agent. The compatibility agent Combine should be used when: more than one plant protection product is included in a tank mix; when tank mixing different formulations like wettable powders and liquids; or when applying micronutrients or plant protection products with fertilizer. Also, Combine improves spray mix stability and dispersion.

To see if a compatibility agent will help your tank mix, try the jar test. Fill two quart jars each with a pint of water or carrier. Use the same source and temperature as you would in your actual tank mix. Mark one jar "with" and one "without." Add 1/4 teaspoon of Riverside Combine to the jar marked "with" and shake it gently for 5-10 seconds. Add the plant protection product(s) to both jars in the proper volume and sequence according to the label directions. Shake gently before adding each new product. Wait 5-10 minutes. Check both jars. If no gels, sludge, flakes or other irregularities are present, the mix is compatible.

If the jar marked "with" is compatible and the jar marked "without" isn't, a compatibility agent should be added to your tank mix. If the jar marked "with" isn't compatible, the tank mix shouldn't be used.

Wait 30 minutes. If the mixture separates but readily mixes again, the tank mix can be used with proper agitation.

Adjuvants Pay Off

Overall, adjuvants can help you protect the investment you make in plant protection products by making them more effective. Whether you're using wetting agents, spreader/stickers, spreader/activators, sticking agents, buffering and compatibility agents or all five, they can help you overcome some of the common problems faced by turf professionals.

For more technical information on adjuvants, contact your nearest Terra Professional Products representative.



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Top ryegrasses in National Turfgrass Evaluation Program tests

Name	AR1	BC1	DC1	GA1	IA1	IL1	IL2	IN1	KS1	KY1	MD1	ME1	MI1	MO1	MO3	NE1	NJ1	OH1	OK1	PA1	QE1	RI1	UB1	UB2	VA1	WA1	WA3	Mean
LRF-94-MPRH	7.5	5.4	5.0	5.0	6.3	6.9	6.6	5.1	6.6	7.8	5.1	7.7	5.9	6.0	6.9	7.1	7.0	8.0	6.7	7.4	6.8	5.9	7.4	6.6	5.7	7.5	5.7	6.5
BAR USA 94-II	7.8	5.7	4.7	4.8	6.3	5.9	6.0	5.8	6.6	8.3	5.5	7.3	6.0	5.7	6.4	7.7	6.5	7.9	6.0	7.2	7.0	5.6	7.8	6.4	5.6	7.7	5.6	6.4
*Pennant II	7.6	4.3	5.3	5.0	6.6	6.1	7.3	5.3	6.8	8.4	5.4	6.7	6.1	5.3	6.7	6.7	6.6	7.9	6.7	7.6	6.7	5.8	7.3	6.9	5.1	7.6	5.7	6.4
*Imagine	8.0	4.7	4.8	5.1	4.8	6.2	6.9	5.3	6.8	8.3	5.4	7.9	5.9	5.7	6.8	7.1	6.0	7.8	6.5	7.4	6.7	5.9	7.5	6.6	5.5	7.8	5.3	6.4
PST-2M3	7.9	4.6	4.8	4.8	4.6	6.0	5.0	5.6	7.4	8.9	6.0	7.3	5.5	5.8	7.0	5.8	7.2	8.2	6.0	7.5	6.9	6.7	7.4	6.8	5.6	7.7	5.5	6.4
*Calypso II	7.5	5.7	5.2	4.9	5.7	6.0	6.0	5.7	6.7	7.8	5.9	7.3	5.5	5.3	6.7	6.3	6.8	7.8	6.0	7.3	7.2	6.9	7.4	6.4	5.1	7.5	5.6	6.4
MB 45	8.0	4.8	5.0	4.7	5.6	5.9	5.7	5.3	6.5	8.3	5.4	7.9	6.1	5.6	6.5	7.3	6.0	7.9	6.6	7.4	6.8	6.3	7.0	6.7	5.5	7.5	5.8	6.4
LRF-94-C8	7.6	4.5	5.0	4.8	5.1	5.9	5.7	6.0	7.0	8.4	5.0	8.5	5.9	5.7	7.6	6.1	6.5	7.8	6.7	7.1	6.9	6.1	7.1	6.6	5.7	7.7	4.9	6.4
Panther	7.7	5.5	5.3	4.8	6.1	6.4	5.0	5.8	6.9	8.4	5.1	7.9	6.3	5.5	6.4	6.9	6.7	7.8	5.9	7.1	6.6	6.2	7.1	5.9	5.6	7.2	5.4	6.4
RPBD	7.3	5.1	5.3	5.3	6.6	6.0	6.5	5.4	6.7	7.6	5.6	7.0	6.0	5.3	6.2	6.4	6.9	7.9	6.1	7.4	7.0	6.0	7.2	6.0	5.6	7.6	5.2	6.3
*Majesty	7.7	4.6	5.2	4.6	5.8	7.0	6.1	5.1	6.7	8.2	5.6	7.4	5.7	5.8	6.7	6.6	6.0	7.9	6.0	7.6	6.6	6.1	7.0	6.7	5.1	7.8	5.5	6.3
J-1706	7.3	5.3	5.4	4.8	6.6	6.2	6.4	6.1	6.6	8.0	5.4	6.9	5.6	5.4	6.9	6.4	6.7	7.8	5.3	7.1	7.0	5.5	7.3	6.1	6.1	7.5	5.3	6.3
*Line Drive	7.4	5.5	5.0	4.7	6.4	6.7	5.8	5.1	6.4	8.5	5.2	7.6	5.9	5.5	6.8	5.9	6.5	8.1	6.4	7.1	6.9	6.4	6.6	6.1	5.3	7.5	5.3	6.3
PST-2R3	7.5	5.8	5.5	4.8	6.3	6.6	6.1	5.5	6.0	7.7	5.3	7.3	6.5	5.7	6.7	6.3	6.3	7.9	5.8	7.3	7.0	6.3	6.9	6.0	5.2	7.2	4.9	6.3
*PST-GH-94	7.6	5.0	5.1	4.9	6.3	6.2	6.4	5.7	6.8	7.9	5.6	7.4	5.4	5.8	6.3	5.9	6.5	7.9	6.2	7.4	6.9	6.1	7.4	6.2	5.2	7.3	4.8	6.3
MB 44	8.0	4.9	5.0	4.7	5.3	6.2	5.2	4.9	7.4	8.6	5.4	7.3	5.5	5.6	7.0	6.4	5.8	8.1	6.4	6.8	6.7	5.8	7.0	6.6	5.5	8.0	5.3	6.3
PST-2DLM	7.7	5.0	5.0	4.6	5.8	5.0	6.4	5.5	6.4	8.5	5.4	7.9	5.6	5.8	6.5	6.2	6.4	7.8	5.7	7.1	6.7	6.8	7.4	6.5	5.1	7.3	5.0	6.3
LSD	0.7	0.9	1.0	0.6	1.2	1.3	1.3	0.9	0.7	0.4	0.7	1.3	0.9	0.6	0.6	1.2	0.7	0.4	1.1	0.9	0.4	0.6	0.5	1.0	0.6	0.6	0.5	0.2

Here are the locations of the field tests, followed by soil texture, soil pH, pounds of nitrogen applied per 1,000 square feet, and mowing height in inches. All were irrigated only to prevent stress, except BC1, MO1, MO3 and UB1 (only to prevent dormancy) and IL2, KY1 and VA1 (only during severe stress).

- AR1 — Fayetteville, Ark., silt loam and silt, 5.6-6.0, 3.1-4.0, 3.1-3.5.
- BC1 — Vancouver, B.C., sandy loam, 6.1-6.5, 4.1-5.0, 1.1-1.5.
- GA1 — Griffin, Ga., sandy clay loam, 6.1-6.5, 4.1-5.0, 2.6-3.0.
- DC1 — Washington Monument Grounds, D.C., N/A.
- IA1 — Ames, Iowa, sandy clay loam, 7.1-7.5, 2.1-3.0, 2.1-2.5.
- IL1 — Urbana, Ill., silt loam and silt, 6.1-6.5, 1.1-2.0, 2.1-2.5.
- IL2 — Carbondale, Ill., silty clay loam, 6.1-6.5, 4.1-5.0, 1.1-1.5.
- IN1 — West Lafayette, Ind., silt loam and silt, 6.6-7.0, 3.1-4.0, 0.6-1.0.
- KS1 — Manhattan, Kan., silt loam and silt, 6.6-7.0, 3.1-4.0, 1.6-2.0.
- KY1 — Lexington, Ky., silt loam and silt, 6.1-6.5, 2.1-3.0, 1.6-2.0.
- MD1 — Silver Spring, Md., sandy loam, 5.6-6.0, 2.1-3.0, 0-0.5.
- ME1 — Orono, Maine, N/A.
- MI1 — East Lansing, Mich., sandy loam, 7.1-7.5, N/A, 2.6-3.0.
- MO1 — Columbia, Mo., silty clay loam, 5.6-6.0, 3.1-4.0, 2.1-2.5.
- MO3 — St. Louis, Mo., silty clay loam, 6.6-7.0, 4.1-5.0, 2.6-3.0.
- NE1 — Lincoln, Neb., N/A.
- NJ1 — North Brunswick, N.J., sandy loam, 6.1-6.5, 5.1-6.0, 1.1-1.5.
- OH1 — Columbus, Ohio, silt loam and silt, 6.6-7.0, 1.1-2.0, 1.1-1.5.
- OK1 — Stillwater, Okla., silty clay loam, 6.6-7.0, 3.1-4.0, 2.1-2.5.
- PA1 — University Park, Pa., silty loam and silt, 6.6-7.0, 1.1-2.0, 1.1-1.5.
- QE1 — Quebec, N/A.
- RI1 — Kingston, R.I., silt loam and silt, 6.6-7.0, 3.1-4.0, 1.1-1.5.
- UB1 — Beltsville, Md., silt loam and silt, 6.1-6.5, 3.1-4.0, 1.1-1.5.
- UB2 — Beltsville, Md., (low mowing), silt loam and silt, 6.1-6.5, 3.1-4.0, 0-0.5.
- VA1 — Blacksburg, Va., silt loam and silt, 6.1-6.5, 3.1-4.0, 2.1-2.5.
- WA1 — Pullman, Wash., silt loam and silt, 6.1-6.5, 2.1-3.0, 1.1-1.5.
- WA3 — Puyallup, Wash., sandy loam, 5.6-6.0, 4.1-5.0, 1.1-1.5.

Supers cautious over rye diseases

BELTSVILLE, Md. — Certain disease problems in ryegrasses "are steering many people away from the use of ryegrass — at least in the transition zone," according to the national director of the National Turfgrass Evaluation Program.

"A lot of superintendents are considering going to bentgrass or zoysiagrass on fairways," Kevin Morris said from his office here. "A lot would like to go to zoysia, but the problem is cost and getting it established. Bentgrass is a more economical option for many of them, if they have a good irrigation system and the ability to keep thatch under control."

Morris said gray leaf spot — never a concern that far north before — was a big problem in the mid-Atlantic region last year.

"It may have been just the right climatic conditions. It may be that superintendents are using fungicides so much that they've wiped out beneficial organisms that keep gray leaf spot in check," he said. "So now we have this new problem on ryegrasses in this area. And the question is whether we have resistance to it. Most likely, we don't have a lot of resistance."

One more challenge to the breeders.

Ryes far superior

Continued from page 15

tence under close mowing and fairway-type conditions."

While generic color "has always been highly correlated with quality ratings," he said, "that doesn't mean a grass will persist well. We stress them to the point where they have to be able to persist regardless of color."

"The color is fairly easy to improve. But improving the disease resistance takes a more concerted effort and more breeders are looking at that area."

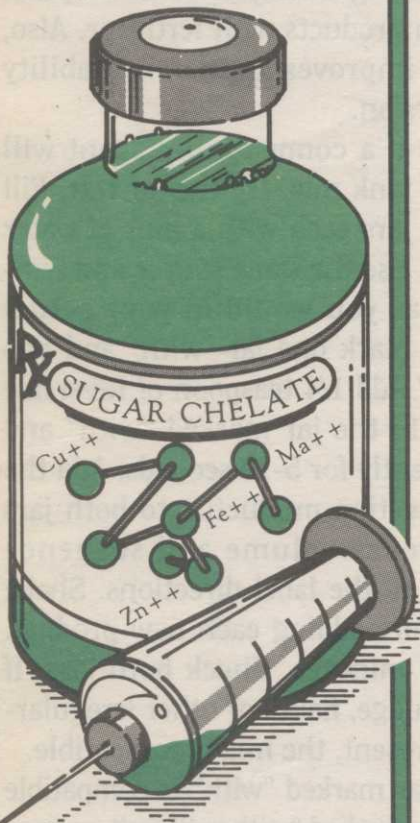
The new cultivars are so fresh from the laboratories that only three of the top 10 are commercially available this year. And it may take awhile to get others into production.

"Finding the acreage in Oregon is becoming more and more difficult," Morris said.

Meanwhile, all this improved breeding is good for the consumer, he said, adding: "If these grasses will persist and survive with less water, pesticides, etc., the consumer benefits."

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Q&A: Bob Carrow

Continued from page 15

cies and cultivars within a species have the best overall drought resistance. This included determining which grasses can develop a good root system and maintain it under our severe soil stresses of high soil strength, acid soil complex, high temperatures and low water content [i.e. drought]. We've identified which grasses have inherently low water-use rates thereby low irrigation requirements. We've developed irrigation scheduling procedures based on the use of turf canopy temperatures, and turfgrass cultivation programs to improve deep root growth.

Traffic stress is the second area of emphasis. We've determined soil compaction tolerances of grasses for recreational sites, developed cultivation programs to alleviate soil compaction and determined the influence of golf cart tire design on turfgrass wear.

GCN: Do you have any preliminary results from your USGA-funded research on developing general practices to deal with the decline of bentgrass in hot, humid climates like the U.S. Southeast?

RC: Preliminary results from a project funded by The Toro Co. the past two years strongly suggested that summer bentgrass decline (SBD) was not due to a pathogen but high temperatures leading to root deterioration, especially in the surface zones, leading to soil oxygen stress. From the results, the USGA is now funding a more detailed study on the causes and corrective practices of summer bentgrass decline.

GCN: The USGA is also funding University of Georgia research projects on the development of better models to track the movement of pesticides in turf-containing soils; Dr. Glenn Burton's work on TW-72 putting green Bermudagrass; and breeding efforts on seashore paspalums. Can you provide brief updates on those projects?

RC: Dr. Al Smith's research on pesticide fate in turfgrass systems demonstrated that very few pesticides leached through high-sand golf greens due to the high organic matter content in the surface zone that absorbs and degrades pesticides. In the second phase, he demonstrated that pesticide runoff from turf surfaces was potentially a greater problem. He is developing means to reduce runoff potential.

Drs. Burton and Wayne Hanna are increasing two improved vegetative Bermudagrasses: TW-72 (greens) and Tift 94 (fairway with good cold tolerance). These are excellent grasses.

Dr. Ron Duncan has a very extensive program on breeding/genetics of seashore paspalum (*Paspalum vaginitum*). This turfgrass has great potential for use in the same areas that Bermudagrass does. However, it has certain advantages — very

high salinity tolerance making it well suited to poor water-quality conditions; substantially lower nutrient requirements; greater resistance to soil stresses that limit rooting; moderate shade tolerance, especially important in climates with prolonged cloudy periods, such as monsoon seasons. Dr. Duncan is increasing ecotypes for evaluation across the Southern United States and selected overseas sites. This is a very stress-hardy grass.

GCN: The current round of USGA funding ends in January 1998, according to Dr. Mike Kenna. What is the most important area for future funding in

your locale? Nationally?

RC: The current overall funding areas of the USGA — water conservation, alternative pest management, pesticide/nutrient fate — are all high priority and will continue to be important. I would like to see the USGA devote somewhat greater resources to basic research on environmental, traffic and soil stresses. They are doing this for pest stress through the alternative pest management program. It is the basic research that allows a science to truly evolve over both the long and short term. Basic research almost always has immediate practical implications.

GCN: Has the USGA done well allocating research money?

RC: Yes, especially considering the diversity of problem areas they are involved in.

GCN: Does the University of Georgia work closely with the Georgia Golf Course Superintendents Association and other state and regional turfgrass groups?

RC: Yes, but not necessarily as a whole group or team. Turfgrass researchers/teachers/extension specialists have one or two areas where they concentrate their attention. With this approach, we can be more involved than if the whole team tried to be involved in each of the interfaces.

GCN: Is there any additional pressure working at the University of Georgia considering the institution's accomplishments?

RC: Probably the No. 1 pressure for a research scientist is obtaining sufficient funds to maintain a productive program. Turf research is costly, requiring turf maintenance equipment, irrigation facilities and operating expenses similar to a golf course, but on a smaller scale. These needs must be met before moneys can be devoted to actual research. This requires much time for writing and submitting projects, meetings, writing reports, developing contacts, etc.



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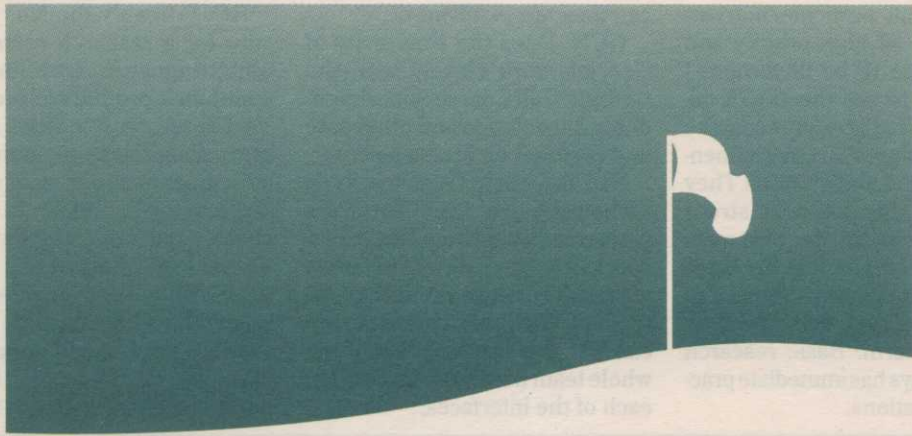
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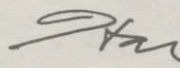
FROM THE DESK OF HAL PHILLIPS

As a reader of *Golf Course News*, it's no secret that public-access golf courses have been the focus of a lot of attention in our pages over the past few years. The reason is simple: Your courses are growing in numbers, your facilities are expanding to meet demand and competition, and your role in the golf industry is taking on added importance.

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That's why *Golf Course News* is sponsoring the Public Golf Forum—to help you meet the business challenges you face every day. It's an educational conference but even more, a chance to connect with your peers and colleagues, exchange information, solve your problems, and meet with vendors who can help your business grow.

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Hal Phillips, Editor

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Yes

Top bentgrasses in National Turfgrass Evaluation Program tests

Name	AZ1	GA1	GA2	IA1	IL1	IL2	KS1	KY1	KY2	MA1	MI1	MN1	MO1	MS1	NJ1	OK1	PA1	QE1	RI1	SC1	TX1	VA1	WA1	WA3	WA4	Mean '95 Rating	
*Lofts L-93	7.2	4.4	1.2	5.8	5.4	6.8	7.1	8.3	6.1	6.2	5.7	7.5	6.0	7.4	7.0	7.8	7.5	6.8	5.2	7.2	6.5	7.2	5.9	5.6	6.4	7.7	2
*Penn A-1	6.8	4.1	1.0	5.3	5.1	5.7	6.5	7.3	5.8	5.6	6.3	7.6	5.0	7.0	7.2	7.6	7.2	6.1	6.8	6.9	6.0	6.8	5.7	5.8	6.1	7.3	4
*Penn G-2	6.5	4.1	1.2	6.7	5.3	5.7	5.7	7.4	5.7	6.1	6.2	6.8	4.9	6.7	7.0	7.3	7.1	6.9	5.8	6.6	5.4	6.9	5.7	5.6	6.0	7.7	8
*Penn A-4	7.7	3.9	1.1	4.8	4.9	6.3	5.9	7.8	4.4	6.2	5.8	7.6	4.4	6.3	7.2	7.1	7.4	5.6	6.1	7.0	5.8	7.4	6.0	6.1	6.0	7.9	1
*Cato	7.2	4.4	1.1	6.0	5.0	5.8	6.0	7.6	5.1	5.9	5.4	7.6	4.8	6.6	6.7	7.2	7.2	6.0	5.7	7.1	5.7	6.9	5.4	5.8	6.0	7.4	6
*Providence	6.8	4.7	1.1	6.0	5.1	5.7	6.3	7.7	5.6	5.9	5.4	7.4	4.9	6.1	6.7	7.1	7.1	5.7	4.6	7.1	5.7	6.6	5.7	5.5	5.9	7.6	3
*Penn G-6	5.9	4.2	1.0	5.4	4.8	5.6	5.9	7.6	5.1	5.8	5.9	7.0	4.9	6.3	7.4	7.1	7.3	5.9	5.6	6.8	6.0	6.9	5.6	5.3	5.9	7.3	7
*Southshore	6.4	4.5	1.0	5.2	5.4	5.9	6.0	7.3	4.7	5.7	5.0	6.8	4.8	5.6	6.7	6.8	7.3	6.2	5.7	7.2	5.2	6.7	5.4	5.3	5.8	7.3	9
Imperial	6.3	4.0	1.0	5.9	5.0	7.0	4.7	7.0	5.0	5.7	4.8	7.0	4.8	5.3	6.0	5.8	7.3	6.0	4.8	7.0	5.2	6.1	5.5	6.0	5.6	7.6	11
Century	7.0	4.0	1.2	5.5	5.3	5.7	4.3	7.1	5.2	5.6	5.1	6.3	4.7	4.8	6.3	5.8	7.2	6.3	4.8	6.8	4.6	6.7	5.6	5.9	5.6	7.5	10
*Pennlinks	5.8	4.3	1.1	5.2	5.1	6.2	6.2	7.7	5.3	5.8	4.9	7.6	4.5	5.6	5.7	6.4	6.9	5.7	5.1	6.7	5.1	5.9	4.7	4.8	5.6	6.8	14
*Crenshaw	7.0	4.7	1.0	6.2	5.0	6.0	4.2	7.2	4.9	5.7	4.5	7.0	4.7	3.8	6.2	5.1	6.9	6.5	5.9	6.8	4.5	6.8	5.0	5.0	5.5	7.7	5
BAR WS 42102	5.4	3.5	1.1	5.8	5.0	4.6	5.5	7.6	5.4	5.8	5.6	7.0	5.0	5.3	6.0	6.6	7.1	6.3	3.3	6.6	5.0	7.0	4.8	5.0	5.5	7.4	16
*SR 1020	6.8	4.1	1.1	6.1	5.0	4.5	4.5	7.2	5.0	5.8	5.2	6.9	4.7	4.7	6.3	5.8	6.6	5.7	5.0	6.8	4.6	6.7	5.2	5.6	5.5	7.4	13
DG-P	5.6	4.2	1.1	5.3	5.0	6.8	5.6	7.3	5.3	5.5	4.6	7.4	4.8	5.0	6.0	6.2	6.9	5.1	3.5	6.9	4.9	6.4	5.1	N/A	5.5	7.0	22
LSD	0.6	0.7	0.3	1.0	0.7	1.9	0.6	0.5	0.5	0.6	0.9	0.5	1.0	0.5	0.5	0.5	0.7	0.8	0.6	0.6	0.6	0.7	0.5	0.6	0.1	0.5	

* Available on the market in 1996.
 The following are conditions at the sites of the bentgrass national tests, including, in order, location, soil texture, soil pH, nitrogen applied (in pounds per 1,000 square feet) and mowing height (in inches). All sites were irrigated only to prevent stress, except GA2, which was watered only during severe stress:
 AZ1 — Tucson, Ariz., sand, 7.6-8.5, 5.1-6.0, 0-5.
 GA1 — Griffin, Ga. (high soil pH), sandy clay loam, 5.6-6.0, 3.1-4.0, 0.6-1.0.
 GA2 — Griffin, Ga. (low soil pH), sandy clay loam, 5.6-6.0, 3.1-4.0, 0.6-1.0, only during severe stress.
 IA1 — Ames, Iowa, silty clay loam, 7.1-7.5, 3.1-4.0, 0-5.
 IL1 — Urbana, Ill., silt loam and silt, N/A, 3.1-4.0, 0-5.
 IL2 — Carbondale, Ill., silty clay loam, 6.1-6.5, 4.1-5.0, 0-5.
 KS1 — Manhattan, Kan., sand, 7.6-8.5, 3.1-4.0, 0-5.
 KY1 — Lexington, Ky., sand, 7.1-7.5, 4.1-5.0, 0-5.
 KY2 — Lexington (Griffin Gate GC), sand, 7.1-7.5, 4.1-5.0, 0-5.
 MA1 — Amherst, Mass., loam, 6.1-6.5, 4.1-5.0, 0-5.
 MI1 — East Lansing, Mich., sand, 7.1-7.5, N/A, 0-5.

MN1 — St. Paul, Minn., silty clay loam, 7.6-8.5, 5.1-6.0, 0-5.
 MO1 — Columbia (traffic), Mo., sand, 6.6-7.0, 5.1-6.0, 0-5.
 MO2 — Columbia, Mo., (no traffic), silt loam and silt, 6.1-6.5, 1.1-2.0, 0.1562.
 NJ1 — North Brunswick, N.J., sandy loam, 5.6-6.0, 4.1-5.0, 0-5.
 OK1 — Stillwater, Okla., sand, 6.6-7.10, 8.1+, 0-5.
 PA1 — University Park, Pa., loamy sand, 6.1-6.5, 2.1-3.0, 0-5.
 QE1 — Quebec, N/A.
 RI1 — Kingston, silt loam and silt, 6.6-7.0, 4.1-5.0, 0-5.
 SC1 — Florence, S.C., sandy loam, 6.1-6.5, 4.1-5.0, 0-5.
 TX1 — Dallas, Texas, loamy sand, 6.1-6.5, 7.1-8.0, 0-5.
 VA1 — Blacksburg, Va., sand, 5.6-6.0, 5.1-6.0, 0-5.
 WA1 — Pullman, Wash., silt loam and silt, 5.6-6.0, 5.1-6.0, 0-5.
 WA3 — Puyallup, Wash., (native soil), sandy loam, 5.6-6.0, 5.1-6.0, 0-5.
 WA4 — Puyallup, sand, 6.1-6.5, 7.1-8.0, 0-5.

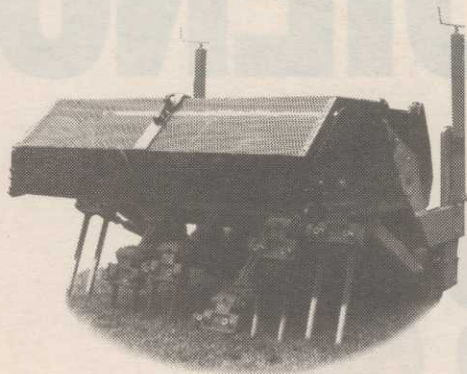
Strides continue in bent breeding

By MARK LESLIE

BELTSVILLE, Md. — Despite its minute sales in the overall turfgrass picture, bentgrass continues to be the trigger on the gun for seed company and university researchers hoping to make their name premiere among golf courses. "Only 1 million pounds [of seed] is sold worldwide annually, but having bentgrass expands your entire produce line," said Kevin Morris, national director of the National Turfgrass Evaluation Program headquartered here. "You have a product to deliver quality and don't have to de-

pend on someone else. That helps your marketing staff." To that end, major bentgrass research efforts are unabated as seed companies and universities work to produce the finest putting surfaces. This year's NTEP results show a juxtapositioning in the top bentgrass cultivars from the previous year's test. "Normally, you don't see a lot of flip-flopping [in the rankings] with bentgrasses," Morris said. "Bents can flip-flop over time if some disease comes along

Continued on page 32



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Poa trivialis is a foe, not a friend, for many in 'epidemic' regions

Continued from page 1

has become more manifest in the last five years, with *poa trivialis*' growing popularity among Southern superintendents for winter overseeding. Seed companies have been growing more of it and it has in one way or another infested growing fields of bentgrass and bluegrass. The infestation is exacerbated in central Oregon where farmers flood-irrigate, thus washing the *poa triv* from one field into another.

"It doesn't take much *poa trivialis* to contaminate bluegrass or bentgrass," Zontek said.

Indeed, to test the aggressiveness of *poa trivialis*, Rutgers University researchers mixed 40 grams of *poa triv* seed in a 50-pound bag of "non-aggressive" Kentucky bluegrass and seeded a field. Three years later, the *trivialis* had taken over more than 50 percent of that bluegrass.

But Rutgers' Dr. Reed Funk tempered the issue, saying: "A lot of this hype on *poa triv* is real, a lot is hype. People learn to identify a new plant and immediately start saying it's a big problem. It's been here longer than you or I have."

Saying that bluegrasses imported from northwest Europe have, at least in the last 50 years, contained "large amounts" of *poa triv*, Funk added that today's turf-maintenance practices of high fertility, heavy irrigation and short mowing height have enhanced its presence.

"You'd be hard-pressed to find a bentgrass green where you don't find a little bit of *poa triv*," said Arman Suny, former superintendent and current general manager at Shadow Creek Golf Club in Las Vegas. Suny sings its praises as "a wonderful putting surface for overseeding," adding that any "problem" with it is one of aesthetics because it's shiny leaf makes it more noticeable.

But Zontek said: "The problem is that in a hot summer it can go dormant, or die and you have big patches of dead grass."

Finger-pointing and lawsuits are going on in courtrooms regarding "*poa triv*," but the immediate impact for golf course superintendents is how to eliminate the *triv* they already have on their courses. Funk reported that Rutgers found "certain herbicides do a reasonable but not complete job of removing [*poa triv*]."

Chipco Alliette reportedly is hard on *poa triv*. And superintendent Mark Delsantro of Wyncote Country Club in Oxford, Pa., said he is experimenting with Fore WP (wettable powder) on his greens and collars to figure out a rate to phytotoxically kill the *poa triv* without hurting the bentgrass. "If we do, we will be rich because we will patent the mix," he said.

Zontek said *poa triv* is more of a problem on newer golf courses, and Delsantro's fits that bill.

Wyncote CC opened in 1993 and when he came aboard Jan. 1, 1995, there was already a *poa triv* issue.

"I've had *poa triv* problems at every golf course I've been at," Delsantro said. "I did a ryegrass-to-bentgrass conversion at Brandywine Country Club [in Wilmington, Del.] and we had *poa triv* right from the start. Here [at Wyncote] it was prevalent.

"An untrained eye might not notice it. But when we look for inconsistencies we see a lot of it — most prevalent on our collars,

RELATED STORIES, PP. 31-33

but also in the fairways ... and even on some of the greens where we had 4- to 6-inch patches of it."

And the problem is not just in the world of seeding.

Berry Hills Country Club in Charleston, W.Va., bought Kentucky bluegrass sod for its greens and collars, and even the sod was contaminated with *poa trivialis*. "We put it in '92 and yanked it out last fall," said superintendent John Cummings.

The infected sod was a particular surprise because sod-quality seed — like that bought by Terra Sod owner Charlie Price, who sodded Berry Hills — is inspected to a higher degree than blue-tag seed.

Price and Berry Hills settled the case out of court, and Price now has litigation pending against his supplier, George W. Hill. Hill has, in turn, filed action against Olson Fennel, Turf Seed, Round Butte and Jacklin, which Price said has since been elimi-

nated as a source of the *poa triv*.

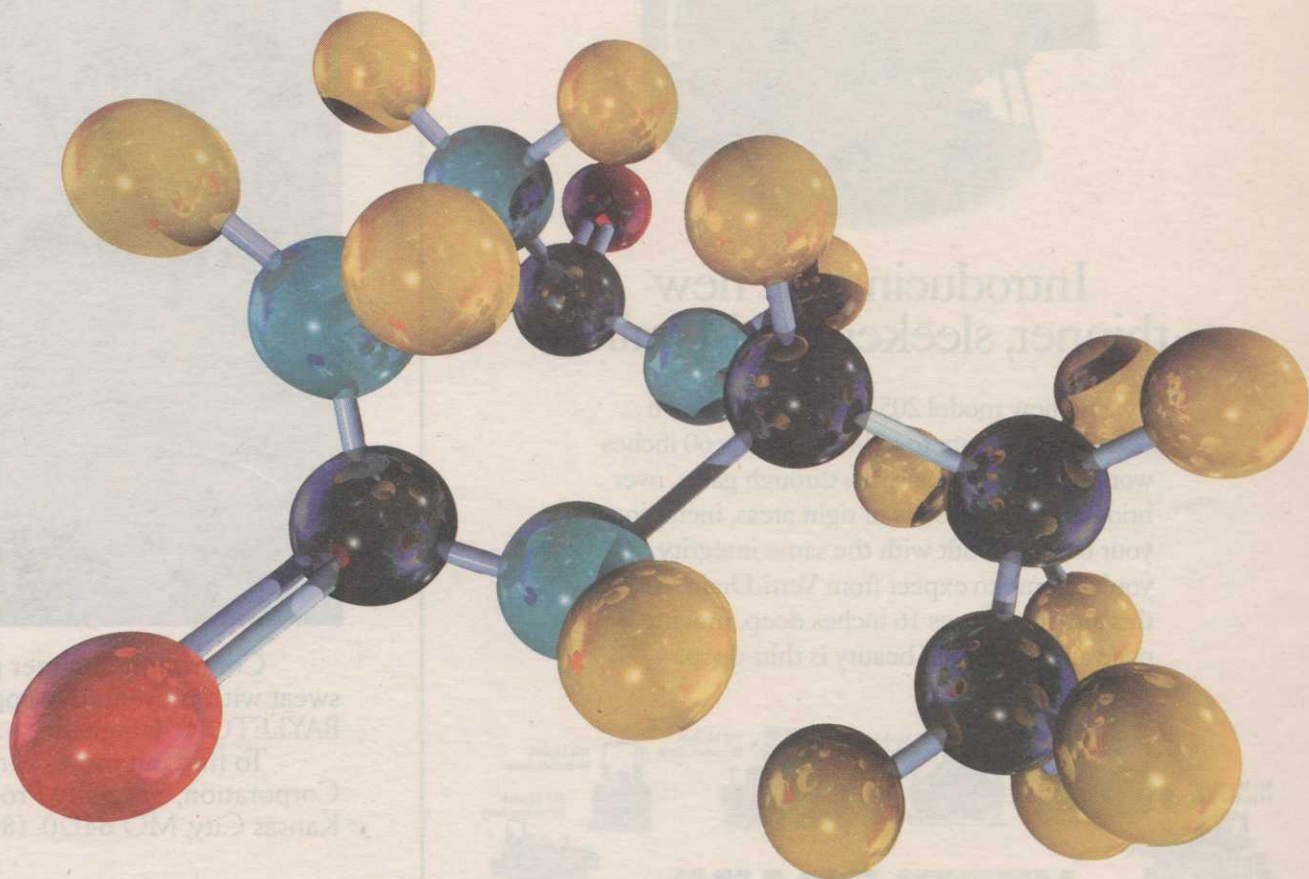
"I've heard quite a bit about *poa triv* problems since we had this," said Cummings. "It's opened my eyes."

The education is limited at this time, but multidimensional.

Beat *poa triv* before you get it, if possible, Zontek recommends. "If we have anything to do with a new golf course, we strongly recommend that they have independent seed tests done," said the USGA agronomist.

Continued on next page

WE'VE GOT QUALITY DOWN TO A SCIENCE.



By MARK LESLIE

LAS VEGAS, Nev. — While some Northern superintendents are anxiously battling *poa trivialis* takeover in areas of their golf courses, the rough bluegrass can be used to advantage, according to Arman Suny.

A former superintendent and turfgrass consultant who is currently general manager at Shadow Creek Golf Club here, Suny said: "In Palm Springs some of the best overseeded greens are with *poa trivialis*. It is a wonderful putting surface for overseeding. While it is 'a

'Use poa triv to your advantage' — Suny

weed,' it's not one I worry about. It doesn't affect the game of golf."

Indeed, Suny said *poa triv* can be a problem-solver for spots on a golf course where it is difficult to grow turf.

"It's a grass we probably don't use enough," he said. "There are probably a lot of places we could use it. It's a great short-day grower and Kentucky bluegrass is not. So you've got a grass that in the spring and even into the fall will flat out-grow

Kentucky bluegrass. It will start growing before the cool-season grasses do — ryegrass included. It's a much more aggressive spreader than ryegrass. It starts earlier, grows later and moves faster laterally.

"So, in places where you've got limited daylight, or a lot of early-season golf when there's not much sun, it's a viable grass to look at.

He said he has used *poa triv* in shade situations on collars. "Nobody notices," he said. "It's a

wonderful tool. If your percentage gets higher, you might have a problem with it on your greens."

Although superintendents have problems with *poa trivialis* dying in some parts of the country, "in other areas it will never, ever die out," Suny said.

Referring to one-time mentor Richie Valentine at Merion Country Club outside Philadelphia, he said: "Richie taught me some tricks. One was, if you have a terrible, shady

green or tee and you can't grow anything on it, you could put *poa triv* and Red Dot on it and just seed it once a month, and you could fake it pretty good. I had a green in Philly with *poa triv* and Red Top. It didn't putt like the rest of them, but it was green and nobody noticed. We had grass on it when nobody else ever could."

Sometimes, he added, superintendents decide there is a problem with a pure agronomic situation even though it doesn't affect the game of golf. "If it doesn't, who's got a problem with it?" he asked.



Epidemic

Continued from previous page

"The blue tag-certified seed basically says what's in the bag is that variety. If you saw what is allowable in terms of weed-seed and crop-seed percentages, you'd die."

Dale Kern, owner of Seed Technology, an independent seed-testing laboratory in Marysville, Ohio, said the solution to the problem lies in "the buyers setting the standards."

State regulators certify blue-tag bentgrass seed by testing 2.5 grams of seed per lot. But a seed lot can have as many as 55,000 pounds of bentgrass.

"That's okay for the homeowner," Kern said, "but when you're planting a whole golf course, it is a different situation."

Kern said superintendents might want seed tested at 100 grams per lot, or even more. "But that can get expensive," he said, noting that the cost for a 50-gram check is \$150.

"On certified sod-quality Kentucky bluegrass, they check 10 grams only looking for *poa annua*," he said. "For years we were running 100-gram samples. But that changed a couple of years ago. This year, we haven't had one request for a 100-gram test."

Terra Sod's Price said: "Quality control: A lot more seed testing needs to be done... The seed-testing labs did not have a lot of expertise in even identifying *poa triv* seed. Now the problem is pretty evident and seed technicians are becoming more aware of the difference between *poa triv* and bluegrass seed.

"Once they get a handle on that, I think they will begin to solve the problem... They obviously have to test more grams of seed. This lot [I bought] was 6,000 pounds. Ten grams of seed tested out of 6,000 pounds is suspect, to say the least."

And yet, as Hurley stated: "I'm not saying it couldn't come in with the seed. But if the conclusion is that there is a problem with *poa trivialis* because of the seed companies and seed farmers, that is grossly simplified and not looking at the big picture. The big picture is: It is all over the place and has been for centuries."

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Seed companies act to maximize purity in quality control

By MARK LESLIE

Seed companies are taking measures to reduce the threat of *Poa trivialis* contamination in shipments of bluegrass and bentgrass, pulling out of certain areas of central Washington, increasing the size of their seed tests, reducing seed-lot sizes and designating bagging areas as strictly bentgrass.

All the action stems from reported increases in the amount of *Poa trivialis* seeds in bentgrass and bluegrass seed-lot tests.

"Cross-contamination is

bound to happen. These [seed farms and seed-bagging operations] aren't sterile environments," said Chuck Hutton of O.M. Scott's St. Louis office.

Saying the seed industry polices itself to ward off contamination, Seed Research of Oregon's (SRO) Skip Lynch said: "Only a criminal is going to sell you bad seed. There are federal criminal laws."

The Oregon state Department of Agriculture "recently effected a control order in northeast Oregon and quarantined Umatilla

and Morrow counties so *Poa trivialis* won't become a problem in other production areas," said Commodity Inspection Division Field Operations Manager Dennis Isaacson.

A control order had previously existed in Union County, he said, adding: "There are still large regions in the state where it is approved for growth. This control order sets aside these counties as *Poa trivialis*-free so other grasses can be grown without the threat of contamination."

Seed companies are responding by requesting more stringent tests on some seeds.

"The last couple of years there has been a higher incidence of customers — probably between 5 and 10 percent more — asking us to test more seed than the standard," said Roger Danielson, director of Oregon State University's seed laboratory, which does Oregon's testing for blue-tag and sod-quality seed. "The commercial labs are also testing bigger amounts of seed." Whereas 10-gram tests are

done on Kentucky bluegrass for blue-tag certification, Danielson said 25-gram examinations, the standard for sod-quality testing, "are fairly common."

Seed companies have taken various actions to deal with the problem. For its part, SRO:

- Is pulling "as many acres as we can every year out of the central Oregon area and moving that production to the Willamette Valley," Lynch said.

- Has its bentgrass seed tested in lot sizes of 10,000 pounds instead of the 55,000 maximum.

- Has tightened up its tests, performing a 5-gram crop and weed-free check on top of the 2.5-gram noxious weed search done on bentgrass and is labeling the seed as "greens quality."

- Has made gold-tag (or sod-quality) certification available as a "special-request item."

At Scott, Hutton said:

- The bentgrass is mixed and bagged in "a completely different facility."

- A platinum-tag certification has been added, taking certification "to a new level."

"All blue tag is, is a statement of genetic purity," said Lynch. "It is not a statement of seed purity. And there is a fine line there. You can certify the worst variety in the world and have it blue-tagged. It could have whatever the upper level of allowable weeds is."

"It's like stating a Taurus is a Taurus," Hutton added. "It doesn't mean there's an engine under the hood."

"Nobody can guarantee there will be no weeds in their seed," Hutton said. "But we are trying to give you the largest view we can [with larger gram tests]."

Platinum-tag tests, he said, are done on 2.5 grams for the purity test as well as the crop and weed search. "The crop area is the most important part for turf management," Hutton said. "That's where all the problems will be hiding."

All the measures the seed companies are taking, Hutton said, are "to protect the owner, and everybody, really. The only person unprotected is the contractor, who has to pay more for it."



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Supers as buyers

Continued from page 29

in an area never before exposed to it, or if thatch becomes a problem.

"Do some have thatch problems? Yes, of course they do. Do some have disease problems? Yes. Are there going to be problems in golf course situations where they are dethatching all the time? Probably not. But people need to know there may be problems."

Also, Morris said that while most test plots across the country are maintained like a green — aerated and dethatched, "it's not like a golf course green. There's no traffic on them... Basically, we're trying to categorize these varieties and determine their strengths and weaknesses."

Lab, university tests prove poa triv's aggressiveness

MARYSVILLE, Ohio—A field test at Rutgers University and another battery of tests run by an independent seed-testing laboratory here dramatically illustrate the aggressiveness of the rough bluegrass poa trivialis and the extent to which it contaminates some turfgrass seed lots.

"We found that when we used a noncompetitive variety of Kentucky bluegrass and mowed it closely, fertilized it moderately and kept it well irrigated that the poa trivialis became very apparent," said Dr. Reed Funk of Rutgers.

Funk was referring to a test in which researchers put 40 grams of poa trivialis in a 50-pound bag of bluegrass and planted a patch of field.

"After some time," he said, "it [poa trivialis] made up over 50 percent of the turf cover."

Afterwards, they stopped irrigation, allowed the field to grow to 2-1/2 inches and discontinued the fertilization regime, Funk said, adding: "Now I can't find any poa triv in that field. Adjacent to that field we planted a competitive blend of three strong bluegrasses with 60 grams of poa triv and I have never been able to find more than one or two plants of triv in that field."

That experience, he said, suggests that the extent of a poa trivialis problem "depends a lot on whether you're growing it in competition with a competitive blend, and on maintenance levels, and probably the conditions of establishment."

Meanwhile, Seed Technology, an independent seed-testing lab here found disturbing percentages of poa trivialis in bentgrasses last year.

Lab owner Dale Kern explained that because only 2.5 grams of seed are tested in every seed lot to qualify for blue-tag certification, and a lot can be as many as 55,000 pounds, quite a bit of weed seed can pass through a screening.

To discover how widespread the problem was, Kern invited 10 companies to provide 10 samples of bentgrass each for testing.

"We tested at 2.5 grams [about one tablespoon] and then at 10 grams [which is four times the amount tested for gold-tag, or sod-quality certification]," he said. "We found no poa trivialis at 2.5 grams. But at the 10-gram level, these lots that could be sold as 'free' at 2.5 had some poa trivialis, poa annua and chickweed as well as timothy, tall fescue and ryegrass. When we checked the 100 lots at 50 grams [a tea-cup size], 46.5 percent of them were contaminated with from one seed to 288 seeds per pound of poa triv, 1 up to 207 seeds per pound of poa annua and 1 to 486 of chickweed.

"Say we found two or three

poa triv seeds in a 50-gram check, that's 18 per pound. That is a serious problem."

U.S. Golf Association Green Section agronomist Stan Zontek put this spin on the issue for the golf course superintendent: "You have 2 million seeds per pound of Kentucky bluegrass, and 3 million seeds in a pound of poa trivialis. So with only .001 percent contamination could be 300 seeds per pound of poa triv; and



if you're overseeding at two pounds per 1,000 square feet, that's 600 seeds you're planting. Poa trivialis is a stoloniferous grass, which means it spreads like bentgrass. You have a huge, huge problem."

Kern's disappointment was magnified, he said, by the response from the seed companies.

"We sent these results back to the 10 seed companies and ex-

plained the situation, saying not enough seed is being tested," Kern said. "We also called the sod-quality certified people. They all said they couldn't gear up to run 50-gram tests."

There are some 15 to 20 commercial seed-testing labs in the country, but most certification is handled at universities and state laboratories.

The cost for a 50-gram microscopic check: \$150, Kern said, adding: "We haven't had a single request for a 50-gram test and we're perhaps the only lab in the country who can do that size."

He said testing for poa annua

also changed for the worse a couple of years ago. "On sod-quality bluegrass they check 10 grams for poa annua," he said. "For years, we were running 100-gram samples. But not one this year."

"I think if they are going to continue to sell quality seeds, the seed companies themselves have to take the bull by the horns and do it," said Terra Sod owner Charlie Price. "They also have to watch who buys and mixes their seeds.

"The seed companies are not totally to blame. I think there's a lot to be cleaned up with the equipment of some people who buy proprietary seeds and mix them."

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REGIONAL NEWS

South Central



APPLICATORS CAN SELF-CERTIFY

LUBBOCK, Texas — All licensed and certified pesticide applicators can now recertify by self-certification in Texas.

In a law that took effect Jan. 1, it spells out that it continues the original process of obtaining continuing education units

(CEUs) by attending Texas Department of Agriculture-accredited courses. Course sponsors will continue to distribute certificates of completion, but applicators will no longer be required to fill out scantron sheets.

A typed roster will replace the scantron. Only such basic information as name, social security and license numbers is needed. The course sponsor will provide additional information such as the date and number of credits, and will continue to distribute certificates of completion. Pesticide applicators keep these certificates in order to self-certify.

Texas officials say their standards for certification conform to and surpass those of the Environmental Protection Agency.

North Central



COLLEGES GET CASH

CHICAGO — Cash awards were presented to eight colleges and universities for participation in the Career Center at the Mid-

America Horticultural Trade Show held here last January.

Joliet (Ill.) Junior College received \$600 in recognition of having sponsored the highest attendance, with 65 students participating in Career Center activities. Other schools in the top four, receiving \$450 each, included the University of Illinois at Champaign (27 students), College of DuPage in Glen Ellyn (21 students), and College of Lake County in Grayslake (16 students).

Cash awards of \$200 went to Milwaukee Area Technical College of Mequon, Wis.; Gateway

Technical College of Kenosha, Wis.; Iowa State University at Ames; and Illinois Central College of East Peoria. A total of 29 educational institutions participated in the Career Center.

Attendance at the Career Center gave students the chance to meet and discuss employment opportunities with representatives from 91 participating companies. A total of 227 students were on hand for this year's event, up from 153 in 1995.

Mountains

ROCKY MOUNTAIN CONCLAVE SET

DENVER, Colo. — More than

30 topics will be offered this year at the Rocky Mountain Turf Conference, Dec. 4-6, in a new format in the form of

workshops, technical seminars and service seminars. Held at Currihan Hall, the workshops will precede the concurrent seminars, plus several key topics of the program will be repeated throughout the conference to enable everyone who is interested to attend. Service Technical Seminars will also be included in the program once again this year.



Southeast

\$45K RAISED FOR ENVIROTRON

HOMOSASSA SPRINGS, Fla. — The fourth annual Envirotron Golf Classic, held by the Seven Rivers Chapter of the Florida Golf Course Superintendents Association at World Woods Golf Resort here, raised \$45,000 for the Envirotron Research Laboratory at the University of Florida.

The tournament's net proceeds will go to the Envirotron research equipment fund. The inaugural event in 199, yielded a \$22,500 donation, followed by \$30,000 in 1994 and \$35,000 in 1995.

Funded in part by the Florida Turfgrass Association, the Envirotron is a 3,100-square-foot research field laboratory, which opened in 1993. It includes a greenhouse, four climate-controlled glass houses, two walk-in growth chambers, two labs, study areas, classrooms and offices.

Designed to study and develop new technology on the relationship of turfgrass with biological, environmental and cultural factors, the Envirotron allows scientists to study the entire turfgrass system from root to blade. Its primary studies deal with temperature modifications, noise abatement, pollution and water purification, as well as the aspects of turfgrass culture.



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RYANGOLF HIRES ALLEN

DEERFIELD BEACH, Fla. — Ryangolf, a division of Ryan Inc. Eastern, has added Tracy Allen to its golf course construction team. Allen brings many years of relationships within the golf industry. He sits on the board of directors of The Florida State Golf Association, and is a former director of The Southern Golf Association, as well as a former member of the editorial board of Links Magazine.

ARCHITECTS ENDORSE PRINCIPLES

PINEHURST, N.C. — The American Society of Golf Course Architects (ASGCA) has endorsed the Environmental Principles for Golf Courses in the United States "because we believe it is good for golf ... good for the environment ... and good for the communities in which we live and work," said ASGCA President Denis Griffiths.



Denis Griffiths

BARDMOOR FACELIFT BEGINS

LARGO, Fla. — Bardmoor Golf Club began a \$500,000 renovation of its 18-hole championship golf course in June. The course is expected to reopen July 27. Greens are being expanded from 66,000 square feet to 90,000 square feet and will be surfaced with Tifdwarf Bermudagrass. A new process of sodding called Rapid-Turf will accelerate the process. More than five miles of 8-foot-wide cart paths throughout the course will be resurfaced with asphalt. The tee areas will also be enlarged, regraded and re-sodded.

ENGH, ROBINSON MOVE

CASTLE ROCK, Colo. — The golf course design firms of Jim Engh and Cabell B. Robinson have both moved. Jim Engh and his Global Golf Design have moved to new offices at 1700 N. Park St., Suite C, Castle Rock, Colo. 80104; telephone 303-688-1030. Robinson has moved his firm to: Las Lomas de Mijas 39, 29650 Mijas, Málaga, Spain; telephone 34 (5) 259 0250/259 0277. Robinson is a member of the American Society of Golf Course Architects and works exclusively in Europe.

COLLINS BUILDS TWO

PALM BEACH GARDENS, Fla. — Golf Buildings Development, Inc. (GBD) has been awarded the contract to design two golf maintenance facilities in Massachusetts. Widow's Walk Golf Course in Scituate and Bridgewater Golf Club are under construction and the maintenance facilities will be completed this fall, according to GBD President Lane Collins.

As Maine goes... One-stop permitting is here!

By MARK LESLIE

AUGUSTA, Maine— When Dick and Ron Foster applied for a permit to build a golf course on 112 acres in Litchfield, the process took seven weeks. Some 3,000 miles away, California has opened nine Permit Assistance Centers (PACs), bringing together permitting authorities from state and local government to simplify the process.

States from Maine to California are taking innovative steps toward regulatory reform and improved customer service, slashing huge amounts of time and paperwork off the quagmire of the

permitting process. Their aim: to invigorate their economies while maintaining a quality environment.

The seven weeks to get approval for the Fosters' project is a shocking speed in many states. But it may become more commonplace as time passes.

"There are a lot of innovative programs going on in all the [New England] states right now," said Brooke Barnes, director of policy development and implementation for the Maine DEP, which is the state's



"pinnacle of licensing and permitting," he added.

"The EPA [federal Environmental Protection Agency] is allowing more experimentation in different ways to approach regulating the environment — not just command-and-control stuff," Barnes said.

"In just the issue of processing, the agencies are always trying to reduce the time and still hold the line on their mission. Our mission is to protect the environment. We want to be customer-

Continued on page 39

Riviera does a double at 10

By MARK LESLIE

PACIFIC PALISADES, Calif. — Riviera Country Club's 10th hole may be the best short par-4 in the country. So it was with trepidation that the powers that be at the club decided something needed to be done to save the little green from the pounding of 60,000 rounds a year.

In late July, course officials will unveil the results of their decision: Instead of enlarging the 3,000-square-foot 10th green, they added a second, permanent part-time green, also about 3,000 square feet in size, to be used certain days of the week.

"It's a unique concept and an intriguing project," said course architect Ron Forse of Uniontown, Pa. "At

first, I didn't want to take it. I didn't want to be part of ruining what may be the most unique hole in [architect] George Thomas' masterpiece."

But Forse saw that the second green could be added and still maintain the strategy of the hole.

"Thomas had that extra fairway bunker off to the right and with the same backslope as the original green. So we hid the new green behind the existing bunker just like the original green," he said. "Also, the new green has the same slope as the original. And the same type of strategy works for the new green as well."

Sitting at 315 yards out from the back tee and 301 from the members'

Continued on page 36



An artist's rendering showing both 10th greens at Riviera; the new one, at right.



Roger Packard and Andy North are among the more successful architect/pro golf course design teams operating today. Packard entered the business with his father Larry in 1970 and emerged from his father's shadow with such widely acclaimed layouts as Cantigny outside his native Chicago and Sweetwater Country Club in Houston. North is a three-time PGA Tour winner, including two U.S. Open victories. Together they have designed Trappers Turn in Wisconsin Dells (Wis.), nine holes at Spring Green near Madison, Wis., Northern Pines in Kalispell, Mont., and The General at Eagle Ridge in Galena, Ill., which is set to open in August.

Golf Course News: How did the two of you team up?

Roger Packard: Andy was talking to a mutual friend of ours and expressed interest in getting into the design field. Dad (Larry) had retired at that point so I was open to having a pro partner. Andy liked my design style and the courses I had done, and I wanted a partner who would be actively involved.

Our personalities clicked and we started on Trapper's Turn.

GCN: What do the two of you contribute individually to a Packard/North design?

RP: Basically we blend our areas of expertise to build the best course possible. I've been around golf all my life and in the design business for 26 years. Andy brings

Continued on page 40

QA & A become popular team

Below, Andy North, right, and Roger Packard look over construction work on one of their projects. At left is a shot of Trappers Turn, a course they designed in 1991 in Wisconsin Dells, Wis.



Ray Hearn leaves Matthews to form course design company

HASLETT, Mich. — Ray Hearn, formerly of Matthews & Associates of East Lansing, has formed his own golf course design company here, Raymond Hearn Golf Designs, Inc.

A senior architect for Jerry Matthews whom he worked with for 10 years, Hearn was involved in some of the firm's most highly acclaimed projects and in the last several years.

"I believe the best way to attain my life goals and career objectives is to form my own company,

drawing on my own design vision and business principles," Hearn said. "Much like Matthews & Associates, the philosophy of this new company is to exceed the expectations of our clients in every facet of our service."

Hearn said the company will deliberately remain small, with a manageable workload, so he can be involved with every project.

He said he and Matthews will



Ray Hearn

continue working together on some projects.

"You always hate to see someone with Ray's talent leave, but I wish him well and look forward to a continuation of our professional and personal relationship," Matthews said.

Hearn is in the process of signing several new clients around the country. Two of the projects to be announced in the near fu-

ture are in Oklahoma and Georgia. Both exhibit sites that have outstanding landforms, according to Hearn, and should contribute to great golf courses. Matthews will be significantly involved in both projects and will be credited as the co-designer.

Joining Hearn as senior designer is Paul Albanese, who was an associate designer at Matthews & Associates. Albanese holds a bachelor of science degree from Cornell University and a master's degree in landscape architecture

from Harvard University.

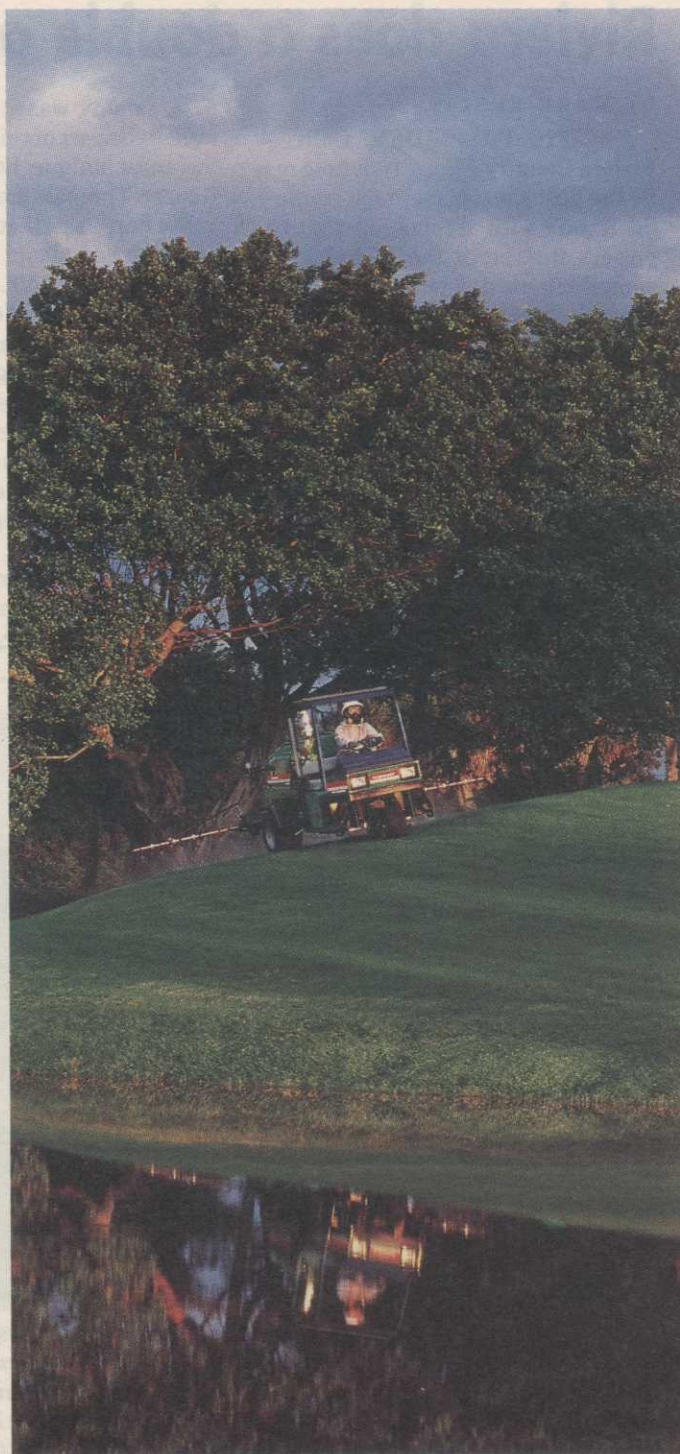
Among the major courses on which Hearn was project architect while at Matthews & Associates are The Twin Lakes Golf Club in Oakland Township, scheduled to open this summer; The Majestic at Lake Walden in Hartland and the Mistwood Golf Club in Lake Anne, which opened in 1994; The Woodlands of Van Buren, opened last year in Van Buren Township; Eagle Glen Golf Course in Farwell; and The Natural in Gaylord, which opened in 1992.

Hearn is an honors graduate in landscape architecture and turfgrass science from Michigan State University. He worked two years as an assistant superintendent at the Country Club of Detroit, where he was also a recipient of the Evans Scholarship sponsored by the Western Golf Association and founded by Charles "Chick" Evans.

Hearn and Albanese are members of the American Society of Landscape Architects.

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Riviera adds green

Continued from page 35

tee, the original green is narrow but very long and opens up like a squash at the front. It sits at a 45-degree angle to the tee and slopes to the left.

The alternate green will play almost 20 yards longer because of its angle to the right, Forse said.

The 10th hole features a 250-foot-wide fairway bunker. If a golfer hits over the center to the original green they then have to hit to a green fronted by a bunker and that is only 23 feet wide at the middle. If he hits over the left side of the bunker, the green opens up to him. "So, by hiding the green behind the bunker we didn't ruin the integrity, visually, of the hole," Forse said. "We just extended the design scheme to the other green."

The concept of adding a part-time green is rare. Pine Valley in Clementon, N.J., did this at its 8th and 10th holes years ago.

Dan Proctor and Dave Axland, who built Sand Hills in Nebraska, were the shapers and finishers of the new hole.

Elsewhere, Forse Design has jobs in Massachusetts and Florida. At Salem (Mass.) CC, work wrapped up at the end of June on a \$1.25 million project on the Donald Ross design.

On the island of Indian Creek Village on the intracoastal waterway in Miami Beach, Forse is in phase one of a master plan on Indian Creek Country Club, a William Flynn design.

In Boynton Beach, the Dick Wilson-designed Pine Tree Golf Club will be restored, Forse said. "They have dynamite golf holes," he said, adding that he plans to restore Wilson's "great old gnarly bunkers" as well as rebuild every green.

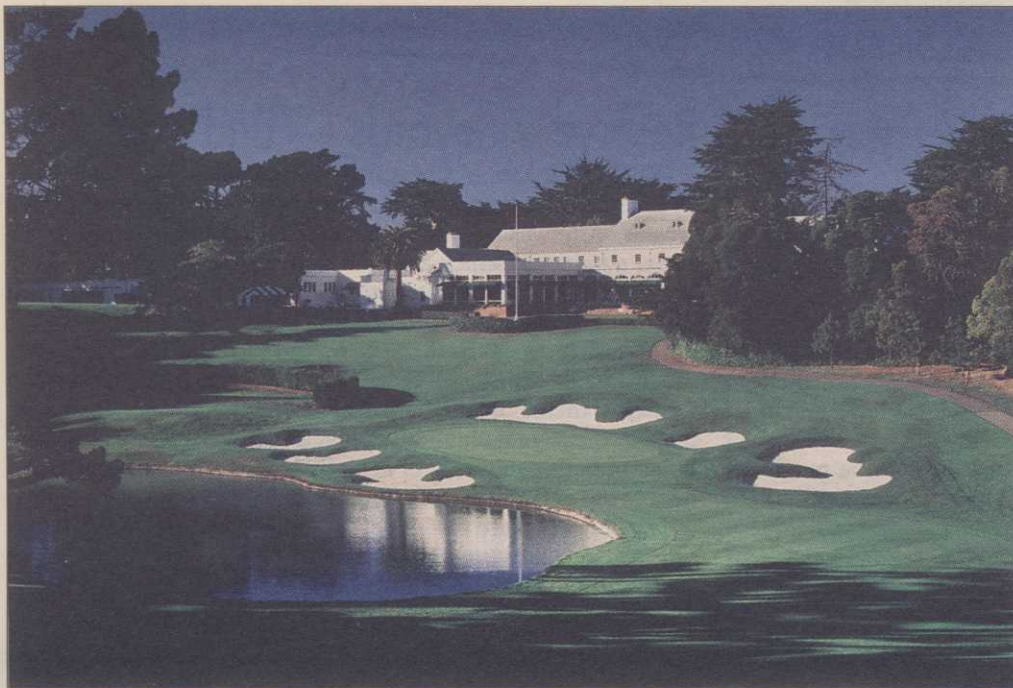
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BEFORE AND AFTER (AGAIN...)

Close readers of Golf Course News may have noticed that, on page 3 of the June issue, we mistakenly published a "before" photo (above) twice. So here's the "after" shot (left) at the California Golf Club of San Francisco, showing some of the nifty bunker restoration the course has undergone. The project's design and construction was handled by Doug Nickels, principal of Nickels Golf Group of San Rafael, Calif.

The Confidential Guide to Golf Courses

By Tom Doak
This book describes, uncovers and rates more than 1,000 courses worldwide that the author has visited and photographed. With more than 180 four-color photos, it might be the best collection of worldwide photographs ever published. It starts with a "Gourmet's Choice" selection of 31 of Doak's personal favorites, each by a different designer, followed by brief reviews of courses from Pebble Beach to Kebo Valley, Maine, and from St. Andrews to Joondalup in Western Australia.

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Guide to Golf Course Irrigation System Design and Drainage

By Edward Pira
As a working reference or as a textbook, this book covers every important aspect of the subject in an easy-to-understand format. Used in numerous academic courses for years, this is the first commercially available version of a perennial best-seller, and is completely revised with new exercises, practical examples, numerous new figures, and expanded sections covering a wide variety of irrigation system components.

\$59.95, 400 pages, hardcover.

Human Resource Management for Golf Course Superintendents

By Robert Milligan and Tom Maloney
This practical guide provides basic management principles and techniques which view people as the most important asset in golf course management. Five basic management functions are detailed throughout the book, using everyday situations to illustrate the key points. Designed to serve as a quick reference, or as a self-teaching guide, it features numerous techniques and practical examples.

\$34.95, 150 pages, hardcover.

Turfgrass Management Information Directory

By Dr. Keith Karnok
A 1,700-entry reference for turfgrass and green industry professionals, this book compiles the latest information and gives an at-your-fingertips list, complete with names, addresses and useful material you need every day. It covers academic programs and key contacts, instructional resources including slide sets and videos, software, a section on related books, and industry services such as diagnostic labs and soil-testing facilities, and much more.

\$19.95, 115 pages, softcover.

Superintendent's Handbook of Financial Management

By Raymond S. Schmidgall
The Superintendent's Handbook of Financial Management is the official certification textbook of the Golf Course Superintendents Association of America. It presents useful methods and techniques for understanding and using income statements, balance sheets, accounting procedures, financial statements, etc.

\$34.95, 150 pages, hardcover.

Color Atlas of Turfgrass Diseases on Golf Courses

By Dr. Toshikazu Tani
Contributing Author, Dr. James B. Beard

The Color Atlas of Turfgrass Diseases on Golf Courses presents more than 540 high-quality color photographs of all the major turfgrass diseases that occur on both warm-and cool-season grasses. It is international in scope. No other book contains as many color photographs of this detail and quality. Helpful maps are included to assist in disease identification by providing geographical locations where each disease/pathogen is likely to occur.

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Ore. project signs Thompson Planning

WINSTON, Ore. — Brockway Oaks, southern Oregon's newest golf course development, has selected Thompson Planning Group, Ltd., of San Rafael, Calif., to design and oversee construction of the 18-hole, par-72 course.

Peter Thompson has routed the 6,811-yard layout through a valley amid rolling hills along the south fork of the Umpqua River that borders the 275-acre site. A clubhouse, restaurant and golf practice facilities also are a part of the first phase of the de-

velopment, which includes plans for a resort hotel on the site.

For golfers, Thompson has provided multiple challenges with a design accentuating the features of the land — gently rolling hills, seasonal creeks, wetlands that are home to deer, turkeys and foxes. Fairways will be lined by large oaks and cedars, with the holes offering scenic views of the river and hills.

"Brockway Oaks will quickly become known for its natural beauty, the way it gently sits on

the land. The site offered us the opportunity to shape holes that, essentially, were already there," said Thompson.

His design incorporates six lakes throughout the area's only 18-hole, daily-fee course situated on a portion of the historic Nichols Ranch. The ranch was founded in 1867 and the much-acclaimed general store still on the site will be incorporated into the commercial development.

The course is scheduled to open in the spring of 1997.

Reserve Vineyards — and golf, too

PORTLAND, Ore. — Construction began in May on an innovative 36-hole golf course called The Reserve Vineyards and Golf Club, located on the western outskirts of the city. The Reserve will operate under a format by which a private membership and the public will be able to enjoy the benefits of the 36-hole facility. Alternating each day, one course will be dedicated to public/resort play, with the other reserved for private members and their guests.

Meanwhile, The Reserve will feature its own vineyards with a "winery" theme throughout the property. The chateau-style 39,000-square-foot clubhouse, which will overlook the finishing holes of both courses, will actually have a wine-tasting station next to the golf shop promoting The Reserve's own private label.

The courses were designed by John Fought and Bob Cupp.

The project is being developed by D.S. Parklane, a major Korean business entity. OB Sports has been contracted to supervise the design and construction, and manage the project upon completion.

Olympic Club completes work on ocean holes

SAN FRANCISCO — Ironwood Golf Inc. has completed another phase of expansion at the Olympic Club here.

The golf course construction firm extended the Ocean Course back to the ocean after decades of inland retreat due to a number of landslides.

Director Dean Bowen and his team have completed all phases of construction on four new holes, and rough-shaped two additional holes for future completion. These new ocean holes are some of the final designs of Jay Morrish and Tom Weiskopf.

In previous phases of development the firm reconstructed various golf holes on both the Ocean and Lake courses. Bowen also constructed the new nine-hole Cliffs Course which Weiskopf touts as the finest facility of its kind anywhere in the world.

Renville proceeds with muni plans, hires Norby firm

RENVILLE, Minn. — The city of Renville has hired Kevin G. Norby & Associates, Inc. of Minnetonka to provide a preliminary routing plan for a proposed golf course.

The plan will be drawn for 18 holes and a driving range on 160 acres of land the city has purchased.

Neighboring land owners have expressed an interest in providing additional areas for housing development on the proposed course. don Herfort, Inc. of Edina will be the architect for the preliminary design.

The city has met with Jackpot Junction Casino and Convention Center about potential joint marketing strategies for the golf course, casino and convention center.

Officials feel the close proximity of the two facilities would provide excellent marketing and promotional opportunities for both entities.



Government streamlining is leading to one-stop permitting process

Continued from page 35

oriented and provide a good response. It doesn't mean everyone is always going to get a permit. But we certainly are willing to help them design a project that is permissible."

"I think almost everybody is streamlining their process because everybody is under pressure from the long [permitting] processes," said Ron Boyd, president of Williamsburg Environmental Group, Inc. in Williamsburg, Va.

In Virginia, Boyd said, the Marine Resources Commission is the clearinghouse for joint permitting, combining the work of three separate agencies.

On the other hand, Maryland "hasn't tried [to speed the process] by any means," he said.

Boyd explained: "Much of it is the individual regulators within the departments. A lot of personal feelings enter into this."

Developers have clamored for a streamlined process for decades, but have mainly been left

stewing. "There is no manual that spells out who to see for permits," said golf course architect Brad Booth of Ogunquit. "But in Maine now, the DEP is the only point of review; only one permit

is needed. And that's good."

"The facts are," said Barnes, "we're working smarter. Increased use of computers and such things enable us to work better internally. We've changed our

"The respective agencies have their different views ... But the level of cooperation is at an all-time high."

— Brooke Barnes
Maine DEP

procedures and rules dealing with applications so that when someone is considering a project they now are talking with us at the very early concept-design stages. In the traditional way of doing it, someone designs a project, gets their consultants in line, fills out the application and drops it on our desk. And we say, 'My God, you're filling in 10 acres of wetland!'

"By front-loading the process, by the time an application gets to us we've identified the hot issues and helped them design the project around the environmental impacts. We've already minimized or eliminated the impacts before the application comes in."

Citing the streamlining as "evolutionary," Barnes said: "The respective agencies have their different views about how they do their jobs and what their charges are. But the level of cooperation is at an all-time high. We're all working together pretty well, and I think the results are being seen. We're not losing the environment for speeding things up."

Speed things up, they've done. Since it became a priority in the early 1990s, he said, "processing times for site-location permits, which a golf course would trigger, went from 18 months to nine months to six months. The average now is 4 to 4-1/2 months — and that's from a very complex industrial project to a simple residential subdivision.

"Even a golf course could be relatively simple," he added, "provided that it's not going to impact streams and that it is designed in an environmentally friendly way."

In California, the Contra Costa Regional PAC brings together such state and local government agencies as the California DEP, the Bay Area Air Quality Management District (BAAQMD) and Contra Costa Environmental Health Department. Agencies contributing to its creation included the Contra Costa Economic Partnership, Contra Costa County and the BAAQMD.

The impetus from Gov. Pete Wilson, following public meetings on regulatory reform, was "to reinvigorate California's economic and environmental leadership through regulatory reform and improved customer service."

Similarly, in Maine's case, Barnes said: "We passed a new wetlands law last year that coordinates federal and state permitting so that someone doesn't have to go the Army Corps in Waltham [Mass.] and the DEP in Augusta. It basically can all be wrapped up in Augusta now.

"We've heard over and over again from business people and environmentalists, that it's better to resolve these things locally than have it taken to Boston or Washington."

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CIRCLE #129

Q&A: North and Packard

Continued from page 35

his many years as a pro coupled with his creativity and know-how for design.

GCN: Do you ever disagree on design issues?

RP: We really haven't had any disagreements; we have very similar ideas about what is most enjoyable for the golfer. We're concerned with the player's enjoyment, not feeding our egos.

GCN: What is the key for a player to become a successful course designer?

AN: I think anyone who wants to be a successful designer needs to become a student of design and determine what would be best for all players, not just yourself and your own abilities.

RP: Basically, just educating yourself with everything designers have to do; just like playing golf, to be good at design, you have to develop your skill.

GCN: How many site visits do you generally make during a project?

RP: It depends on the individual site. But as a rule, we average two to three a month with more as the course nears completion.

GCN: What items are essential for a course to be considered well-designed?

RP: A well-designed course should offer great shot value; it should make the player form a strategy for playing each hole, and should be challenging without being overly penal. Most of all, a well-designed course should leave each player with the feeling that he/she can't wait to come back again.

GCN: Why is The General being touted as the best work you've done together?

RP: First of all, the piece of land we had to work with was incredible. The entire team that created The General worked very well together. Also, Andy and I find that the longer we work together, the better we get.

GCN: Who are your favorite classic and contemporary architects?

AN: Donald Ross and Alister Mackenzie. I also like some Weiskopf and some Fazio.

RP: A.W. Tillinghast, Donald Ross, Dick Wilson. Most of all, though, my father influenced my overall style.

GCN: Aside from your own projects, what are your two or three favorite courses and why?

AN: Muirfield Village is very difficult, but always in great condition. I love shorter courses like Cypress Point and Harbour Town. I love short holes. And of course the big, macho courses like Medinah 3, Winged Foot and Oakland Hills with its great mature oaks.

RP: Pinehurst, Pine Valley and the classics that represent the purest of golf course design. Even new courses should look like they've been there for 50 years.

GCN: Considering your past success at the U.S. Open there, do you have any special feelings about returning to Oakland Hills?

AN: I'm really looking forward to it. I wish I was playing in it.

GCN: What Tour players have made or would make good course designers?

AN: Players who have had to learn how to read the course where it wasn't all physical ability that brought their success are the best. Corey Pavin would make an excellent designer.

RP: I admire the work of Tom Weiskopf.

GCN: What design features of

Sweetwater Country Club make it particularly well suited for women?

RP: I adjusted the distances for the LPGA players' tournament; but honestly, as with all of our designs, the course is tailored to all levels of players with front tees around 5,000 yards and back tees around 6,900-7,000 yards.

GCN: What were the main things you learned from your father regarding course design?

RP: Dad is a perfectionist and he passed that on to me. I've learned to never settle. I always try to push myself to create the

best that I can. He stressed the importance of a great routing plan, and always being a gentleman in matters of business.

GCN: What were the main things you learned from your experience with Brent Wadsworth?

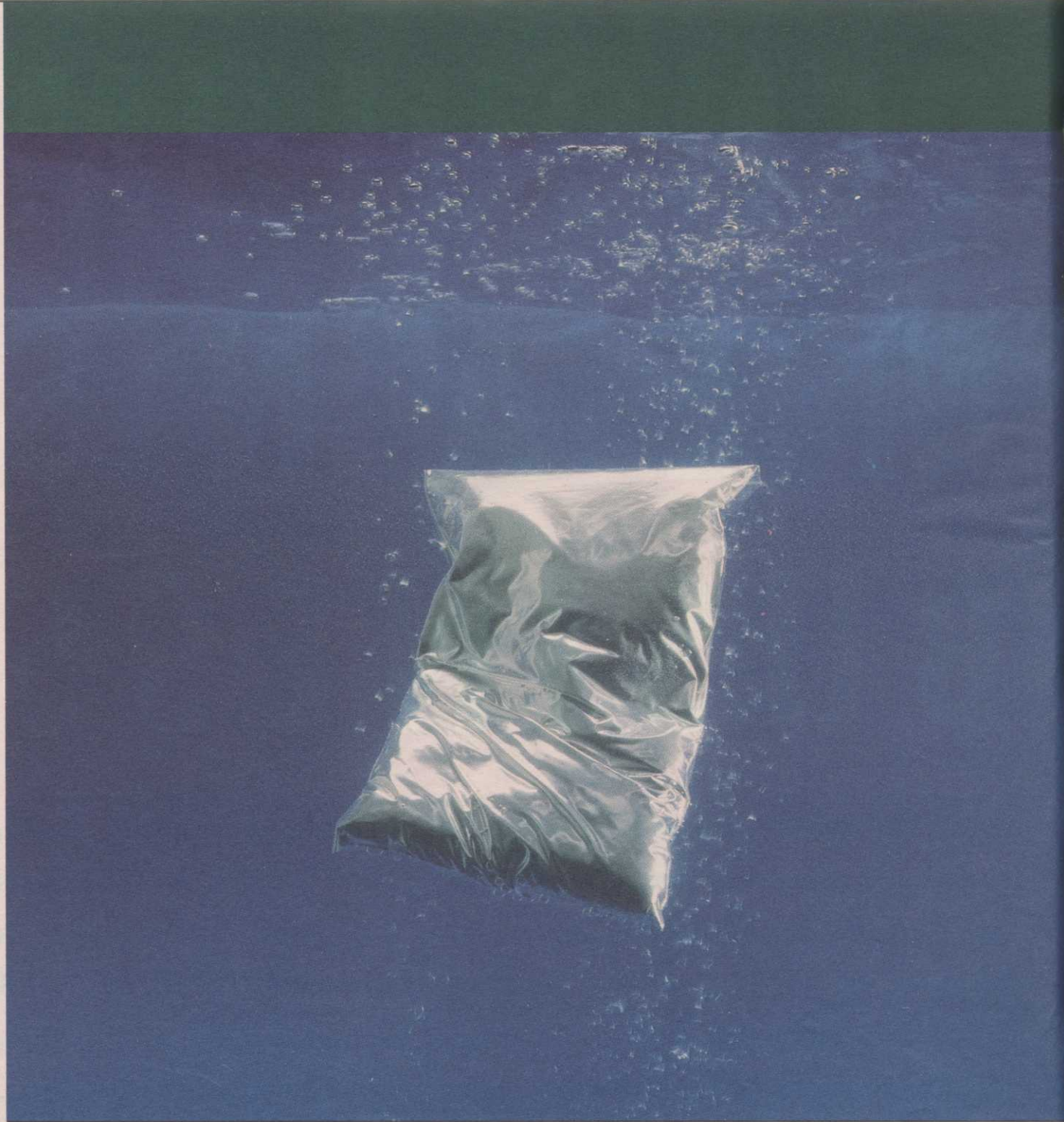
RP: I started working construction as a teenager for Brent, so basically I was exposed to the aspects of creating a golf course from a very young age. As one of the best construction companies in the country, Wadsworth taught me how to do things right.

GCN: Have there been any major changes in course architecture since you started?

RP: When Dad started in the business, large greens were very popular; there was very little undulation to the fairways, square tees, etc. Eventually designers started adding more flair and creativity to design, sparking greater interest from golfers who were both challenged and awed by the layout and aesthetics of the course.

GCN: Do you have a favorite course you've designed?

RP: Really, no. I've enjoyed working on them all. And each course brings back a lot of good memories. I just hope they give players as much pleasure as they did for me in creating them.



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Public Golf Forum

Continued from page 1

Golf Course News scheduled for Oct. 27-29, here at the Marriott Lincolnshire Resort. With education programs designed specifically for owners, managers, superintendents and developers of public-access facilities, The Forum will provide attendees the edge they need to survive.

"As the information source for the golf course industry, we have our fingers on the pulse," said *Golf Course News* Publisher Charles von Brecht. "This allows us to pinpoint the areas where owners, managers, superintendents and developers might really need expert business advice

and guidance.

"I believe we've succeeded in assembling a program that addresses these needs."

The Forum will feature four distinct education tracks—Marketing, Management, Maintenance and Development—each featuring expert instruction from proven leaders inside and outside the golf industry.

• The Marketing program is designed to help owners and managers "get the word out" via TV, radio, photography, the print media, the Internet and good ol'-fashioned word of mouth. For example, award-winning photographer Mike Klemme will tell attendees how to best market their courses through pictures;

Vince Alfonso, former president of the National Golf Course Owners Association, will instruct attendees on how to use local TV and radio to their marketing advantage; Rich Katz, vice president of marketing for Billy Casper Golf Management, will show owners how to economically promote their courses via the time-honored "Barter System"; and appraiser Larry Hirsh, president of Golf Property Analysts, will share 10 ways to upscale your operation—thereby allowing higher green fees while increasing course value.

• While most agronomy programs show superintendents how to spend money, the Maintenance track at the Public Golf

Forum concentrates on saving it through innovative turf care and efficient management. Indeed, The Forum is unique in the attention it pays to business issues faced by today's superintendents. Bruce Williams, president of the Golf Course Superintendents Association of America, will share innovative, efficient staffing techniques. Terry Buchen, *GCN's* Savvy Superintendent and contributing editor, will weigh in with his exclusive "10 Ways to Save Money." Earl Shafer, the superintendent at Wilmington (Del.) Country Club, will discuss ways to use OSHA regulations as a cost-saver. Also, Chicago District Golf Association Turfgrass

Advisor Dr. Randy Kane will discuss agronomic problems particular to the region, while U.S. Golf Association Green Section agronomists Bob Brame and Peter Vermeulen will speak on Midwest turf problems and solutions.

• The Development program will employ a two-prong approach: Targeting both the start-up developer and the existing course owner looking to expand—indeed, the latter group accounted for nearly half of last year's 468 course openings. This track will feature architect Bob Lohmann on course renovation; Jeffrey Brauer, immediate past president of the American Society of Golf Course Architects, on the particulars of expanding facilities from 9 holes to 18, 18 to 27 and 18 to 36; architects Dick Nugent and Keith Foster on reclaiming landfills and quarries for golf development (and how to use them as a marketing advantage). Discussions of demographics, financing alternatives and environmental permitting strategies will also be included in this track.

• The Forum's Management program is the strongest ever. Operations wizard Gregg Gagliardi returns this year with separate sessions on increasing profit margins on the driving range and in the restaurant. Walt Lankau, owner of Stow Acres (Mass.) Country Club—host to the 1995 USGA Publinx Championship—will share his experiences implementing and fine-tuning an automated tee-time reservation system. As any owner knows: If the price is right, the course is always for sale. In that spirit, the Management track will feature a session on "Making Your Course Attractive for Sale," featuring Mike Rippey, president of North American Golf, and golf course appraiser Sam Hines.

Information on attending the conference and exhibiting at the trade show can be obtained by calling the *Golf Course News* Conference Group at 207-846-0600.

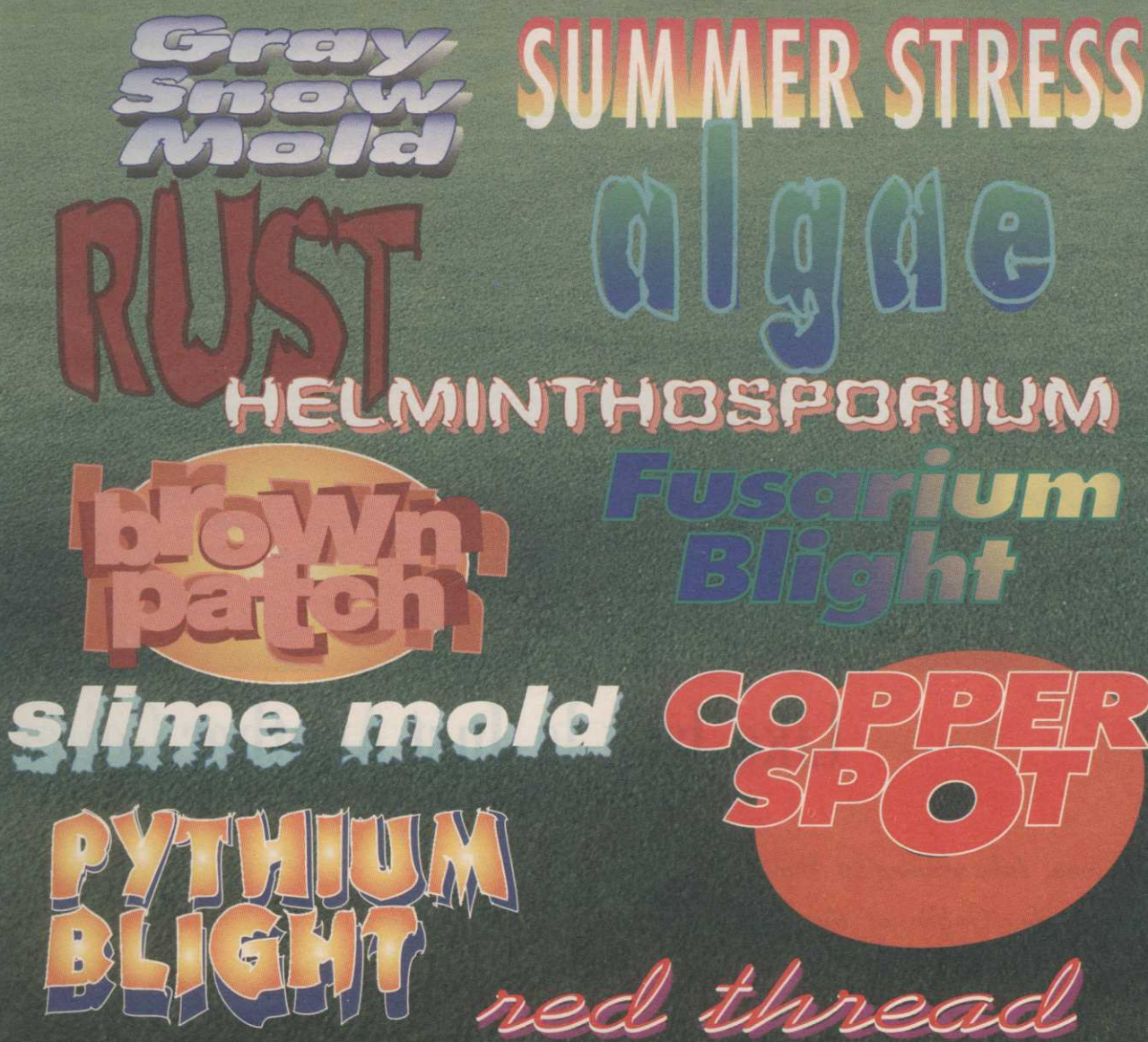
Phillips comment

Continued from page 10

no retrofitting required. Expect the other players in golf cobbling to quickly strike similar deals with the oodles of spike-alternative makers now crowding what had been a pretty static marketplace.

Reebok has chosen to equip its Performance Convertible golf shoes with Softspike Extra Traction cleats, "because they outperformed all other spikeless alternatives in our testing," said Phil Percuoco, Reebok product development manager.

The athletic footwear behemoth appears to have taken the "whole-hog" approach to its spikeless commitment. Reebok has agreed to respice, on request, any model in its golf shoe line with Extra Traction cleats at no additional charge. The manufacturer also plans convenience programs for clubs to go spikeless, including rental-shoe discounts of 40 percent of the standard wholesale price and shoe program for tournaments.



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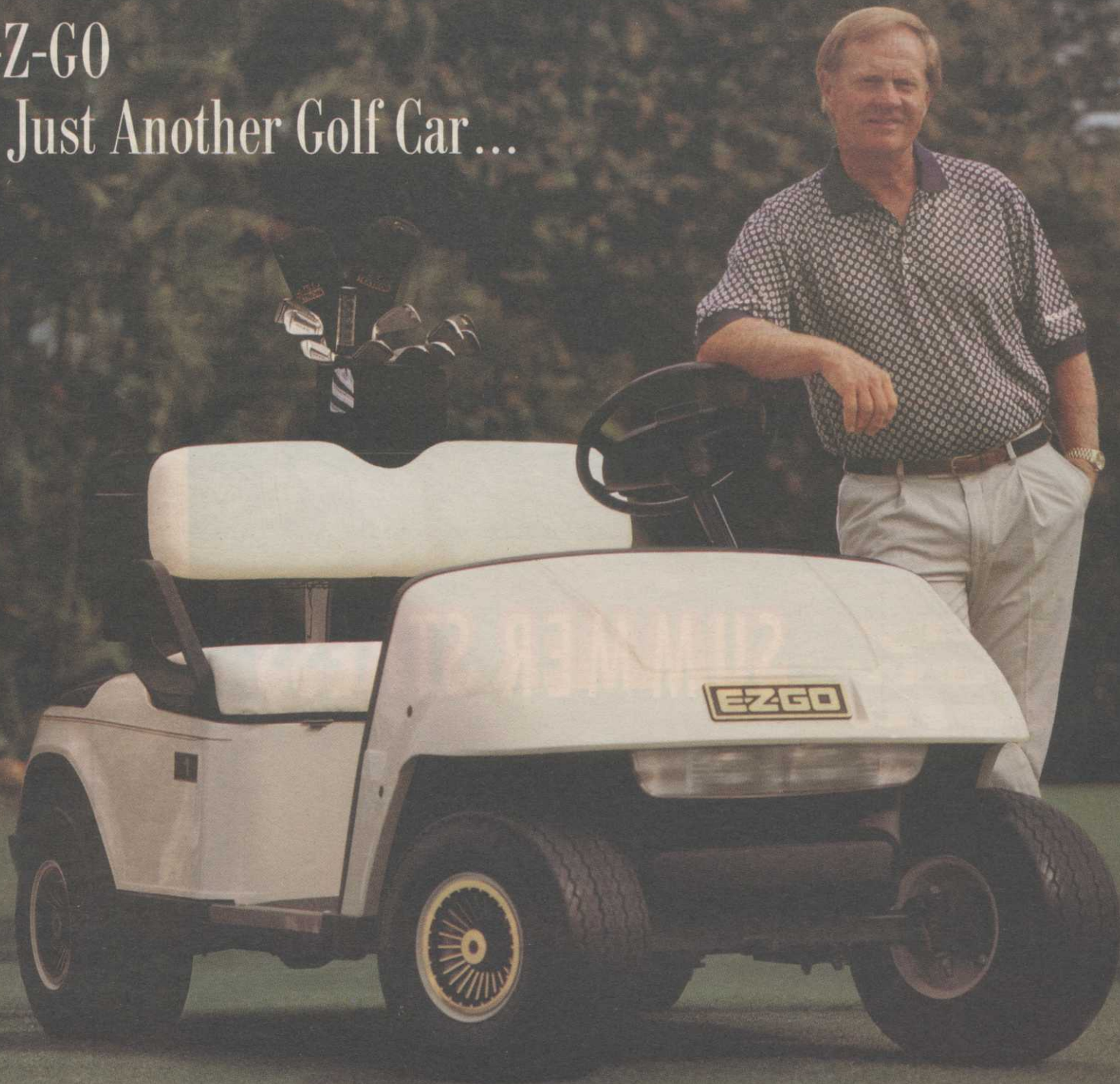
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CIRCLE #130

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FLEET MAINTENANCE: MANUFACTURERS OFFER THEIR MONEY-SAVING ADVICE

At a loss? Consult the Club Car manual

By RICK FARRIS

Having a good, working knowledge of your golf or utility vehicles, the proper tools, and consulting your service manual(s) — I personally prefer the Club Car model — can be the keys to maintaining your golf car fleet. Furthermore, your troubleshooting ability can ease identification of potential problems and stop you from over-reacting to what may indeed be a simply-solved problem.

Suppose, for instance, you're frustrated by a hard-starting engine. Let's follow a hypothetical situation from start to finish, illustrating how you can identify and possibly remedy a problem with your vehicle knowledge, the proper tools, and your maintenance and service manual. By applying the appropriate troubleshooting procedure, identifying the problem may be easier than you think.

Before attempting any troubleshooting or testing, check the oil in any four-cycle engine and determine its level and condition. Remember, crankcase oil is used for lubricating and cooling air-cooled four-cycle engines. Try starting the engine. Does it turn over with the starter/generator? If not, use the maintenance and service manual to help you locate the electrical circuit and components common to the starter circuit of the vehicle. The starter circuit in most gasoline golf or utility vehicles generally includes components such as a key switch, limit switches, fuses, solenoids, a starter, and a battery.

Use the troubleshooting guide in your manual to locate and test these

Continued on page 45

Rick Farris is a senior technical training specialist with Club Car, Inc.

E-Z-GO recommends preventative routine

By RON SKENES

At many courses, the golf car fleet is one of the top two or three revenue generators. Golf car rentals are one of the main sources of income for the course. At the same time, the fleet is one of the largest equipment investments for a course.

Yet, all too often golf car fleet revenues are not what they could be because a regular preventative maintenance program is not in place. To produce the expected revenue, a fleet must be kept in top operating condition. Time spent on regular, preventative maintenance will not only minimize down time, it will maximize revenue for the course.

Preventative maintenance begins with the crew who handles the golf car fleet every day. As cars are brought to the staging area, the tires, steering and brakes can be checked. Does the car run properly? How does it handle? Are the tires properly inflated?

A visual inspection should also be performed on the car as it is brought to the staging area. Is there any obvious damage? All of these items should be checked every time the car is brought out. At the end of the day, the same items are checked. This routine takes no extra time and can be performed by the crew as they handle the cars at the beginning and the end of the day. Any problems should be reported to a mechanic.

Like the automobile manufacturers, E-Z-GO provides a list of maintenance items with suggested frequencies for checking them. For the periodic maintenance recommended by the manufacturer, set up a regular rotation,

Continued on page 46

Ron Skenes, is manager of Marketing Services for E-Z-GO Textron.

Long-term profitability the key, says Yamaha

By TOM O'CONNOR

Any golf car fleet is viewed, in two terms, during the course of its life: As a necessary evil when negotiating its purchase or lease; and later as a source of revenue often taken for granted.

However, no matter where you are in the course of your fleet's life cycle, one thing should remain constant: Maintenance should be considered of foremost importance.

Tom O'Connor is a product manager at Yamaha USA Golf Cars.

When budgeting new purchases and leases, club managers should overcome the temptation to look at initial cash outlays. Instead, long-term profitability and the car's ability to withstand the rigors of constant use with minimal maintenance and down time should be considered.

New technologies in golf car construction are gradually having a positive effect on the cost of fleet maintenance. A perfect example of this can be found in the 1996 Yamaha Ultima.

Continued on page 45

ParCar design allows for safety and service

By SONJA SAUEY

Golf courses today are interested in safety, reliability and performance — ultimately the bottom line. This is why Columbia ParCar designs all its vehicles with these issues in mind.

Insurance costs have risen tremendously, including liability. Features designed into Columbia ParCar vehicles for servicing, reliability and performance, focus on safety to keep golf courses from incurring these additional costs.

Preventive maintenance lists contain numerous safety equipment checks. Insurance costs can be controlled when these inspections are completed on a timely basis, and properly recorded for future reference.

Monthly checks should be made of the reverse warning buzzer for proper operation. Make certain the system is fully functional since this may be the

Continued on page 46

Sonja Sauey is director of marketing and sales for Columbia ParCar.

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U.S. Battery develops 8-volt

The U.S. 8V GC is the newest battery developed in the extensive U.S. Battery deep-cycle line. This 8-volt battery has been designed specifically to power the new 48-volt golf cars.

Although other companies have had this technology available for about one year, U.S. Battery has chosen to continue its testing program to ensure the consumer will get the best 8-volt available.

The technology used in the production of the U.S. 8V GC is the most advanced available.

Constructed with the proprietary product Antinium, the grids reduce gassing and service time. The use of this special grid alloy will also extend the life of the battery far beyond acceptable industry standards by reducing internal grid corrosion. The pasting formulation has been further enhanced with the introduction of the Crystallock curing process, which provides superior cycling performance.

For more information, contact Donald Wallace at 909-371-8090.

CIRCLE #306

ShowShine improves appearances

ShowShine is designed to quickly improve the appearance of golf cars and course equipment, while simultaneously protecting them from ultraviolet fade with a powerful sunscreen.

Waterspots are reduced and the anti-static property makes clean-up easier. Eyeglasses benefit from improved visibility, and windshield clarity can be restored without expensive replace-

ment. Tires, tops and seats are conditioned and protected. Shoes and golf bags resist grass stains and water. Counters and doors resist fingerprints.

Made in the United States, ShowShine contains no silicone or harmful chemicals.

For more information, contact: Racetek, P.O. Box 948, Evans, Ga. 30809-0948; telephone 706-860-1237.

CIRCLE #307

Yamaha unveils gas-powered G-16 Ultima

Yamaha Golf Car Group has introduced the new G-16 Ultima gas golf car. With a new 10hp engine and a unique, air-cooled muffler, the G-16 Ultima gas golf car sets new standards for power, efficiency, quietness and emissions, while significantly reducing engine-compartment temperature. Also equipped with a new, easy-to-maintain air filtration system, the G-16 lowers intake noise while providing longer filter life.

"The G-16 Ultima gas golf car has been designed from the ground up to be the lowest-maintenance, longest-life golf car available," said Joe Stahl, vice president of Yamaha Golf Car Group.

Like the original Yamaha Ultima, the G-16 incorporates coil springs and shock absorbers on all four corners, with an independent front suspension for a superior ride. The car also features exclusive 5-mph energy-absorbing front and rear bumpers that withstand repeated impacts without damage to the car or bumpers. The color-impregnated body is made up of a special thermoplastic olefin that is virtually indestructible.

For more information on the full Yamaha line, including the G-16 Ultima gas golf car, call Yamaha USA Golf Car Group at 1-800-843-3354.

CIRCLE #308

Austrian firm offers pair of golf cars for disabled market

U.S. representatives for Austrian Golf Car Industries are introducing two recreational mobility products for the handicapped — the Para Magic Golf and Para Magic Outdoor.

The Para Magic line, sold in the U.S. by A Quiet Place, was developed by Austrian Golf Car Industries and the Rehab Center Tobelbad in Austria. It was designed as an all-terrain three-wheeled vehicle. The two front wheels are powered by hydrostatic gearing which are independently controlled. The front wheel base is 4-1/2 feet wide, assuring stability in hilly and rough terrain.

The Para Magic Golf is equipped with the same tires as are used on golf course maintenance equipment, so that it may be used anywhere on the golf course, including the greens and sand traps.

This product line is represented in the United States by A Quiet Place of Kingston, Pa., a division of Emrex Inc. For more information on Para Magic Golf or Outdoor, write to A Quiet Place, P.O. Box 1349, Kingston, Pa. 18704; telephone 1-800-845-9642.

CIRCLE #309

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Club Car advice

Continued from page 43

components until you find the defective part. If your engine turns over, but will not start and run, the problem may be in the fuel system. Check the level and condition of fuel in the gasoline tank. If your vehicle has been stored for a long period of time, the fuel may be stale or water from condensation may have settled to the bottom of the tank. In either case, the tank, fuel lines, and carburetor must be thoroughly drained and cleaned and fresh fuel installed.

Check fuel filter(s) and air filter and replace, if needed. Also, check the function of the throttle and governor linkages. After making certain all are in proper operating condition, consult your maintenance and service manual, and check the items common to the engine's ignition circuit. Don't forget to include checking the ignition "kill" circuit in your troubleshooting procedure.

Next, perform a cylinder compression test. Remove the spark plug(s), ground the secondary ignition coil wire(s) and lock the throttle wide open. Using a standard compression gauge, turn the engine over at the RPM recommended in your maintenance and service manual and measure the cylinder compression. Low cylinder compression will cause hard starting and low power output in any engine. If your engine is equipped with solid tappets and runs rough, check the valve timing. Tappet clearance, which greatly affects valve timing, is crucial to engine performance. Remember, for every one-thousandth of an inch that clearance is out of specification, valve timing changes approximately four degrees.

If your vehicle's engine refuses to turn over or turns over very slowly after periods of normal running, there could be a problem in the charge circuit. First, check the starter/generator belt tension. Proper belt tension is an absolute must for proper generator function. Next, using your maintenance and service manual check the components in the vehicle's charge circuit. You could find the generator voltage output to be too low, the voltage regulator to be defective, or possibly discover a weak battery.

A good preventive maintenance program includes increasing your working knowledge of your vehicle(s), having the proper tools and manuals, and being able to troubleshoot in problem situations. By paying attention to detail and by sticking to your periodic maintenance and service schedule, you can (at minimal cost) reap the benefits a well-maintained fleet of golf or utility vehicles provide. If you have any questions or would like more information, please call the Club Car, Inc., Sales and Marketing Department, at (706) 863-3000.

GOLF COURSE NEWS



DRIVING COURSE REVENUE

E-Z-GO Textron has introduced two new refreshment vehicles: the Oasis and Grand Oasis. Both feature special modular refreshment centers manufactured expressly for E-Z-GO by Carts of Colorado, which specializes in designing, and manufacturing mobile and modular merchandising solutions that drive revenue. For more info, contact E-Z-GO at 404-798-4311.

Yamaha advice

Continued from page 43

In an effort to reduce maintenance costs, Yamaha has designed a car that doesn't require regular maintenance. The pivoting and rotating parts on the chassis of the Ultima are made from materials that do not require lubrication. This advanced design results in considerable savings in maintenance costs over the life of the car.

Only the Ultima has a floor access panel that permits easy access to brake and throttle mechanisms, generally eliminat-

ing the need to jack up or go under the car to perform service. And most nuts that hold Ultima components together are captured, reducing the number of tools needed to perform service and resulting in faster disassembly and assembly.

These and other new technologies in golf car construction are changing the way fleet maintenance is viewed. Course managers can now realize increased profitability from their fleets in terms reduced parts and personnel costs, resulting in increased rentals due to greater reliability and extended service life.

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CIRCLE #135

ParCar advice

Continued from page 43

only warning golfers receive of an approaching car. The Columbia ParCar Safety Directional Key Switch helps ensure that drivers travel in the proper direction. The ParCar directional lever (gasoline) and Safety Directional Keyswitch (electric) is located on the dashboard where they are easily visible to the driver.

Charger plugs and receptacles should be regularly assessed for damage and a snug fit. This helps prevent

loose-fitting electrical connections for recharging and possible sparking and arcing for fire prevention. One of the best ways to make sure a connection doesn't loosen is by properly attaching and removing the cord plug from the vehicle. With the receptacle location on ParCars, it is easy to access and properly remove the plug.

ParCar Foursome and Eagle model vehicles feature the patented Clam Shell-style rear body. This styling allows access to the power train by permitting each of the partial

body sections to open without the need to unscrew or remove panels. Further, the Clam Shell body provides assured battery-gas venting to prevent fire hazards in the cart barn and eliminates the likelihood of "driver take-off" while the charger is still plugged into the vehicle.

Chassis should be lubricated **quarterly**. Grease zerks should be lubed so the vehicle will ride smoothly and quietly. ParCar golf cars carry a lifetime warranty on the frame of the vehicle. See the Columbia ParCar Warranty Statement

for further details.

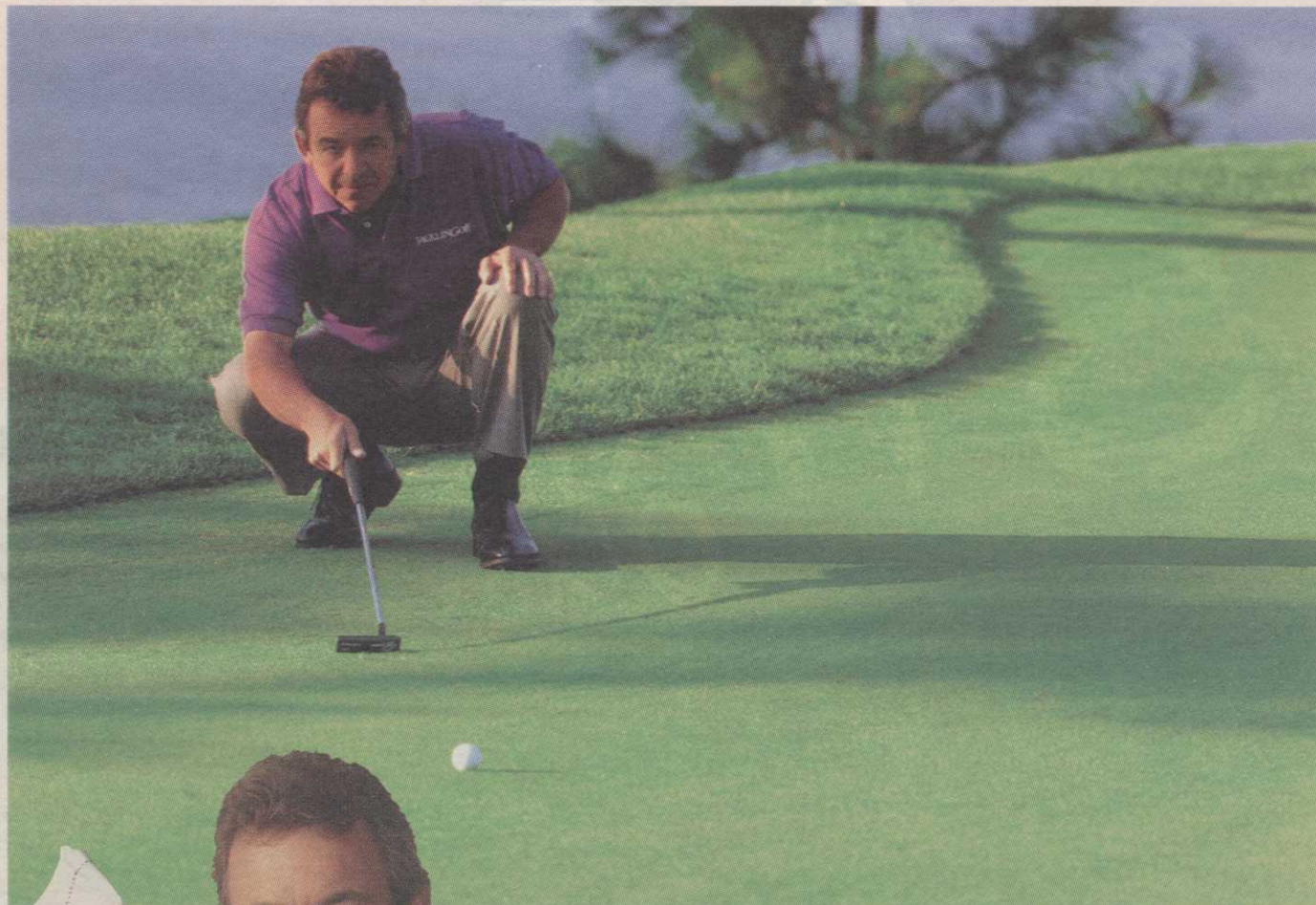
Semi-annual checks should be made of front-wheel alignment and camber. ParCar golf cars offer turf and tire protection with independently adjustable front-wheel camber adjusters. Twice a year, check front-tire alignment to make certain tires are flat to the ground. If they are not aligned, they may be adjusted independently to eliminate fast-start turf damage and provide longer, even tire wear.

Clean or replace the Micro Clean air filter **annually**. ParCar gasoline vehicles

feature a centrifugal air-filtering system. The system is better than 99-percent efficient in even the dustiest applications and is available with the exclusive Briggs & Stratton, 4-cycle, 9-horsepower engine.

Columbia ParCar vehicles have been manufactured in full compliance with all applicable American National Standards Institute (ANSI) regulations. Safe use and proper operation of ParCar vehicles are important. Any vehicle alterations resulting in non-compliance with applicable ANSI standards is strictly prohibited.

Refer to the owner's manual for further details and specifications regarding adjustments and routine maintenance recommendations for particular vehicles.



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CIRCLE #149

E-Z-GO advice

Continued from page 46

taking a few cars a day to check all of the necessary points. Organized record-keeping and proper rotation of the fleet will ensure that the recommended maintenance is performed on each car. E-Z-GO even offers a PC-based computer program called the Maintenance Information Management System (MIMS) that tracks golf car usage and schedules the appropriate maintenance checks.

For courses that have on-staff mechanics, it is important to keep an adequate supply of tools and spare parts on hand. The local golf car representative can provide a recommended parts stocking list for the course.

Many courses have opted for a service contract with the golf car provider. E-Z-GO offers complete turnkey service contracts to interested customers.

Don't forget to keep the golf car clean! Clean cars add to the enjoyment of a round. A clean, well-maintained fleet makes a statement about a golf course. It says the course management cares about the impression it makes on its members and guests.

Effective fleet management and proper maintenance go hand-in-hand. Regular maintenance pays off while the course owns or leases the fleet and at trade-in time as well. A well-maintained fleet will not only generate top operating dollars, it will also generate top trade-in dollars.

The secret to a good maintenance program is establishing a system for checking each golf car on a regular basis. The contribution maintenance makes to the bottom line is not as obvious as that of, say, the snack shop. However, it should have the same priority. And, in the long run, the return on investment will be significant.

GOLF COURSE NEWS

Tony Jacklin is the winner of 14 PGA European Tour events (including the 1969 British Open) and 11 other international events (including the 1970 U.S. Open). Tony is also a four-time European Ryder Cup captain, and can be seen on the Senior PGA Tour.

BRIEFS



KSL FAIRWAYS ADDS 2 COURSES

KSL Fairways has acquired two Wisconsin courses, Mequon Country Club and Lake Windsor Golf Club, bringing the Manassas, Va.-based firm's total ownership to 25, 18-hole courses at 22 sites. Mequon is a private, 27-hole club located 13 miles north of Milwaukee. The company plans \$1 million in improvements to the facility. Lake Windsor is a 27-hole, daily-fee facility located eight miles northeast of Madison.

LEGG MASON PROMOTES WELLS

BALTIMORE — Legg Mason Realty Group has promoted David Wells to vice president. Wells leads LMRG's recreational consulting practice, specializing in golf course properties. He performs market and financial analysis, development consulting and management/operational audits, brokers properties and works with other Legg Mason subsidiaries in raising debt and equity for recreational real-estate projects.



David Wells

SMITH TO HEAD BIGHORN

PALM DESERT, Calif. — Warren Smith was recently named general manager of Bighorn, an exclusive golf club and community in south Palm Desert. Smith will oversee all daily operations at the club as well as sales and marketing activities for the master-planned community. Smith formerly served as senior vice president of country club operations at Palm Desert-based Sunrise Company where he was involved in the development and management of Indian Ridge, Palm Valley and Monterey Country Club. He also consulted for KSL Recreation at PGA West and LaQuinta Resort and Club.



Warren Smith

HIRSH ELECTED INTO CRE

HARRISBURG, Pa. — Laurence Hirsh, president of Golf Property Analysts, was elected to membership in the Counselors of Real Estate (CRE). Holders of the CRE designation are recognized for superior real-estate, problem-solving ability in specialized areas. Hirsh specializes in the valuation, litigation support, feasibility analysis, ad valorem tax-assessment analysis and general analysis with a unique expertise in golf courses and recreational and leisure properties.

MARKETING IDEA OF THE MONTH

Llamas enhance the walk and the pocketbook

By MARK LESLIE

CANNON FALLS, Minn. — Welcome to Elmdale Hills Golf Course. Meet Hank and Pueblo, your caddies for the day. A gimmick? Perhaps. But a true drawing card, and that is the important factor here.

You see, Hank and Pueblo are llamas. And, in addition to carrying golf bags, their gifts are their ability to grab media attention and attract golfers to this new course trying to establish itself some 40 miles south of Minneapolis.

"We've gotten a lot of media attention," said Diane Brage, who with husband Bruce opened Elmdale Hills last July 1. "It got our name out there. Quite a few from the city have read about them, or seen them on TV and come out."

Continued on page 51



Talamore Golf Club (left) in Southern Pines, N.C., is one of a growing number of courses using llamas to carry bags and attract golfers. In photo below, a handler leads a llama around a green at Elmdale Hills Golf Course in Cannon Falls, Minn.

MAN(AGER) ON THE STREET

Personal service called key to survival

This marks the first in what we plan as a regular man-on-the-street type question-and-answer feature with the heads of some of the country's leading course management companies. This month's question is: "Assuming that rounds and participation levels will remain relatively flat over the next 10 years, how will you compete for market share in your areas of business?"

Joe Guerra, executive vice president of American Golf Corporation

... Through virtual marketing or one-on-one marketing. AGC is developing marketing programs that will allow us to treat customers less generically. We are finding substantial opportunity for growth

by tailoring our marketing to each customer's playing habits, whereas in the past we have been guilty of offering these unique and separate customer groups a generic menu of products and services. For instance, the needs and wants of the avid core golfer are very different from those of the casual golfer and we are now able to develop and market a wider variety of products and services to each customer type.

... By leveraging to the benefit of AGC's portfolio of golf courses the technology and other marketing and sales tools which have proved successful in other service organizations. This is already occurring at AGC. As AGC looks to the next century, we

are positioning ourselves to provide the ultimate playing experience for the customer while at the same time maximizing revenue on behalf of our landlords and clients. Some examples include AGC's proprietary central reservation system, yield management systems and exclusive service excellence training programs.

Joe Black, president of Western Golf Properties

We will compete in the future, just as we do today, with superior conditioned golf courses and extremely high levels of service. We will simply try to create a better golf experience than our competitors.

Bob Husband, president of Cobblestone Golf Group

First I do not agree that rounds and participation levels will remain flat over

Continued on page 50

LEGAL CORNER

Employer's right to trade secrets examined

By NANCY SMITH

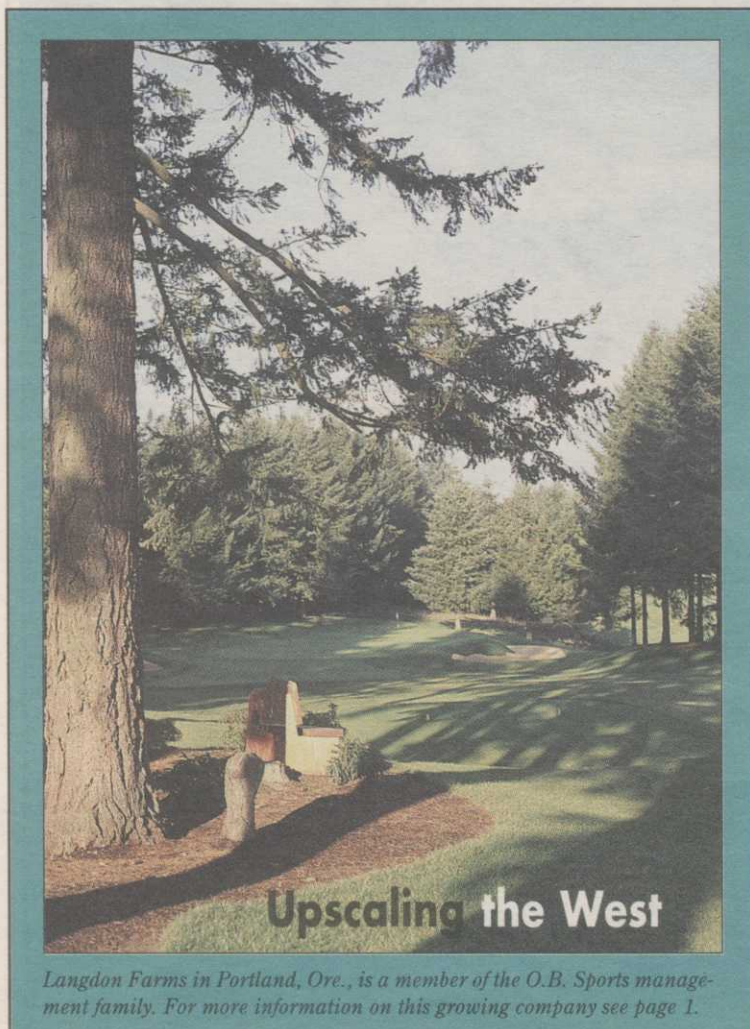
If a country club manager left to join the cross-town club, board members and co-workers might give "good-luck" wishes for the new post. But if that manager took a copy of the list of members, could that be unfair competition or just good ol' American enterprise.

Unauthorized use of a list of members and potential draws questions of trade secrets — and just how far a business can limit the acts of a former employee in a free country.

Some cautious employers ask employees agreements regarding information learned on the job. Some such agreements even make employees promise not to compete with the employer after other employment is obtained. But such agreements may not be worth the paper they are written on if they violate the basic tenets of fundamental individual freedoms and the right to openly compete in the marketplace.

Whether an employee can be kept from using information learned on the job turns largely on the nature of the information. Client or member lists may

Continued on page 48



Upscaling the West

Langdon Farms in Portland, Ore., is a member of the O.B. Sports management family. For more information on this growing company see page 1.

Nancy Smith is an attorney working in Pasadena, Calif., and a regular contributor to Golf Course News. She can be reached at 818-585-9907.

Courses added by golf management companies in recent months

Company/Course Name	City	State	Company/Course Name	City	State	Company/Course Name	City	State
American Golf Corp.			Buena Vista Hospitality Group			KSL Fairways		
SeaCliff CC	Huntington Bch	CA	Spanish Hills G&CC	Camarillo	CA	Tantallon CC	Ft. Washington	MD
Dunmaglas GC	Charlevoix	MI	Corcoran Jennison Hospitality Co.			Willow Run GC	Pewaukee	WI
Hilltop GC	Plymouth	MI	Widows Walk GC	Scituate	MA	LinksCorp		
Heatherwoode GC	Springboro	OH	Edwin B. Raskin Co.			Thorntree CC	Desoto	TX
Golden Oaks CC	Reading	PA	Bluegrass Yacht &CC	Hendersonville	TN	Marty Golf Management Inc.		
SilverHorn GC	San Antonio	TX	Golf Enterprises Inc.			Lakewood CC	New Orleans	LA
Seven Springs CC	Chesapeake	VA	Paradise Hills GC	Albuquerque	NM	Masters Golf Corp.		
American Golf Country Clubs			Heritage Golf Management Inc.			Rosemont CC	Orlando	FL
Oregon GC	West Linn	OR	Whitetail GC	Bloomington	IN	O.B. Sports		
Billy Casper Golf Management			International Golf Group			Reserve Vineyards & GC	Portland	OR
Back Creek GC	Middletown	DE	Radisson Greens GC	Syracuse	NY	Western Golf Properties		
Tennessee Centennial GC	Oak Ridge	TN	International Golf Management			The CC at DC Ranch	Scottsdale	AZ
Brassie Golf Corp.			Kissimmee GC	Kissimmee	FL	Oak Creek GC	Irvine	CA
Southern Dunes G&CC	Haines City	FL	Tarpon Springs GC	Tarpon Springs	FL			

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Jefferson Golf & Country Club

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Trade secrets

Continued from page 47

be considered protected if they meet the definition of a "trade secret." In addition to federal trade regulations, many states have adopted the Uniform Trade Secrets Act. This law defines a "trade secret" as information which derives its economic value from not being known to the general public. Once compiled, the information must be kept in a manner that maintains its secrecy. A bona fide trade secret can be a private company's client list compiled from years of hard work by employees using various methods of development.

For example, one California court found that the client list of an employment agency qualified as a trade secret because the list had considerable detail as to the needs and desires of various customers who purchased temporary employment services. In the case of *Courtesy Temporary Service, Inc. v. Camacho*, the court found the company's client list was a trade secret. The list had been developed over the years and guarded by the company for the valuable information it contained. The information was not available in other public sources, such as telephone books or directories. The court found that there was no source from which to determine what companies might be interested in using temporary services. The list had been "secured by screening a large number of such prospects, at considerable time, effort and expense."

When a small group of employees decided to quit and form a competitive company, the court found that use of the former employer's customer list was an unlawful misappropriation of a trade secret. It was as if the former employees stole the benefit of all the effort that went into making the list.

The Uniform Trade Secrets Act makes it against the law to "misappropriate" such a trade secret. Misappropriation can occur in several ways. Misappropriation can merely be acquiring the secret list. It can be revealing the list to anyone who does not have permission to have the list. It can be acquiring the list properly, such as by an employee, and then using it improperly, such as after the employment relationship ends.

The court noted, however, that the information not only has to be acquired through special labors, it must be kept under wraps. It must be "the subject of

Continued on next page

Trade secrets

Continued from previous page

efforts that are reasonable under the circumstances to maintain its secrecy." In the *Courtesy Temporary Services* case, the company made it a point of never revealing this list outside of the company. Indeed, the list was only given to the company's own employees on an "as needed" basis. The court found the list was properly created and maintained to be a trade secret. It prohibited the spin-off group of former employees from using the list.

On the other hand, efforts to limit former employees from using information on customers will not be upheld when the information doesn't qualify as a "trade secret." Such restrictions can easily be considered a restraint of trade. In addition to potential federal violations, such actions may violate state law. In California, for example, Business and Professions Code Section 16600 states that every contract "by which anyone is restrained from engaging in a lawful profession, trade, or business of any kind is to that extent void."

Under this rule, courts have found that a salesman who leaves a company can go into direct competition and call on his former employer's clients as part of the competitive marketplace. In *Gordon Termite Control v. Terrones*, the company sued a former employee. He had signed an agreement when he worked for Gordon Termite Control stating that if he ever left he would not call on any of Gordon's clients. The contract stated that if the employee ever broke the agreement, he would pay \$50 for each former client he had called.

Under the restraint of trade prohibitions, the court found the contract was not enforceable. Where the agreement was to merely keep the former salesman from "calling on" the company's clients, it did not involve any "trade secrets." As such, the contract restrained the salesman's right to practice a lawful trade. The contract was illegal. It could not be enforced.

In *Morris v. Harris*, an employer sued a former employee for taking its customers. During the employment relationship, a contract had been signed between a janitorial service and the employee who performed the services. The contract elicited a promise from the janitor that if he left the company he would not solicit any of the company's clients for 10 years. When the janitor left, the clients asked him to continue doing the work on his own. The company sued.

The court found the contract to be an illegal restraint of

trade. It was not enforceable. The court noted that a similar conclusion had been drawn by the Oklahoma Supreme Court under that state's law. In the 1944 case of *Continental Car-Na-Var Corp. v. Moseley*, the California Supreme Court found another such employee agreement void. A floor wax company tried to keep a former salesman from calling on clients he had come to know when working for the company.

The salesman had created some 250 to 300 index cards reflecting his contacts while

working at the company. When he left, the salesman notified these customers of his new position with a competitive firm. In reviewing the case, the Supreme Court noted the list was not a trade secret, but consisted of names of companies well known to salesmen of many competitive floor-wax companies. The names were "commonly known in the trade."

In the type of judicial eloquence appropriate to the court in that era, the opinion states: "Public policy and natural justice require that

equity should also be solicitous for the right inherent in all people, not centered by negative covenants upon their part to the contrary, to follow any of the common occupations of life. Every individual possesses a form of property, the right to pursue any calling, business or profession he may choose. A former employee has the right to engage in a competitive business for himself and to enter into competition with his former employer, even for the business of those who had been customers of his former

employer, provided such compensation is fairly and legally conducted."

If a club employee were to take a member list and use it at a new job for solicitation, such conduct might well be protected against any efforts to restrain trade. This is particularly true where lists are published, such as in directories. While lists containing personal or financial information might well be protected, lists of names, addresses and telephone numbers could well be used by a former employee with impunity.

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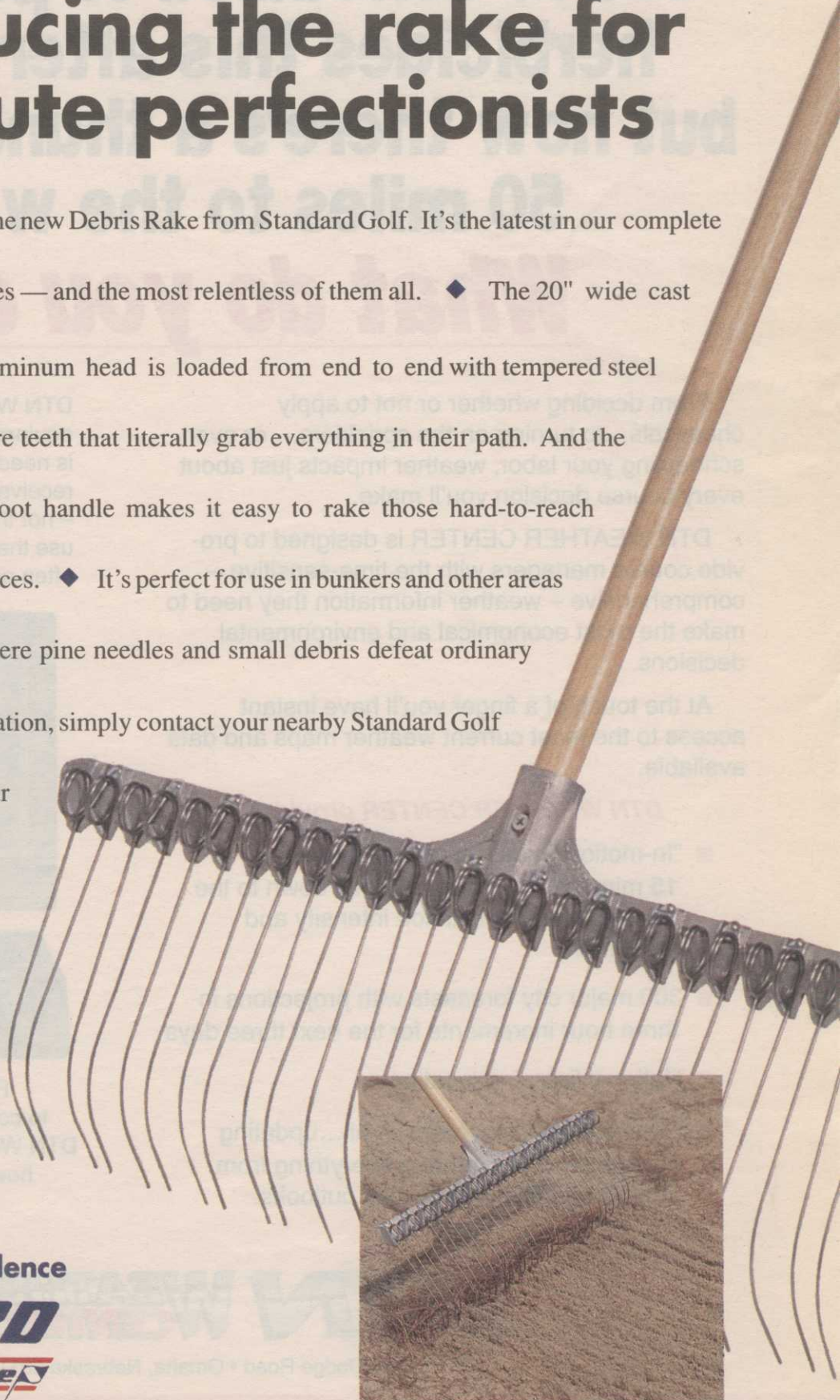
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Man(ager) on street

Continued from page 47

the next 10 years. There are currently 124 million people in the United States between 18 and 49 years of age. Their average participation rate is 13.4 percent versus the national average of 11.6 percent. As people age they tend to play more golf, particularly as they reach their 50s.

If these people follow the trends of their parents, the demand for rounds will increase dramatically over the next 10 years and there is every evidence that this will happen, even if no

new people enter the game. In 1995, 250,000 people entered the game and core golfers (defined by the National Golf Foundation as people who play eight or more rounds per year) increased 3.4 percent.

Our company has experienced constant growth in the number of rounds played in the markets we serve and therefore we remain very bullish about the future of golf.

Marc Bergschneider, chairman of National Fairways Inc.

The short answer is quality. Quality of product, including the course and personal service. The

idea is to exceed expectations of the customer so that value is perceived at every price point. If we do this successfully, the courses we own and operate will retain or even increase market share. This requires a careful study of the market position the facility holds so that the product delivered is commensurate with the customer. Therefore, when operating a municipal course, we will make it the best public course at a modest price. When operating a private club we will again make it the very best in golf and charge accordingly.

Another idea to perfect is that

of making the courses fun and friendly places to play golf. People like to be part of the product. So it is important to retain a local feeling to the course and have the members and/or patrons take emotional ownership. The secret to this is making the employees a team with pride in their work. It will be obvious in the service product they deliver.

If we are able to consistently incorporate the above ideas into the final product, our market share will be fine and our business will prosper.

Claye Atcheson, vice president of Marriott Golf

Marriott Golf has a very positive outlook for the future of rounds of golf at our existing portfolio of facilities and for the facilities in the development stage. Our high-service delivery standard will continue to be aggressive in anticipating and exceeding the needs of the guest. Our team of professionals in every area of the business will continue to have the focus of either delivering the service or supporting the staff members who are face-to-face with the guest.

Knowing who plays our golf courses and their preferences for services offered will play a large role in the future rounds played. Customer loyalty and providing value added products and programs to these customers is mandatory for enhancing the profitability of the golf properties.

Behind the scenes we will be making use of the technology that is becoming available or that we are developing to refine our operations and to analyze our business. Yield management of tee times is a primary objective of our golf operators.

Steve Lesnik, president of Kemper Sports Management

Kemper Sports Management has adopted an integrated marketing communications approach in order to compete for market share in our areas of business. Our site managers, overseen by Kemper Sports' home office, coordinate the use of advertising, publicity, sales promotion, point-of-purchase communications, direct marketing, personal selling and event marketing to promote our facility.

The first step in this process is to define what segment of the particular market we will target, and what it is about our product that is special to the target market. We encourage our site managers to run creative promotions and always measure results.

Eric Affeldt, president of KSL Fairways

KSL Fairways' acquisition philosophy is to attempt to purchase courses in clusters. This strategy has and will allow us to lead pricing in our various markets and also more effectively promote KSL Fairways' golf courses via our reciprocal play program. Our tie-in to our parent company, KSL Recreation, and their related destination resorts at Doral, PGA West, La Quinta and Lake Lanier Island, Ga., add another dimension to our marketing program.

Finally, while many markets have seen a flattening trend in rounds and participation levels, we remain very confident that our facilities will not only maintain but grow market share through our constant attention to superior customer service.

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Next month's question:
"What other industry will the golf course management business most resemble 20 years from now?"

Llamas

Continued from page 47

From this nine-hole track to the high-profile, highly ranked Talamore Golf Club in Southern Pines, N.C., which opened in 1991, llamas are a proven winner — but only if used correctly, according to Talamore owner Bob Levy. “A couple of other courses have tried it, but they failed,” he said. “I don’t think it will work unless you do your homework and do it professionally and properly.” Properly, he said, is to train llamas to know what to expect from golfers “and not get spooked.” The breeder Levy dealt with spent a month training them and perfecting the saddlebags to carry the golf bags; and when Talamore’s llamas caddie, a trained handler accompanies them. But the time and investment has been well worth the effort, Levy said.

“We didn’t do it as a publicity stunt, but we got an awful lot of publicity when we first did it,” he said. “CNN carried a human-interest story for an entire weekend. We were in *People*, *Life*, *Time*... all over the world, all the local news stations. And it all just happened. We never went after any press at all — no PR agency, no press kit, nothing. The llamas showed up and that was it.”

Indeed, it was a story on Talamore’s llamas in Smithsonian Institution Magazine that caught the Brages’ eye and planted the idea for Elmdale Hills’ tallest caddies.

And, likewise, newspapers and Minneapolis television stations have broadcast human-interest spots on Hank and Pueblo.

“They’re a big hit. People love them,” Levy said. “We charge a lot [\$100 per person plus greens fee]. We could have charged less and they would have been used more, but we didn’t want it to be a circus. This is a great way to walk the golf course.”

At Elmdale Hills the llamas are available Mondays and Tuesdays and cost \$25, Diane Brage said, because they are “slower days and we hope to bring more people in on those days.”

On the other hand, “if a group comes in and wants to use them on a different day, they can do so,” she said. “And if somebody really wants one on another day and we’re not busy, they can take them out.”

Levy said using handlers as Talamore does resolves the speed-of-play problem. The only thing that slows play, he said, is “when people on another fairway see the llamas and stop playing to watch.”

“It definitely has drawn people here,” Brage said. “Oh, we’ve got power carts and pull carts. But people have lots of fun with the llamas and take their pictures.”

Also, many have bought gift certificates for friends to use the llamas. “I sold one yesterday for Father’s Day,” she said.

Meanwhile, the llamas have become a trademark at these two distinctly different golf facilities.

“Home of the Llama Caddies” is prominently displayed on brochures or other materials the Brages send out.

At Talamore, “our logo is a silhouette of a llama,” Levy said. “It’s present in a subtle way — and with merchandise. We did our own custom over-sized driver: ‘The Llama mama.’ They sold out. We’re coming out with another new design now.”

•••

As for other concerns:

- No, Hank and Pueblo do not damage the turf. They have soft, padded feet that leave no mark.

- They are “very low-maintenance

animals,” Ms. Brage said. They eat one-third of a bale of hay a day and water.

“Quite simple: Somewhere between a cat and a sheep,” Levy said.

- Those tales of llamas spitting at people are fairy tales. “They can get temperamental toward each other but not people,” Ms. Brage said.

- Their living quarters? At Elmdale Hills, Hank and Pueblo occupy a pen next to the course’s parking lot.

And at Talamore, “they overlook the 18th hole. They are on top-notch real-estate — the best,” Levy said. “And well deserved.”

Training llamas a full-time business

STAMFORD, Vt. — When Talamore Golf Club owner Bob Levy approached Lars Garrison about using llamas as caddies, the Vermont farmer tackled the challenge with abandon.

“Lars spent a month perfecting this saddlebag and training them,” Levy said.

The end result is a saddlebag with side packs especially designed to carry a golf bag on each side and with holders for golf balls, tees and a six-

pack. Training the apprentice llamas concluded with two revelations for all golfers who plan to use them as caddies: 1) don’t surprise them from behind; and 2) don’t have baubles atop your golf club covers.

Garrison said he sells a minimum of two llamas because “they are very social animals and need their own kind around them.” A trained llama generally costs \$1,500 to \$2,000, he said.

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CIRCLE #140

O.B. Sports names Roberts director

AURORA, Ore. — O.B. Sports has named C.A. Roberts III director of business development. Roberts spent the past six years as director of development for the Atlanta-based American Junior Golf Association.

In his new role, Roberts will promote O.B. Sports on a national basis and

seek new opportunities for growth.

O.B. Sports is a course development, design, and operations company specializing in upscale public/resort facilities in the Western United States. Among its properties are Angel Park in Las Vegas and Langdon Farms in Portland, Ore.



C.A. Roberts

O.B. Sports

Continued from page 1

1997, were designed by former partners Bob Cupp and John Fought. Fought, a U.S. Amateur champion and two-time winner on the PGA Tour, recently merged his design practice with O.B. Sports, giving the company the ability to bring a course from the visionary to the fully operational stage.

"We strive to do the whole thing — design, build and operate a golf facility," Vincent said. "We're not into buying or managing distressed properties like the many consolidators out there. We pre-

fer to start from ground zero and build something, rather than inherit someone else's problems."

O.B. Sports' other properties are Angel Park and The Legacy in Las Vegas, Stevinson Ranch in Modesto, Calif., and Langdon Farms in Portland. Fought designed Langdon Farms and The Reserve. O.B. had construction supervision responsibilities at The Legacy and Stevinson Ranch and the firm has performed some revisions at Angel Park. The company owns Angel Park, Langdon Farms and The Legacy while it manages The Reserve and Stevinson Ranch.

"We'd like to strike a 50-50 bal-

ance between ownership and management contracts," Vincent said.

After a brief fling on the PGA Tour in 1968-69, Vincent and Director of New Operations Bob Marshall (the B in O.B. Sports) founded the firm in 1972. Among the courses the company has been involved with are Edgewood and Incline Village in Lake Tahoe, Calif.; Torrey Pines in San Diego; Teton Pines in Jackson Hole, Wyo.; and Toana Vista Golf Course in Wendover, Md.

In addition to its existing, five-course portfolio, O.B. has another half-dozen projects in various stages of planning. It hopes to officially announce a handful within the next 12 to 18 months.

"We've stuck to our guns about staying near the city in each case," Vincent said. "For example, it's been eight years on the three sites we're working on in Seattle. We could have done projects 60 to 90 minutes outside the city long ago. But that's not the way we want to operate. Staying close to strong demographic areas is important.

"If you are prudent about selecting your market area, there's still room for many more courses to be built. But it's getting so difficult to get permitting, and land costs are so high, that the temptation is to look outside the cities. Those developers are taking a big chance that development will eventually follow them out to those areas. But if it doesn't, they are in big trouble."

O.B. Sports seeks a theme at its courses. Langdon Farms, for instance, carries an agricultural motif throughout the operation. The archway over the entrance resembles that over a Western farm with a sign reading "Public Only." The snack bar is a mock feed store; driving range stalls look like stables; the administration offices are located in a farmhouse. The cart path along the eighth hole passes through a 1918 barn and shots to the green may actually pass over the structure.

The Reserve will feature its own vineyards with a winery theme throughout the property. The chateau-style clubhouse will have a wine-tasting station at the concierge desk promoting The Reserve's own private label.

In addition to bringing resort-type golf to the city, the other thing that distinguishes O.B. Sports from other management firms is its emphasis on golf and the golfer, Vincent said. All of O.B.'s top executives are accomplished players. Vincent and Fought are both former PGA Tour players. Director of Operations Ed Francese, Chief Financial Officer Jamie Cook, Southwest Agronomic Director Ed Hodnett, Northwest Agronomic Director Billy Campbell, investment banker Peter Kooman and Marshall are all low-handicap or scratch players.

"We know what the golfer is looking for," Vincent said. "If a facility doesn't work from a golfing sense, we aren't interested. We won't use housing to subsidize golf."

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BRIEFS



ELYEA JOINS TEE-2-GREEN

HUBBARD, Ore. — Richard H. Elyea has joined Tee-2-Green Corp. and Turf-Seed, Inc. as a turfgrass consultant to provide domestic and worldwide site-specific recommendations on turfgrass, agronomic and environmental issues for golf course architects and designers. Elyea was a golf course superintendent in Iowa and Nebraska for 10 years. Elyea may be contacted here at 800-547-0255, or directly at his Columbus office, 614-793-8644.



Richard Elyea

FUNKHOUSER TO REP SANDOZ

DES PLAINES, Ill. — Sandoz Agro, Inc. has added Ray Funkhouser as the Turf & Ornamental sales representative for the Northeast region. Funkhouser joins Sandoz with a strong sales background as a former senior sales representative and regional advertising and sales promotion manager for more than 10 years at Stauffer Chemical Co. Most recently, he was a sales representative for Penn State Seed. Funkhouser can be contacted at 908-341-7386.



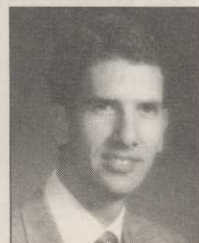
Ray Funkhouser

NOERGAARD TO LEAD CHR. HANSEN

MILWAUKEE — Paul Hansen, president of Chr. Hansen A/S in Denmark, has appointed Leif Noergaard president and chief executive officer of Chr. Hansen, Inc. in the United States. Noergaard has been with Chr. Hansen for almost 10 years, most recently as executive vice president of the Worldwide Color Division.

GIESE: ZENECA'S MAN IN MIDWEST

WILMINGTON, Del. — Zeneca Professional Products has named Matt S. Giese as product service lead for the Midwestern and Western U.S. Operating from Lincoln, Neb., Giese is responsible for service support of Zeneca turf products. Giese joined Zeneca Professional Products in 1995 as a technical sales associate, working on an evaluation program for the development of a turf product.



Matt Giese

Cooperation at EPA results in better science

By HAL PHILLIPS

WASHINGTON, D.C. — As a bureaucratic entity not necessarily known for its efficiency or cooperative skills, the Reregistration Division at the federal Environmental Protection Agency (EPA) is setting an increasingly high standard.

The EPA has reported significant improvement in the quality of studies submitted to the agency in support of reregistering pesticide products. The average chemical requires 120 studies in support of its reregistration. Since 1993, the overall rejection rate for these studies has been cut in half, saving the agency thousands of review hours and the chemical industry significant testing costs.

"When data is rejected, it has to be redone by the company and my rework is phenomenal," said Peter Caulkins, deputy director of the Registration Division in EPA's Office of Pesticide Programs. "The cost to companies is in the billions just to repeat the studies."

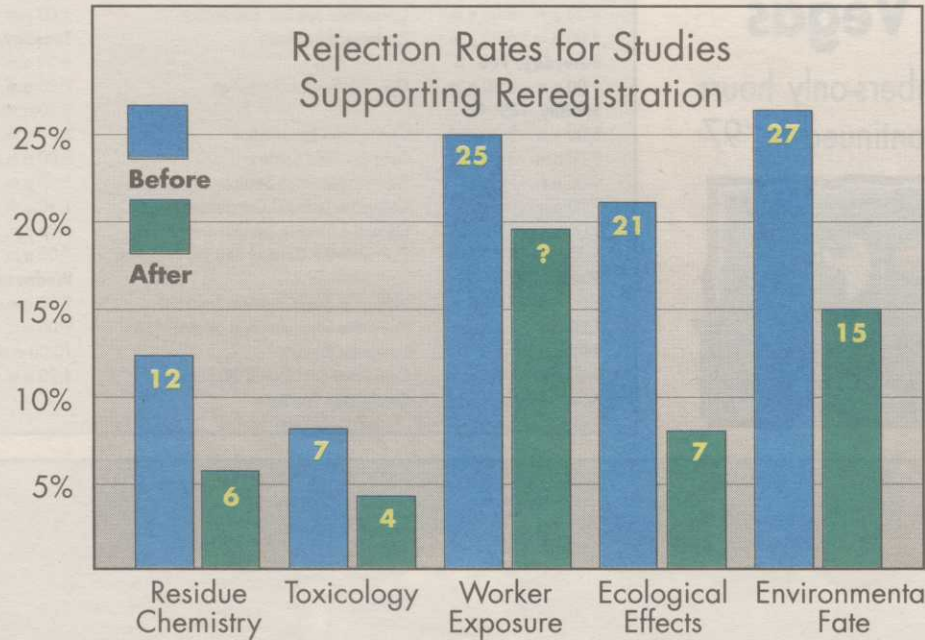
"One company was informed they had a 40-percent reregistration rejection rate. I heard their reaction was, 'EPA is smoking something.' But to their credit, they created their own rejection-rate database and turned out to be 45 percent. Their rejection rate has since gone down to 8 percent."

"We're seeing actual, quantifiable results. We're tripling the number of reregistrations in a time when the agency has less money and less resources."

These marked improvements are the result of four years of workshops conducted in conjunction with the pesticide industry and its scientists. The result: Caulkins said EPA has improved its guidance for conducting these studies and companies are submitting better work.

Under 1988 amendments to the Fed-

Continued on page 57



Bontempo to head up Novartis T&O

Ciba-Geigy Ltd. and Sandoz Ltd. have selected Emilio J. (Leo) Bontempo, president of Ciba's Agricultural Group in the United States, to head Novartis Crop Protection, which includes the turf and ornamental industry. Novartis is the name of the new company formed by the proposed merger of Ciba and Sandoz. Having gained approval from shareholders, the merger is now undergoing government regulatory review in Europe and the United States.

Dale A. Miller, president of Sandoz Agro, Inc., has been selected to head Novartis Animal Health in the United States. The third sector in Novartis' Agribusiness Division will be Novartis

Seeds. It will be headed in the country by Edward T. Shonsey, now president of Northrup King, a Sandoz business.

Bontempo joined Ciba-Geigy in 1964 and held a number of administrative and marketing positions prior to becoming vice president-planning and administration in 1974. He served as vice president-marketing from 1978 until 1987, when he was named president of Ciba Crop Protection and the Ciba Agricultural Group.

Miller, in addition to serving as president and chief executive, is chairman of Sandoz Ltd.'s worldwide Agro Management Committee. He joined Sandoz Agro in 1986. Prior to joining Sandoz, he was associated with Velsicol Chemi-

Woerner acquires Warren's, foothold in overseas markets

CRYSTAL LAKE, Ill. — With its purchase of Warren's Turf Nursery, E.J. Woerner & Sons of West Palm Beach, Fla., has also acquired an international presence.

The purchase by the Woerner family comes only months after its September 1995 acquisition of the former Mace Sod Service, a 7,000-acre turf farm in Palm Beach County.

Woerner President Lester Woerner and Warren's Turf President Bill Curran announced the transaction.

The acquisition is aimed at further broadening Woerner's geographical base by adding operations in Georgia, Virginia, Indiana, California and Hawaii, as well as an entrance into the overseas market through its Southern Turf Division, Woerner said.

Curran said Warren's, based here in Crystal Lake, has been very patient in the search for the right buyer that could meet its objectives for the sale both from a business and an employee perspective. It is hoped Woerner will fit that role, he added.

Woerner added that one of the main attractions to acquiring Warren's was the great depth of quality management at all the various locations as well as its prominent name and reputation.



NEW PRODUCT OF THE MONTH

Golf course construction has been fast forwarded with the installation of concrete cart paths by machine. Power Curbers, Inc., a Salisbury, N.C.-based manufacturer, makes a mold for cart paths that fits beneath its Power Curber 5700-B paver. The wet mix is poured into a large hopper mounted on the machine and fed through the mold, producing the flat surface. For more information, contact Power Curbers, Inc. at 704-636-5871. For more golf car-related new products, see pages 43-46. Still more new products are featured on page 58.

GCSAA mulls fine-tuning of show hours in Vegas

LAS VEGAS — The Conference and Show Committee of the Golf Course Superintendents Association of America (GCSAA) met here in April to plan improvements for next year's event here.

The committee discussed changes to streamline the registration process to better handle this volume of attendees, especially at peak times.

"Distributors-only" hours — held the first half-day of the Orlando show — are scheduled for 9 a.m. to noon on Feb. 10, 1997. Based on the committee's recommendation, "members-only" hours will be discontinued in 1997, allowing the trade show to open to all attendees at noon. Trade show hours will be extended the final day, Feb. 12, until 5 p.m. for the Las Vegas event only.

The committee also recommended the Opening Session and Environmental General Session begin at 6 p.m. to provide more time for seminar participants to complete the day's activities and travel to Bally's Casino Resort for these important events.

Traditionally, GCSAA members have been given preferential treatment in registering for education seminars via an "Early Bird" brochure mailing that differed in content from the updated "Fall" brochure. The committee endorsed a plan to have members continue to receive the early mailing.

The second mailing, to the general public, will use the same brochure. Updated information will be available in *Newsline*, *Golf Course Management* and the preview edition of the daily conference and show newspaper *Showtime*, and on GCSAA's World Wide Web site. Attendees will be able to register by printing the registration form available there and faxing or mailing it to GCAA. Plans call for on-line registration by the 1998 conference and show.

The second-largest event in the golf industry, GCSAA's 1996 conference and show, held in February in Orlando, Fla., had record-breaking attendance of 21,784 participants, with nearly 700 companies exhibiting at the trade show.

HOFFCO TAPS POWDER

RICHMOND, Ind. — John M. Pouder has been appointed vice president of engineering for Hoffco/Comet Industries by President Charles H. Peterson. Pouder has a strong technical background in automotive, consumer and commercial products. Formerly employed as a technical manager for Techcom, Inc. of Indianapolis, he has held such positions as director of engineering, product engineer, test engineer, sales engineer and engineering manager.

Members-only hours discontinued in '97



GCSAA 68TH INTERNATIONAL GOLF COURSE CONFERENCE AND SHOW DAILY SCHEDULE

Thursday - Monday, Feb. 6-10

6:30 a.m. - 8:00 a.m. Conference Seminar Registration
8:00 a.m. - 5:00 p.m. Conference Seminars

Saturday, Feb. 8

6:00 p.m. - 8:30 p.m. Opening Session/Reception

Sunday, Feb. 9

8:00 a.m. - 2:30 p.m. Certification Examination
8:00 a.m. - 5:00 p.m. Turfgrass Field Seminar
9:00 a.m. - Noon General Education Session
9:00 a.m. - Noon Collegiate Turfbowl Competition
2:00 p.m. - 5:00 p.m. General Education Session and Forums
6:00 p.m. - 8:30 p.m. Environmental General Session/Reception

Monday, Feb. 10

6:00 a.m. - 7:00 a.m. Innovative Superintendent Breakfast
7:00 a.m. - 8:30 a.m. Innovative Superintendent Session: Part I
9:00 a.m. - Noon Distributor Preview
9:00 a.m. - Noon Concurrent Educational Sessions
Noon - 1:30 p.m. Certification Luncheon

12 Noon - 6:00 p.m.
1:00 p.m. - 4:00 p.m.

Trade Show Open
Forums

Tuesday, Feb. 11

6:00 a.m. - 7:00 a.m.
7:00 a.m. - 8:30 a.m.
9:00 a.m. - 5:00 p.m.
8:00 a.m. - Noon
9:00 a.m. - Noon
1:00 p.m. - 5:00 p.m.
1:30 p.m. - 3:00 p.m.
6:00 p.m. - 7:00 p.m.
7:00 p.m. -

Innovative Superintendent Breakfast
Innovative Superintendent Session: Part II
Trade Show Open
Annual Meeting and Election of Officers
Allied Association Programs
USGA Green Section Education Program
Friends of the Foundation/Reception
Gala '97 Reception
Gala '97

Wednesday, Feb. 12

9:00 a.m. - 5:00 p.m.
9:00 a.m. - Noon
10:00 a.m. - Noon
4:30 p.m.

Trade Show Open
Educational Programs
International Summit
18-Hole Challenge Prize Drawing

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SCIMITAR® GC.

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As a golf course superintendent, you have responsibilities and challenges that seem to pull you in a lot of different directions every day. In the middle of your hectic work schedule, you would like assurance that your grounds are getting the best care possible. When it comes to turf pest management, SCIMITAR GC gives you all the assurance you need. You can trust SCIMITAR GC Insecticide to give you the control you require on your grounds and the confidence you demand for your golfers.

SCIMITAR GC, based on advanced pyrethroid technology, provides turf managers with a unique tool that works hard against insect pests. SCIMITAR GC is specially formulated for golf courses, delivering both fast-action and extended-release control at incredibly low use rates. It goes after a variety of turf and ornamental insects, even the really tough ones like chinch bugs, mole crickets and sod webworms. It never bothers your golfers and grounds maintenance crew with an annoying odor. For unbeatable insect control and optimal confidence, trust SCIMITAR GC on your grounds. It's all the assurance you need.



ZENECA Professional Products

BRANDENBURG TO REP VIGORO OUT WEST

WINTER HAVEN, Fla. — Vigoro Professional Products has appointed Mark Brandenburg as a territory manager covering California, Arizona, Nevada and Utah. Brandenburg is responsible for selling the Par Ex line of fertilizers. Prior to joining Vigoro, Brandenburg was a marketing manager with Western Farm Service, which involved educating the sales force about plant nutrition. Previously, he was a western regional sales manager for NOMIX, Inc., where he managed an agrichemical herbicides and applicator system product line in eight Western states.



Mark Brandenburg

HUNTER PROMOTES CAROWITZ

SAN MARCOS, Calif. — Hunter Industries has promoted Jeff Carowitz to marketing manager for residential, commercial and large turf products. Carowitz will oversee domestic and international marketing activities. He will implement a range of marketing programs, including new product launches, product pricing and positioning advertising and publicity, sales literature, point of purchase displays and the development of the Hunter catalog.



Jeff Carowitz

Australian firm signs Lesco as exclusive fertilizer, seed supplier

CLEVELAND, OHIO — Lesco, Inc. and Chemspray, a leading marketer of professional turf care products in Australia, have announced an agreement whereby Lesco will be the exclusive supplier of professional slow-release turf fertilizers and grass seed to Chemspray. Chemspray, founded in 1965, is a division of Nufarm Limited, which calls on municipalities, golf courses, sports fields and other professional applications.

According to Earle Webber, Chemspray chief executive, Lesco was selected for "its ability to support Chemspray in its mission to provide customers with a level of service which is designed to consistently meet or exceed expectations." He added: "Lesco is well positioned to support Chemspray as it continues to build on its very strong recognition as a supplier of technologically superior product." In addition to the Australian market, Chemspray was named as the exclusive distributor of Lesco products in China, New Zealand and Hong Kong. Nufarm (Asia) will distribute Lesco products in Singapore, Malaysia, Indonesia, Korea, Thailand, Vietnam and Taiwan. "Lesco is excited about the new relationship with Chemspray and Nufarm (Asia), as they provide us with yet another link in our international sales expansion" said Phil Gardner, Lesco vice president of international sales.

Lloyd new VP at Aquagenix

FT. LAUDERDALE, Fla. — Aquagenix, Inc. has promoted William E. Lloyd to executive vice president. Lloyd, a south Florida resident, was previously vice president of marketing for environmental Waterway Management, Inc., Aquagenix' aquatic and vegetation management division. Prior to joining EWM, Lloyd was the vice president of AmerAquatic, Inc. He has more than 20 years experience including serving as president of Lakes and Waterways Management Services, a subsidiary of 3M. Lloyd serves on the board of directors for many organizations including the Palm Beach Golf Course Superintendents Association and the USGA Green Section Committee for the state of Florida.

WIEGEL, SELBY JOIN HERTZ RENTAL CORP.

IRVINE, Ca. — Sheila M. Wiegel, C.P.A., has been appointed region controller for the Western Region Office of Hertz Equipment Rental Corporation, based here (714-955-1980). Wiegel reports to Holton Barnwell, division vice president, Western Region. In other Hertz Equipment news, Ronnie B. Selby, Jr. has been appointed as Chicago branch manager. The branch is based at 25896 S. Sunset Drive, Monee, Ill. 60449, 708-534-1600. Selby reports to John Anderson, division vice president, Midwest Region. Selby oversees the entire Chicago branch operation from sales to the service department.



Photo courtesy of: Hartefeld National Golf Course

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Bayer realigns sales team; taps Childers, Dotson

KANSAS CITY, Mo. — Cecil Childers has accepted the position of sales specialist with Bayer Corp, which has realigned its sales force.

Childers' territory includes Virginia and West Virginia. Since joining Bayer in 1975, he has served as pest control product manager, manager of the Southern area, regional technical manager and technical service representative. Childers received a master's degree in plant pathology and a bachelor's degree in agronomy, both from Virginia Polytechnic Institute.

In other Bayer news, Jim Dotson has accepted a senior sales representative position, covering the newly created territory in southern Illinois and eastern Missouri. Since joining Bayer in 1982, he has been involved with insecticide research, field development research and most recently was research product manager for turf and ornamental products. Dotson holds a master's degree in entomology from the University of Missouri-Columbia and a bachelor's degree in zoology from Southwest Missouri State University.

Bayer has realigned certain sales territories.

Scott Harms began work with Bayer in March as the sales representative for Kentucky and Tennessee. During college, he spent three years working on a golf course. He recently received a bachelor's degree in communications from the University of Louisville at Kentucky.

Eric Lentz, whose territory includes Georgia and Alabama, worked as an intern for Bayer during the summer of 1995 and started work as a sales representative in November. He recently received a bachelor's degree in entomology from the University of Delaware.

Jorge Moreno joined Bayer in January as a sales representative for the southeastern coast of Florida. He holds two master's degrees and a bachelor's degree from the University of Florida, where he studied horticulture and agronomy. He joins Bayer from Ciba, where he was a research assistant.

Jim Rollins' territory includes Michigan and Ohio. He joined Bayer in 1977 as a sales representative. He then moved on to district sales manager and most recently, bar code project administrator. He received a bachelor's degree in horticulture from Ohio State University.

Richard Skorepa joined Bayer in 1991 as a sales representative in Michigan and Ohio. His new territory is northern Florida. He holds a master's degree in plant pathology and a bachelor's degree in agronomy, both from the University of Missouri-Columbia.



Cecil Childers



Jim Dotson

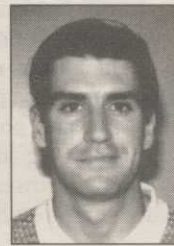


Jim Collins



Richard Skorepa

Also joining the Bayer sales force (from left): Jorge Moreno, Eric Lentz, and Scott Harms



Bayer offers new fax info service

Bayer Specialty Products has announced a new option on its information line: fax-on-demand service.

Now the 800-number (1-800-842-8020) offers product information via fax as well as a question and answer line.

Fax-on-demand enables callers to request literature on pest control and turf and ornamental products. Product labels, material safety data sheets and product information sheets are available for: Premise, Tempo,

Baygon, Dipterex, Bayleton, Dylox, Merit, Morestan, Namacur, Oftanol and Sencor.

When customers call the product information line they immediately get the option of going to the fax-on-demand system. After choosing that prompt, callers can choose to have an index of what's available faxed to them or punch in order numbers, provided they know them.

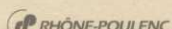
It takes approximately 30 minutes to receive a fax.

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EPA rejection

Continued from page 53

eral Insecticide, Fungicide and Rodenticide Act (FIFRA), pesticide manufacturers are required to submit scientific studies to bring the database supporting all pre-November 1984 registration up to current scientific standards for safety testing. The resulting flood of reregistration applications was supported by studies that were rejected by EPA nearly 50 percent of the time.

Something had to be done.

"You have a lot of environmental fate studies and toxicology

studies for golf course chemicals," said Caulkins. "What were the reasons they were being rejected? After reviewing the studies, we identified the problem but not the solution. So we brought in the industry and said, 'This is what we found.'

"It was a classic TQM procedure. I charged the industry with putting together a group of scientists to ask, from a customer's perspective: 'How good is our guidance? What are you guys doing wrong? And what solutions do you propose?'

"The success of this process was our concentration on fixing

the problem, not assigning blame. So I applauded the industry and its scientists... Much of the problem was simple communication: They didn't know what we wanted. On their end, there were QAQC (Quality Assurance, Quality Control) problems."

Any chemical seeking reregistration is the subject of some 120 studies. When studies are rejected — meaning they are sent back to the company, redone, then resubmitted to EPA — it's referred to as a "cycle". Before the recent changes, reregistration applications commonly featured 50 or more

cycles. That number is now 10.8, or 20 percent of what it was.

Studies submitted in support of pesticide reregistrations can be divided into five groups, or disciplines: residue chemistry, environmental fate, toxicology, worker exposure, and ecological effects. A 200-page report was compiled for each, discussing why rejection rates were so high. The study of these reports and subsequent behavior modification has resulted in unprecedented improvements:

- Residue chemistry: The rejection rate in this discipline used to be 12 percent, now it's 6 per-

cent. "That doesn't sound that high, but the number of these studies dwarf all the others," Caulkins explained. "For any given site, there may be 30 to 40 studies that have to be done. Also, metabolism studies are included here. When companies do metabolism studies, they base all their other data on those findings. If there are mistakes, if the [metabolism] study is rejected, all their other studies will be wrong. Errors here will mean other studies will be rejected."

- Environmental fate: This discipline includes ground water studies, surface runoff and spray drift. The rejection rate in this discipline had been 27 percent. Now it's down to 15.

- Toxicology: The rejection rate in this discipline is 4 percent, down from 7 percent. This drop isn't precipitous but, as Caulkins noted, these studies are by far the most expensive.

- Worker exposure: Caulkins explained that only two of the pesticide manufacturers had experts in this field. Consequently, the database is incomplete. The traditional rejection rate in this discipline has been 25 percent. An industry task force has been formed to study ways to bring this number down, said Caulkins.

- Ecological effects: The rejection rate had been 21 percent. It has dropped to 7 percent.

"On the company side," said Caulkins, "is where I really got blown away. I had no idea how important relative rankings were. In other words, if I told Company A that it had a 30 percent rejection rate and a competitor had a 20-percent rate, that information went straight to the top."

This high-level executive involvement might explain the mind-boggling improvement in company performance.

In its study of rejection rates, EPA has tracked the performance of 16 major chemical manufacturers, all of which supply products to the golf course industry. Prior to 1991, the lowest rejection rate among the 16 was 14 percent, while the highest was 57 percent. Today, the lowest rejection rate among the 16 is 0 percent, while the highest is 17 percent.

The bottom line: Companies are providing better studies and saving money. EPA, strapped by budget and staffing cuts, has reduced its work load.

"And consider the effect on registration," said Caulkins. "For a company to put a patent on an active ingredient takes six to eight years. That's before it even gets to us. In the early '80s, depending on how many cycles it went through here at EPA, it was upwards of five or six years to get the chemical through. That's 11 years of their 17-year patent chewed up by the process. That makes it hard to make money.

"Now we're down to 38 months. We've cut it in half, and I think we can halve it again."



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Fox Valley unveils Electro Mark

Fox Valley Systems, Inc., has introduced Electro Mark remote marking system, with which any vehicle from a bulldozer to a golf car can be easily converted into a marking machine.

Electro Mark operates on normal vehicle power, a truck's cigarette lighter! Electro Mark is capable of making small marks or long lines and the handy switch plate puts the controls right at the operator's finger tips. Electro Mark can be easily removed when not in use. A can holder, D.C. adapter, toggle

switch and holder and two sets of clamps for bar installation are included with each Electro Mark.

Fox Valley will repair or replace an Electro Mark, even if it is run over with a truck, for one full year for the original owner.

For more information call us 847-639-5744 or 800-MARKERS and ask for Department R795, or write: Fox Valley Systems, Inc., Department R795, 640 Industrial Drive, Cary, Ill. 60013; or visit its home page on the World Wide Web-<http://foxpaint.com>.

CIRCLE #301

Harco introduces one-piece connection

Harco Fittings has introduced the new Harco Lateral 90, a fitting that allows a user to move from a mainline to lateral line with a one piece connection.

The Harco Lateral 90 is designed to connect irrigation laterals to mainlines and provide a change in elevation. High strength ductile iron eliminates the aggravation and expense owners and superintendents have repairing

pipe and fittings that break at this high stress area in golf and commercial irrigation systems. The Lateral 90 is available in 1.5-, 2-, 2.5- and 3-inch diameters and can be ordered with an optional side outlet tap for a swing joint to quick coupler connection.

For additional information, contact your local irrigation distributor or call Harrington Corp. at 804-845-7094.

CIRCLE #302

Milliken addresses drainage problems

Milliken Chemical has unveiled Invigorate Soil Conditioner to address the problems of soil drainage, water overusage and compaction.

This unique polymeric liquid soil treatment helps restore proper aeration; improve the opportunity for greater root growth; reduce water usage; drain standing water; and make better use of fertilizers that have been applied. It is not a wetting agent, but a large molecular weight polymer that aerates the soil as it unwinds, providing a large quantity of nucleating sites for fertilizing materials and other nutrients. The aeration in the soil provides increased pore space, allowing increased oxygen and water into the soil. This provides better aerobic bacterial activity and increased water retention.

For more information contact Milliken at 1-800-845-8502.

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This slide-in top dresser can be used on most turf vehicles. A self contained unit powered by a 5 hp. Briggs & Stratton engine. Can be mounted or removed in minutes. Weight 500 lbs. 18 foot spreading width.

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CIRCLE #145

New dimension in growth supplements

3 D! No, we're not talking about attending the movies. 3D is a new concentrated plant-growth supplement that provides turfgrass managers with a prized commodity: A sense of security.

According to Virginia Tech University Professor of Turf Ecology Dr. Dick Schmidt: "3D preconditions the turf for adverse conditions. Our studies have shown that this product significantly enhances the drought tolerance of tall fescue and the root mass and turf density of bentgrass."

3D, from Plant-Wise Biostimulant Co. is "derived from pure quality, cold process seaweed and fortified with the highest concentration of humic acid and other beneficial plant growth supplements," according to Robin Banks, national sales manager.

For more information, contact Plant-Wise at 1-800-334-4962.

CIRCLE #304

Cleary offers 3336 in granular form

W.A. Cleary Chemical now offers a new granular formulation for 3336 fungicide — 3336 G.

This new formulation expands the current family of 3336 products of wettable powder in water soluble bags, and the newly reformulated flowable.

The granular formulation provides the same protection for turf as the WP or F label for anthracnose, dollar spot, brown patch, pink snow mold, summer patch, fusarium blight, necrotic ring spot and stripe smut.

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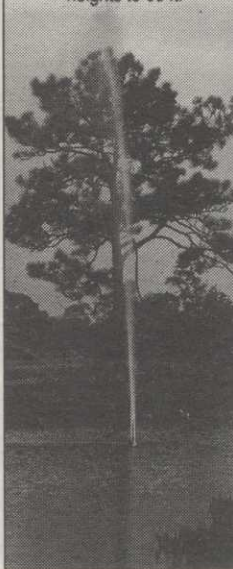
Timber Shelters

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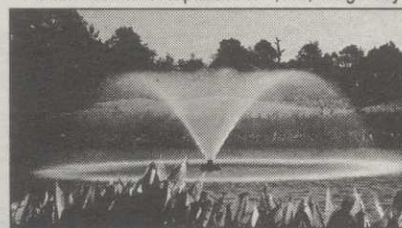
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10 — GCSAA Seminar on Turfgrass Stress Management in West Palm Beach, Fla. *

19 — GCSAA Seminar on Drainage Systems in Honolulu. *

25-27 — Turf Producers International Summer Convention and Field Days in Sacramento, Calif. Contact Tom Ford at 847-705-9898.

28-30 — The International Lawn, Garden and Power Equipment EXPO in Louisville. Contact 800-588-8767.

30 — Midwest Regional Turf Field Day in West Lafayette, Ind. Contact 317-494-8039.

30-31 — Golf Course Development: Designing and Redesigning to the Market at Harvard University Graduate School of Design in Boston. Contact Office of Development and External Operations at 617-495-1680.

August

1 — Golf Course Design at Harvard University Graduate School of Design in Boston. Contact Office of Development and External Operations at 617-495-1680.

1 — 5th Annual Midwest Grounds Management Conference in Palatine, Ill. Contact 847-925-6687.

2-3 — ALCA Masters in Management for the Landscape Industry in Chicago. Contact Connie Whelchel at 800-395-2522.

5-6 — Golf Course Environmental Considerations at Harvard University Graduate School of Design in Boston. Contact Office of Development and External Operations at 617-495-1680.

20 — Wisconsin Turfgrass Field Day in Madison. Contact Audra Anderson at 608-845-6536.

7-8 — Golf/Residential Site Planning at Harvard Graduate School of Design in Boston. Contact Office of Development and External Operations at 617-495-1680.

7-8 — Penn State Turfgrass Field Days in University Park, Pa. Contact Pennsylvania Turfgrass Council at 814-863-3475.

9-10 — Golf Clubhouse Design and Site Planning at Harvard University Graduate School of Design in Boston. Contact Office of Development and External Operations at 617-495-1680.

13 — GCSAA Seminar on Safety Devices and Regulations in Honolulu. *

14 — Turf Talk '96 in Chandler, Ariz. Contact Garden West at 602-233-2966.

20 — Wisconsin Turfgrass Field Day in Madison, Wis. Contact 608-845-6536.

20-24 — American Association of Nurserymen Conference in Portland, Ore. Contact 202-789-2900.

23-26 — Florida Turfgrass Association Annual Conference and Show in Tampa, Fla. Contact 800-882-6721.

28 — Ohio Turfgrass Foundation Field Day in Columbus. Contact Julie Weller at 614-261-6750.

29 — GCSAA Seminar on The Microbiology of Turfgrass Soils in Austin, Texas. *

September

4-8 — Responsible Industry for a Sound Environment Annual Meeting in West Palm Beach, Fla. Contact RISE at 202-872-3860.

5 — GCSAA Seminar on Reclaimed Water Irrigation in Phoenix, Ariz. *

5-6 — Southwest Horticultural Trade Show in Phoenix. Contact 602-966-1610.

7 — GCSAA Seminar on Human Resource Management in Sacramento, Calif. *

12-15 — American Society of Irrigation Consultants Annual Conference in Pleasanton, Calif. Contact Wanda Sarsfeld at 510-516-1124.

* For more information contact the GCSAA Education Office at 800-472-7878.

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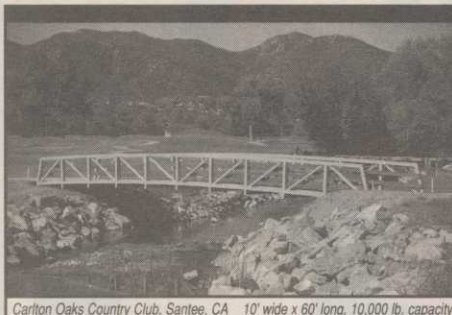
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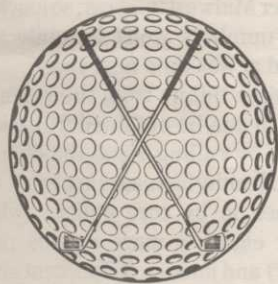
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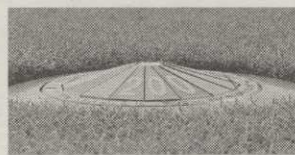
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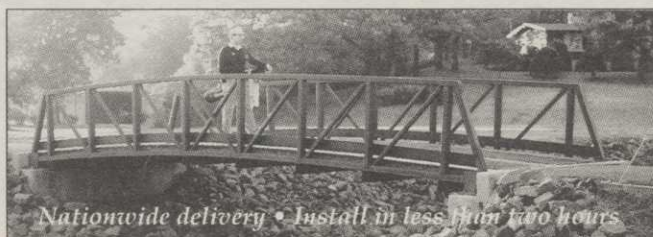
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*Appears in regional editions.

NGF report

Continued from page 62

year's "Golf Participation in the U.S." report is based was conducted for the NGF by Market Facts, Inc. of Chicago. As in past years, a total of 30,000 households were surveyed and results were weighted with key U.S. Census demographic variables to ensure their national representation. This allows the national participation rate to be estimated to within 0.2 percent with 90-percent confidence.

"On our estimates of rounds, I think we're in a 2- or 3-percent error range," said Beditz, "which is a lot of rounds when you think of it on a national basis. But we do need more accurate results. One thing to remember: These are consumer estimates from the previous year — they're not facility-based. We're working a methodology that is based directly on the turnstile.

"There hasn't been any material change in rounds played, though we have been adding 2 or 3 percent each year to the course supply. We would be delighted if we could see equal growth in rounds played. We haven't, on an overall basis. Some markets are as busy as they could be. In other areas, they may be over built and rounds are down... As all politics is local, so is rounds-played."

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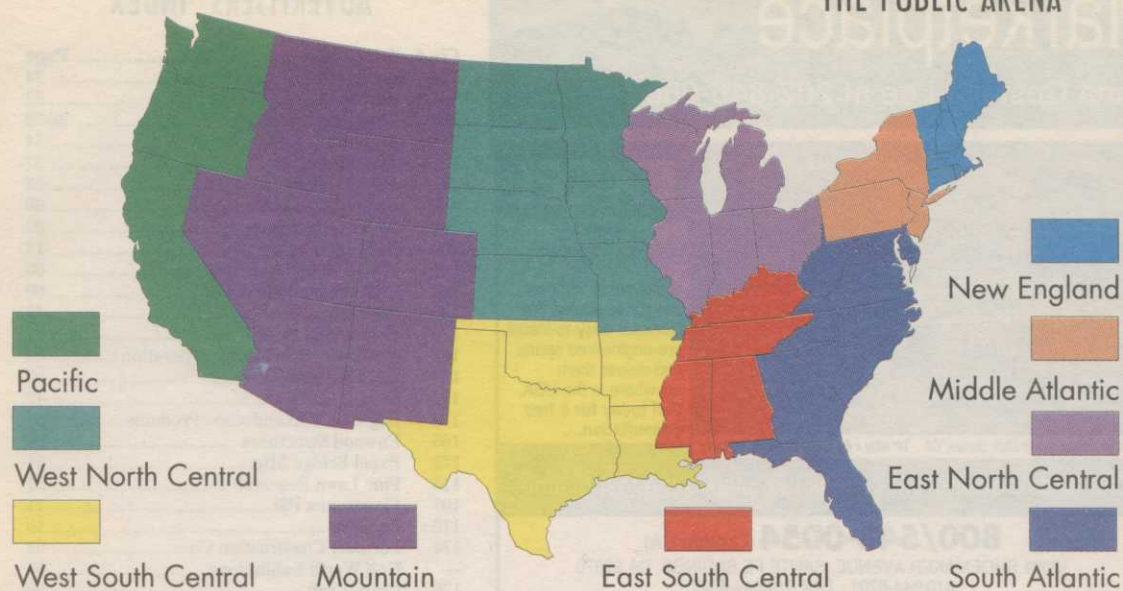
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REGION	PARTICIPATION RATE	GOLFERS	ANNUAL ROUNDS PLAYED
West North Central	17.8%	2.7m	55.1m
East North Central	15.4%	5.6m	93.9m
Mountain	13.4%	1.7m	31.7m
New England	11.8%	1.3m	26.2m
Pacific	10.6%	3.3m	62.5m
Middle Atlantic	10.5%	3.4m	66.1m
South Atlantic	10.5%	4.0m	99.8m
East South Central	7.8%	1.1m	22.9m
West South Central	7.6%	1.8m	32.0m

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NGF report

Continued from page 1

ing 1995. With 817 facilities under construction — 50 to 65 percent of which should open during the next 12 months — it appears demand is keeping up with supply.

"It's good news, obviously, although I wasn't surprised by it," said Dr. Joseph Beditz, president of the NGF. "You can't apply these numbers to a specific marketplace. They're designed to describe the situation in a macro sense. The whole point is to give people a general view of what the overall environment might be.

"Whether rounds are up or down is a regional phenomenon. It's difficult to have a perspective for the whole country. For example, it's been awfully wet in the upper Midwest this year, so maybe the numbers won't be quite so good at this time next year."

Some tidbits from the report, which can be obtained from the NGF by calling 1-800-733-6006:

- Healthy increases in play were turned in by core golfers (who play eight or more rounds per year) and juniors, 3.7 percent and 17.4 percent, respectively. The number of avid golfers — a subset of core golfers who average 60 rounds a year — rose by 400,000 players, from 5.1 to 5.5 million.

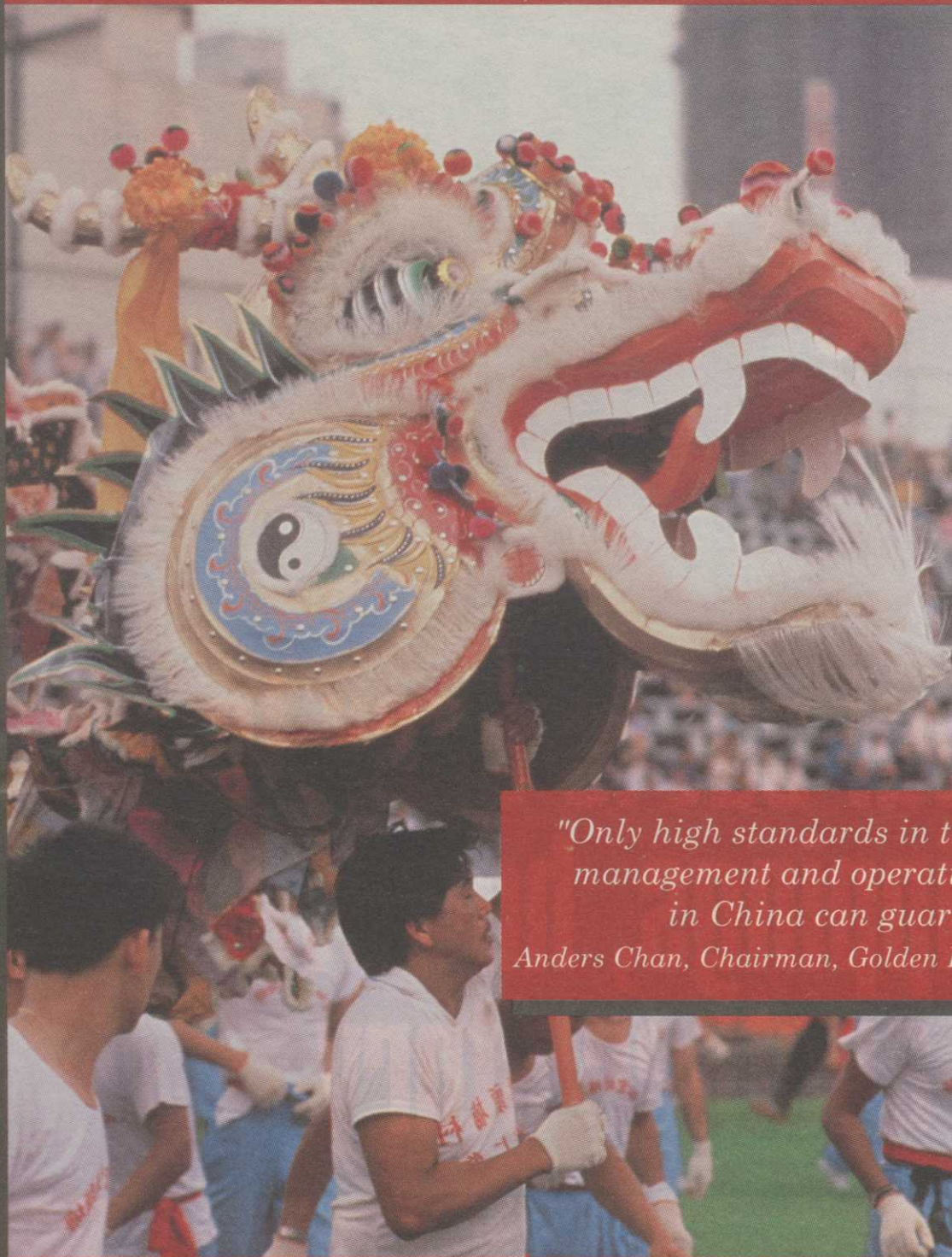
- The West North Central Region (North and South Dakota, Minnesota, Iowa, Missouri, Nebraska and Kansas) boasted the highest participation rate at 17.8 percent. The neighboring East North Central Region — Wisconsin, Michigan, Illinois, Indiana and Ohio — was second in participation (15.4 percent) and second in rounds played with 93.9 million. These two regions combined led the nation in golf course openings last year, indicating supply and demand are growing commensurably.

- Senior golfers currently account for 25 percent of the total golfer population; females make up nearly 26 percent of this segment. However, while the average senior player is 62 years old, that number should begin to come down as the Baby Boomers succumb to the inevitable march of time. The primacy of this demographic group should grow exponentially over the next decade.

The survey upon which this

Continued on page 61

The Dragon Awakens...



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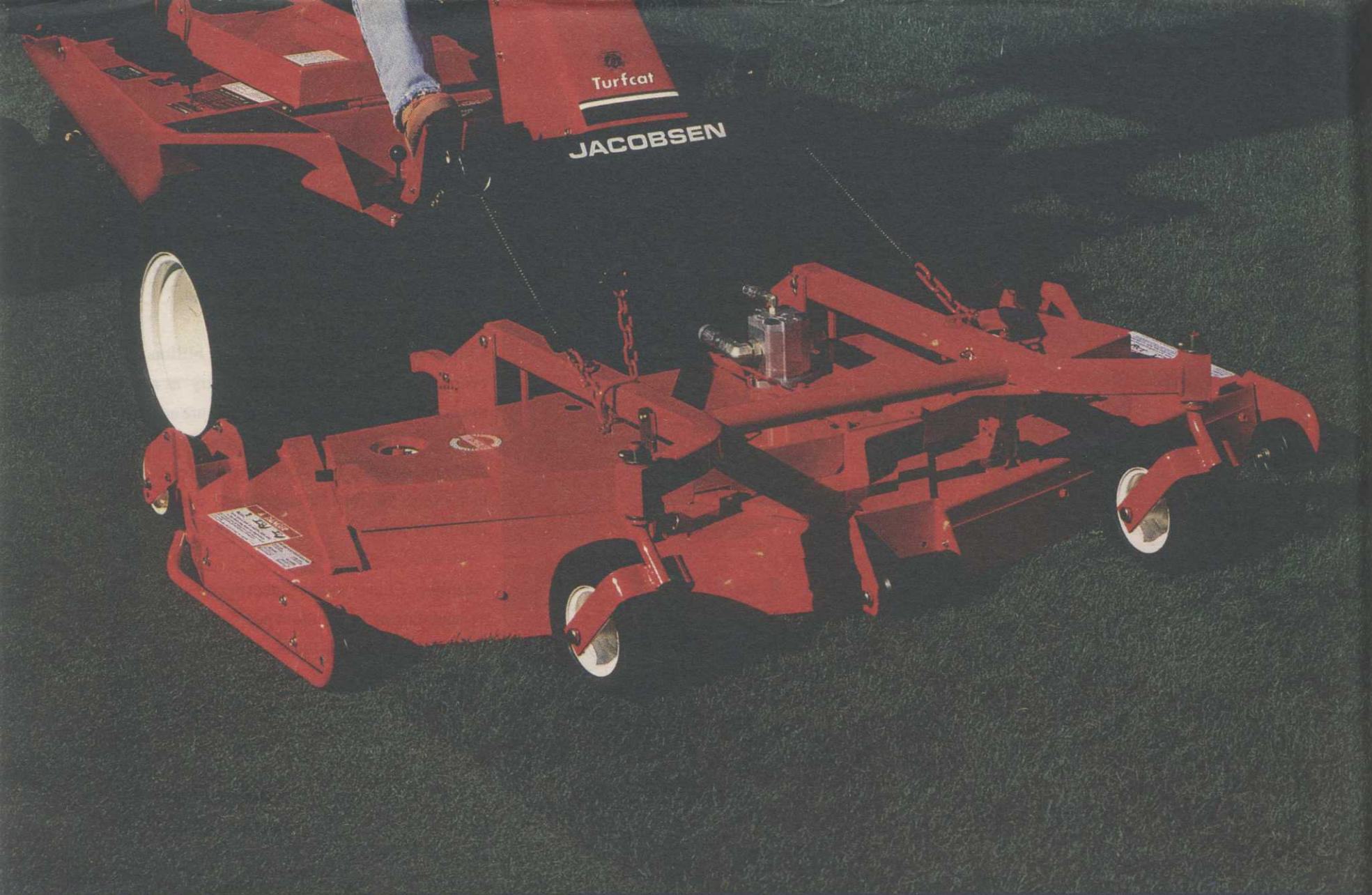
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