Courses breaking hazwaste law

BY MARK LESLIE
Most golf courses today are breaking the law.
Only 45 percent of the Club Managers Association of America members questioned in a poll say their clubs have a hazard communication program, and an industry expert feels even that is a high figure.
A poll conducted by Public Opinion Research, Inc., of Washington, D.C., and CMAA's Governmental Affairs Department found that only 56 percent of the managers polled had even heard about the law requiring a hazard communication program.

Beditz leads NGF into future

BY BOB DRUM
The National Golf Foundation is "its strongest in history," says Dr. Joseph F. Beditz, its new president and chief operating officer. "I'm inheriting a healthy club and want to keep it up and keep improving."

Beditz, 38, who had been in the job in an acting status since David B. Hueber resigned in January, has high hopes since being handed the post permanently after a May 2 NGF board meeting.

The law, which originally targeted heavy industry and manufacturing, was expanded to cover golf courses among other businesses in May 1988.
The federal Occupational Safety and Health Administration reports that lack of a
Continued on page 28

Oregon seed law vote soon

A decision is expected in mid-June on a proposed field-burning law in Oregon that may endanger the entire supply of U.S.-produced cool-season golf course grasses.
Observers close to the Oregon state Legislature say the seed industry has enough support in the House to kill any bill that would be too damaging to the 70 seed companies and 800 farmers who grow seed in the state.
But Dave Nelson, executive director of the Oregon Fine Fescue Commission, is not taking anything or anyone for granted.
"Things have to cook and take their time" in the legislative process, he said. "We're proceeding through the process but we don't know anything for sure until the final vote on the floor."
Another industry expert said the state Senate in mid-May was taking a harsh stand that would have cut the number of acres that could be burned in the state from 250,000 to 150,000 this fall, then to 100,000 acres in 1990, and 50,000 in 1991 and thereafter. The Senate at that time supported raising the fee farmers pay per acre burned from the current $3.50 to $20 or $25 an acre in 1992. A total of 345,000 acres produces grass seed in the state.
Continued on page 19

Drought woes plague courses

BY KATHY BISSELL
The drought situation continues to affect golf courses in all parts of the country.
Most severely hit are areas of Northern California, according to Don Hoos, director of agronomy for Landmark Land Co., Inc., which has 22 courses from California to Florida.
"In Carmel and Monterey the underground aquifer is not as good as in some areas. There has already been a 20 percent reduction request for industrial users, which includes golf courses, hotels and resorts," Hoos explained. "They can achieve 20 percent by being more careful with irrigation, maintaining minimum levels for grass, not watering roughs. The greens, continued on page 16
And nobody matches Jacobsen greens mowers for precision cut, balance or durability.

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Jacobsen Division of Textron Inc.

1988 J 21 8
BY LARRY KIEFFER

Golf course development has entered a new era, says Kevin Downing, golf and landscape operations manager for a South Florida developer and a member of the USGA Green Section Committee.

And any developer who doesn't understand that the rules have changed may end up spending all his capital on the permitting process—or, worse, if he gets through it, may not be able to sell his real estate because he builds more golf course (in difficulty) than his market can handle.

Downing spoke at the annual USGA Green Section Florida Conference at JDM Country Club in Palm Beach Gardens in April, said, "If you build a golf course for the three-handicapper, you'll work for the one-handicapper. You need to be prepared for a very long sellout because there are not many three-handicappers walking around out there."

With the kind of money you're talking about at today's upper-end country club community, people just aren't going to buy into a golf course they can't play."

Other speakers at the conference included golf course architects Pete and Alisse Dye, golf course manager Tim Hiers and attorney Mike Veron, all members of the Green Section Committee. Also on the program were three professors from the University of Florida—Dr. Monica Elliott (fun-gicides), Dr. Matt McCarty (weed control) and Dr. John Cisar (potassium nutrition).

Downing described the evolution of Willoughby Golf Course in Stuart, Fla., a 600-acre development on sensitive wetlands (including some native habitat for the federally protected scrub jay) surrounded by commercial development and a major highway.

"It used to be very easy to design 'target golf' courses," Downing said. "Now it's mandatory.

The company spent $1.1 million on the permit process, drafting three completely different land-use plans before finally getting permission to turn the first shovelful of dirt.

Because of new requirements for upland buffers and special treatment of shoreline zones, the protected scrub jay habitat and the requirement of a local agency that 25 percent of the native vegetation be left untouched, Downing said the golf course had to be routed before the architect could be hired.

"Furthermore, we had done focus groups to make sure we knew what our potential market wanted in the way of a golf course community," Downing said. "They not only wanted to play golf, they also wanted to look out on a green golf course and blue water."

Because of those requirements, the company had to find new parcels to develop larger root systems which resulted in better water and fertility uptake and less plant stress.

Downing said that the developer had to design the golf course maintenance budget—"and the golf course maintenance budget would be for the next six years."

He said, "Finding an architect who was sensitive to environmental limits and who was willing to design a course with the vistas we felt our buyers would demand at a degree of difficulty we thought they could handle and which could be maintained for six years at $550,000 to $750,000 a year was not easy."

The group finally settled on Arthur Hills, who had designed the much acclaimed Bonita Bay project in Naples, Fla.

"And Art had to agree to tone down the contours on his greens—which is sort of his signature—and do some other things to make the course playable for our average prospect: an 18-handicapper who hits a 180-yard slice," Downing said.

Other highlights of the seven-hour conference attended by 235 superintendents, architects, club managers and golf professionals from Florida and southern Georgia:

- "I can't find an engineer who says they will work, but they do," said Pete Dye while describing a system of "catch pockets" or "sump basins" that allows him to drain fairways that are constructed on only a foot above the water table.
- "When mixing chemicals, it should be done by the superintendent himself," said Downing, "and his assistant, attorney Veron. "Keep a log and always, always, always have a witness." He also said the label and a small sample of the mixture should be saved.
- "My goal," said course manager Hiers, "is to convince developers, owners, operators and architects to hire a qualified superintendent at the earliest possible stage in construction. 'I'm not saying architects and contractors can't do their jobs, but the superintendent is the one who is going to stay there after everyone else is gone. He has a vested interest in making sure things are done right.'"
- "Give women the same playing conditions as men," said Alice Dye. "Give them a choice of tees. And never give the average lady a forced carry of more than 75 yards over water. If she has 75 yards, she'll try an iron—five iron or nine iron, it doesn't make any difference since the average lady (not the good player) tends to hit all her irons the same distance—which gives her a better chance of getting the ball up."

The meeting was moderated by F. Morgan "Buzz" Taylor, chairman of the USGA Green Section, and Roger Harvie, USGA regional affairs manager of the Southeast.

Larger facilities must be found for next year's meeting, officials said.

Larry Kiefffer is a veteran golf writer who owns Janlark Communications, Inc, in Auburndale, Fla.
Mahaffey, Forester form partnership

PGA Tour veteran John Mahaffey has announced his partnership with Rick Forester in Mahaffey-Forester Design Group, Inc., based in Houston, Texas.
Forester, who has been both a touring and club professional, was involved in the design of several Golf Coast golf courses including Bear Creek Golf World, selected as one of the country's top public courses, and Cypresswood Golf Club, which was completed last year.
The University of Houston alumni are longtime friends.
"John will be as involved as his current playing schedule permits," Forester said. "He has good ideas and a feel for what the amateur wants in a golf course."
Mahaffey believes that "people are ready to get back to more traditional architecture and that there is enough work to keep the new firm busy."
Mahaffey and Forester plan to work on all types of designs "from small-scale to re-do's to complete 18-hole layouts anywhere in the world." Mahaffey summed up their philosophy: "You can build a course that is challenging without having severe undulating greens and trouble everywhere."
Citing the Donald Ross-designed Pinehurst 2, Mahaffey said, "The design of this course is so basic. It is just as pleasant from the forward tees as it is at championship length. It isn't boring; it isn't easy. From the back tees, it is as demanding as any course in golf. That's what we will be striving for: Not building monuments to architecture, but classic, timeless design."

$300 million park planned

Construction is expected to begin in October on a $300-million theme park including golf courses that Anheuser-Busch Co. plans to build on Spain's Costa Brava.
A spokesman for the regional government of Catalonia, which must now give final approval, announced that the St. Louis brewer was the sole bidder on the project.
A spokesman said the bid, which excluded land costs, was to build an amusement park, golf courses and other recreational facilities, a hotel-conference center and homes on 2,070 acres in the Catalonian province of Tarragona.

NGF offering new appraisal service

To help reduce insurance costs at golf courses nationwide, the National Golf Foundation has announced availability of a certified appraisal service for country clubs.
The Asset Records/Certified Appraisal Program is being provided by the Independent Appraisal Co. of Pittsburgh, Pa., in conjunction with FAI Insurance Counseling Inc. FAI is the administrator of the NGF-endorsed risk management and insurance package of programs.
The new program is said to accurately define the value of the club's assets.
South T. Smith, NGA Membership Services vice president, said: "This certified appraisal enables golf clubs to substantiate 'proof of loss' in the event of a claim."

American Golf buys, plans expansion

American Golf Corp. has announced that it has bought the nine-hole Charles T. Myers Golf Course in Charlotte, N.C., and signed a 20-year lease with the state of California to manage Lake Tahoe Golf Course, formerly the Lake Tahoe Country Club.
The Myers Golf Course, which will open to the public, is a par 36 layout over 3,300 yards. A second nine holes is planned by the County of Mecklenburg within the next four years.
The facility has a clubhouse, golf shop and snack bar.
American Golf has been managing Lake Tahoe Golf Course for the past four years. A provision of the new lease is that American Golf will design and build a new clubhouse within the first three years.
Meanwhile, American Golf has announced it has leased from New York City the Alleypond Driving Range.

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Superfacility brings variety to Chicago

Tanguy-Burke-Stratton Comprehensive Real Estate Services has arranged a lease valued at $3.3 million for Chicago's first golf retail superstore and indoor golf facility at the Washington square building at 651 W. Washington Ave.

The 14,500-square-foot golf center—Pro Golf & Country Club—opened in May offering five 18-hole putting greens, three computerized 18-hole simulator lessons, a staff of teaching pros, and a discount golf equipment and accessory store.

The store will have about 5,000 square feet, and the rest of the space will be set aside for golf instruction, professional and instructional scouting, and a lounge. Chicago Design Network designed the facility.

The supercomputer-simulated golf machines use the latest technology so golfers can simulate play on such famous courses as Pebble Beach and Spyglass Hill, California, Club du Bonmont in Switzerland, and Quinto Duro in Portugal.

Nat'l Nitelite tourney set

The inaugural 1989 National Nitelite Day and Open golf tournament will be held Sept. 9-10 at Doral Country Club in Miami. Fla.

Nelson F. Newcomb, president of Pick Point Enterprises in Mirror Lake, N.H., which markets the novel night ball, said tournament will benefit the National Society to Prevent Blindness, headquartered in Schaumburg, Ill.

Steve Caldwell of Tara Ferncroft Country Club in Damans, Mass., became the first pro to enter. Teams daily for the 18 day hours holes and nine nighttime holes that count double.

During night play, winter rules will be used. When putting, the Nitelite tee will be made to mark balls. The Nitelite putter is recommended because it lights up so that the angle of the blade can be seen.

Flashlights are recommended for all players. However, shining the light of your hand to已然 to "read" greens is prohibited. The 4-inch lightstick will be used on flagsticks, 150-yard markers, tees, and to mark the area for out of bounds.

Players must wear a lightstick pinned to their backs. The lightstick weighs a half-ounce and doesn't interfere with the swing.

Panks designer at Sedona

In the April issue of Golf Course News we mistakenly reported that the new Sedona (Ariz.) Golf Resort's 18-hole championship public course was designed by Gary Park. It was designed by Gary Panks, who has joined with David Graham to form a design firm.

Pesticides embroiled in controversy

"The EPA is regulating and registering pesticides for certain lawns without adequate information," she said. "They don't know exactly what the extent of inhalation and dermal absorption there is out there.

Weiss added, "With 7 million American households hiring these companies to give you services, the fact that requiring sign posting, the potential for exposure is great, as I see it. The fact that they're diluted doesn't mean anything..."

"Prevent Blindness, headquartered in Schaumburg, Ill."

The law... puts interests of pesticide... industries over public health.

—Laura Weiss

Pesticides used extensively on food crops and in agriculture. "Science and Technology found significant errors in methodology in testing..."

"Dursban insecticides can cause a variety of nervous system effects, the report says, but those claims are based on lab experiments in which animals were "spontaneously injected with lethal doses of chlorpyrifos and then revived with heroic measures," the scientists said.

"Public Citizen listed side effects linked to diazinon (an insecticide used in lawn sprays), and the report said "the basis of the law that in itself requires EPA to balance risks and benefits. You've got a risk assessment that can't be done adequately because how can you do a fair risk assessment if you don't know what exposure is? They're just making guesses..."

"EPA requires your product to be "required practices for reducing or eliminating pesticide use."

One major step, she said, would be using IPMs. If you're going to be using a golf course that demands a lot of care, putting together an IPM program makes sense, she said. "It makes sense to reduce our use of pesticides. It makes sense for the players who would be exposed to less chemicals while they are on the course, it makes sense for the people who would have to handle the chemicals, it makes sense for our ground water which chemicals could leach into."

But Jim Sin, the CEO of the USA Green Section's Golf House said, "IPM is the coming thing and is very important, but it's not going to stop a major outbreak of insect, weed or disease. You can use it to a certain extent. It will help. What it does really is organize you so that you do every thing that is possible to minimize stress or potential outcomes for pests and to predict when you should treat..."

And pesticides are an integral part of IPM. IPM includes them in a more logical and curative way, rather than going out on a preventative program where you spray the grass and hope it works or it doesn't. It helps you so that you probably use fewer applications, and you probably time them better, but it doesn't exclude pesticides..."

"And pesticides are an integral part of IPM. IPM includes them in a more logical and curative way, rather than going out on a preventative program where you spray the grass and hope it works or it doesn't. It helps you so that you probably use fewer applications, and you probably time them better, but it doesn't exclude pesticides..."

Snow said, "There are going to be times when you are going to have to deal with issues because you are going to have to deal with grass, and you are going to have to deal with pests."

Snow predicted that most golf superintendents "would be willing to cooperate and do everything they could to accommodate using fewer pesticides, but a total ban would be a disaster..."

Americans returns golf course to Korea

The return of a golf course to South Korea next year will mark the beginning of a relocation of a controversial U.S. military base from central Seoul, South Korea, to the countryside.

The base, home of the U.S. Eighth Army, is a focus for anti-American sentiment in South Korea. The golf course is located on the 609-acre base in teeming downtown Seoul, and many South Koreans want the land to be maintained as a park.

But land prices in Seoul have been soaring and real estate developers are very interested in the land.
Spice up those headlines

To the editor:
I just finished going through the April Golf Course News. Very nice; I wish you success with it. I like the color, plus you are apparently with a high-quality printer. Good paper, too; good opacity and weight.*

My one suggestion for improvement: headlines. They could use more substance, punch, to lead readers into stories.

And if you ever happen to get a dialogue going on riding vs. walking (one of my favorites) and you would like an ordinary golfer to weigh in on the side of the latter, just holler.

Best regards,
Ralph Wells
Direct Connection Inc.
Northbrook, Ill.

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Loaded and up-to-date

To the editor:
Your new paper is loaded with interesting articles not found in other publications. I’m glad to see all up-to-date news and that you verify what you print.

Sincerely,
Nelson F. Newcomb
president
Pick Point Enterprises

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Interesting, informative

To the editor:
Please include our firm on the Golf Course News subscription list. Your first two issues were both interesting and informative. As golf facility development and operations consultants, we constantly keep up with changes and developments in the golf industry, and your publication will certainly help us to continue doing so. Good luck!

Sincerely,
Michael J. Riddle
national marketing director
Golf Resource Associates

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Keep format as it is

To the editor:
I received my first copy of Golf Course News this week. I am not sure how I got on your mailing list, but I am glad I did.

I appreciate the general nature of the publication. It is nice to have a single publication in an exceptionally easy-to-read format that will help us keep up with the overall business of golf.

Speaking of format, keep it like it is! The size and paper finish make for easy reading and easy "clip and paste" to forward articles to others.

Sincerely,
Frank A. Gasperezi
sales manager
Turf & Ornamental Markets
E.I. Du Pont de Nemours &Co.

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Premiere appreciated

To the editor:
Congratulations to you and your staff on the premiere issue of Golf Course News. All of us at Palmer Course Design Co. certainly appreciate your sending us a copy and we will be looking forward to all future publications. We look forward to working with you in the future.

Congratulations again and we wish you the best of success.

Best regards,
Ed Seay
executive vice president
Premiere

---

Cart path to success

To the publisher:
Just saw my first (your second) issue of Golf Course News and am impressed. Glad to see the fruits of your efforts being realized. The ad balance appears healthy. So you should be on the cart path to success.

My congratulations and best wishes for prosperity.
Terry McSweeney
manager
PGA Magazine
Supplier features outlined for year

One of our goals at Golf Course News is to keep our readers informed with all products and services that are provided by hundreds of suppliers to the golf course industry.

With that in mind, we are announcing our editorial calendar for the remaining 1989 issues (July–December), with one exception...that being the November issue, which we will be announcing in the July issue.

You can look forward to the following industry supplier categories featured in the issues to come:
- August – Seed and sod growers.
- September – Chemical update; herbicides.
- October – Irrigation and pumping systems.
- November – TBA.
- December – Chemical update, fertilizers.

Our editorial plan is to present suppliers in these categories to you, our readers, in an entertaining and informative manner that will make it possible for you to use in your day-to-day activities. I hope you will find it beneficial.

We will be looking to the suppliers we are covering with these features for suggestions and up-to-date information on their particular products and services.

Charles E. von Brecht, Publisher
Seven people have been accredited certified club managers by the Club Managers Association of America.

They are George Barrett of Harborside Country Club in Fort Myers, Fla., Gregory Froehlich of Portage Country Club in Akron, Ohio, George Logos of National Golf Club of America, Va., and Merle Worman Jr. of Ft. Orange Club in Albany, N.Y.

The new CCMs qualified for certification by fulfilling specific requirements over a period of years in management, experience, education and association activity.

Four people, including Frances Feld to vice president of administration and member services.

According to Executive Vice President James A. Schuping, CMAA also promoted Kathi Pernell to vice president of administration of the Club Management Institute Foundation, Robert Hassmiller to director of education and scholarship of the CMIF, and Robert Wilson to controller of the CMIF.

Feld has been with CMAA for more than 13 years, starting as manager of the Member Services Department. Under her management, the association has grown from 2,600 members to almost 4,600.

Schuping said that under Feld's supervision the Student Membership Program was created and has flourished and the Executive Career Services has dramatically expanded with the addition of the Mid-Management Career Opportunities Listing, Interim Management and Consulting Service and the Executive Screening Service.

Pernell also serves as director of public affairs for CMAA and has been involved in project planning, writing, media relations and fund-raising. She has been director of development for the Southern Ballet Theater, executive director with the Atlanta region of the American Cancer Society, program director to the Muscular Dystrophy Association and national director for the Muscular Dystrophy of America.

Feld and Pernell are both active with the American Society of Association Executives and Greater Atlanta Society of Association Executives.

Hassmiller also serves as director of education for CMAA. Hassmiller, who holds bachelor's and master's degrees from Miami University of Ohio and a doctor of philosophy in higher education degree from Florida State University, Wilson, CMAA's manager of accounting, has been with the association since June 1986.

In turf and ornamentals you can't get better treatment than products from Du Pont. Our commitment to controlling costs and helping you produce a better product or service is known worldwide. Whatever the growing pains in your business, look to Du Pont products to treat the problem.
Jack Kidwell, left, of Columbus, Ohio, and Philip A. Wogan of Topsfield, Mass., recently were elected Fellows of the American Society of Golf Course Architects. They join a distinguished group of society members 70 or older who have given "long and valuable service to golf course architecture and the ASGCA."

Silva, Borland, Dasher

Bruce Borland of Arlington Heights, Ill., Robert M. "Mike" Dasher of Orlando, Fla., and Brian M. Silva of Whitinsville, Mass., have been elected regular members of the American Society of Golf Course Architects. All had been associate members since 1986. The society, headquartered in Chicago, Ill., comprises leading golf course architects in the United States and Canada.

A 1981 graduate of the University of Illinois in landscape architecture, Borland was among the first golf architects to use a computer in the actual design of a golf course.

In the mid-1980s he adapted a computer program in order to analyze golf designs in terms of optimum shot values, club selection sequence and balance. Borland recently launched Pro Golf Design, a Chicago-based golf course architectural firm specializing in the design and remodeling of public and private golf courses throughout the U.S.

He is a contributing editor for Par Excellence magazine.

Dasher received bachelor's and master's degrees in civil engineering from Georgia Institute of Technology and is a member of the American Society of Civil Engineers.

From 1973 to 1980 Dasher was employed as a project superintendent for the Wardsworth Co., one of the largest golf course contractors in the United States. He has built and supervised golf courses for architects in Illinois, Wisconsin, Indiana and Georgia.

He joined the golf design firm of Arthur Hills and Associates in 1980, and runs the Southeast section. As a master of science in construction management, he's primarily responsible for on-site construction programs.

Nicklaus heads group of new associate members

Jack Nicklaus and seven others have been named associate members of the American Society of Golf Course Architects.

The ASGCA members in secret ballot voted in Nicklaus, Fred Bliss, Steve Smyers of Tampa, Fla., Craig Phillips of Freemont, Calif., Kyle Morish of Tulsa, Okla., Brian M. Silva of Whitinsville, Mass., and in 1981 received a Distinguished Service Award from the Florida Turfgrass Association. He then returned to Massachusetts as an agronomist in the USGA Green Section's Northeast region.

In 1983 Silva joined veteran golf architect Geoffrey S. Cornish of Amherst, Mass., as a partner in the firm of Cornish and Silva, Inc., fulfilling his boyhood dream of becoming a golf course designer. His first 18-hole design, The Captains Golf Course in Brewster, Mass., was selected by Golf Digest magazine as the Best New Public Course of 1985.

An unabashed fan of Donald Ross, Silva studied the architect's works extensively, and authored a comprehensive critique of Ross.

Pete, Dye, left, presents the ASGCA's Donald Ross Award to longtime Golf World Magazine editor Dick Taylor. Taylor was cited for "his writing that created a greater understanding of golf course architecture and architects."

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Gary Player Design Co. has announced that six courses it has designed will be completed this year, and it is working on 16 other projects from San Diego to Connecticut.

Player's partner and company president, Jim Applegate, said Hilton Head National will be the first of the design firm's courses to open. The daily fee resort course is nearing completion and is scheduled for an October opening.

Other courses on the Player docket include:

- Laurel Oak in Sarasota, Fla., a Radnor Corp. project calling for 36 holes, 18 of which will be complete this year. Construction on the second course in the private community is scheduled to begin in 1990.
- Cutter Sound in Stuart, Fla., which is expected to open next February as the centerpiece of a private waterfront community.
- River Run Country Club in Ocean City, Md., the focus of another private waterfront community.

Griffiths' courses, which are being designed by the Griffiths firm, are expected to open in 1990. They are Veterans State Park Golf Course in Cordele, Ga., on which Griffiths is working with Eighteen Construction, and Heatherwoode Golf Course in Springboro, Ohio, which First Golf, Inc. has been contracted to build.

The Rodriguez foundation's new course, supplanting its nine-holer in Clearwater, will cover 6,000 yards. It will be a daily fee facility.

The municipal Southside Golf Course, being built by the city of San Antonio, will feature huge greens to accommodate an amazing 80,000 to 85,000 rounds per year, according to Griffiths associate Tom Johnson.

Veterans State Park Golf Course is scheduled to open next May. Owned by the Georgia Department of Natural Resources, it is located adjacent to Lake Blackshear at the state park. The 18-hole public course is laid out over 7,000 yards.

Griffiths will also design Chicopee Woods Golf Course in Gainesville, Ga., for the Board of Commissioners of Hall County and Goose Pond Island Golf Course for the city of Scottsboro, Ala. Those two municipal courses are not expected to open until the summer of 1991.

Griffiths said bids were due in May on the Georgia facility which will be built in a forest preserve and cover 7,000 yards, and a builder has not been determined for the Scottsboro course, which will be located along the Tennessee River and cover 6,900 yards.

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Casper/Nash a blast in Vegas

A majority of the land for the Sun City Summerlin course in Las Vegas, designed by Casper/Nash & Associates, had to dynamited to order to be built upon. Del Webb Corp. handled the explosives and construction for the Casper/Nash layout which covers 6,790 yards.

The 18-hole private course opened in May. It is located at 1120 5th Rainbow Boulevard.
Baird globetrotting from U.S. to Far East

The monsoon seasons of the Far East have been challenging for Nashvillle, Tenn., architect Gary Roger Baird in one of 15 projects he is working on from the Southern United States to Thailand.

Baird is nearing completion on the earthwork design on the championship Royal Gems Golf and Sports Club complex, 30 miles south of Bangkok, Thailand. But for Baird to get to this point, it has taken a two-year construction cycle of building dikes, draining a rice paddy site, letting the earth sit for a year to lose moisture, then doing final shaping on the course. It all has to be accomplished between monsoon seasons.

Meanwhile, an 18-hole semi-private course that Baird designed in Ronan, Mont., at the base of the Mission Mountains, just opened for play and the second nine holes at the Heatherhurst Course at Fairfield Glade, Tenn., is to open soon.

Furthest along among his in-progress projects is the state-owned Montgomery Bell State Park in Tennessee, which Baird completely redesigned. It is in the growing stage and is scheduled to be opened in the late fall.

Graham/Panks get major projects underway

The site has been cleared and the shaping is underway on the Windham (N.H.) Country Club course being designed by Graham/Panks International.

Scottsdale, Ariz.-based architect Gary Panks and PGA Tour veteran Mark Graham, builder and architect, have partnered in 1987, and now are facing a busier schedule ahead, they say.

"With our first two major projects under construction and several more in the preliminary stages, we now have the need to increase our staff and expand our headquarters," said Panks."However, David and I will never lose sight of our philosophy to undertake only three or four projects at a time. To complete three or four, eight to 10 must be in various stages of design or construction."

The 18-hole private Windham course is located on 200 acres of rolling forested hills. It is scheduled for completion by the fall of 1990.

Panks and Graham are also working on a project begun several years ago in Coffs Harbor in New South Wales, Australia. Called Pacific Bay Beach & Golf Resort, it is part of a $400 million development financed by Australian businessman Peter Montgomery.

Also opening this fall is the 36-hole Warren Valley Golf Course in Detroit.

Baird also plans to open a private club that will open in September, the existing 27 holes at the Shisido course in the Ibaraki Prefecture about 50 miles north of Tokyo, and designing nine additional holes at that private course, and another designing a second 18 holes at the Shizu course.

The Chibo course is located east of Tokyo and will be a private club developed by Sports Shinko Co. It will take more than two years to build and grow-in.

The firm's courses in planning or design stages include The Bayview Golf Club in Cape Charles, Va.; The Plantation Club at Sugar Mill Woods in Homosassa, Fla.; and Gold Creek Golf Club in Jackson, Calif.

Irwin courses near completion

Hale Irwin Golf Services, Inc. has designed two courses at opposite ends of the earth that will open this year and has two others under construction and five in planning stages.

The St. Louis-based firm designed New England Country Club in Bellingham, Mass., a private club that will open in September, and Nara (Japan) Sports Shinko Country Club, a private club that just opened for play but will open with official ceremonies in the fall.

The 6,500-yard New England CC is cut through an ancient forest and features bent-grass tee, fairways and greens. It is the landmark for an exclusive country club and residential community developed by Forge Development Corp., a subsidiary of Monarch Capital Corp.

The Nara course, located north of Osaka, will play 7,023 yards through forest and mountain glades. It features two greens per hole differentiated with different season grasses to accommodate golfers the year round. It is being developed by Sports Shinko Co.

Irwin-designed courses that are under construction are the Ocean Inlet Golf Club and Plantation in North Myrtle Beach, S.C., and a facility in Chiba, Japan.

The 18-hole public Ocean Inlet layout incorporates the coastline and Carolina forest to create a "demanding and beautiful venue," Irwin says.

The course will be the centerpiece for a residential community developed by Southern Land and Golf Co. and is expected to open late this year or in the spring of 1990.

The Chibo course is located east of Tokyo and will be a private club developed by Sports Shinko Co. It will take more than two years to build and grow-in.

The firm's courses in planning or design stages include The Bayview Golf Club in Cape Charles, Va.; The Plantation Club at Sugar Mill Woods in Homosassa, Fla.; and Gold Creek Golf Club in Jackson, Calif.

Irwin is planning two others that it will not only design, but also own and operate—the Spirit Golf Club in St. Louis and the Ridges Golf Club in Grand Junction, Colo. Spirit Golf Club will be built on land leased from Spirit of St. Louis Airport, the course built in the links style and spread out along the Missouri River valley with views of the bluffs.

The Ridges Golf Club will be built on upland desert and mesa land with "breath-taking" vistas of Mesa National Monument and the Colorado River Valley.

Please keep us informed about projects

Each month, Golf Course News—in cooperation with the American Society of Golf Course Architects—will publish news stories on new golf courses being designed in the United States.

We are asking people who are planning or have begun construction of new courses, or rebuilding or expansion of existing ones, to write to Golf Course News, P.O. Box 767, Yarmouth, Maine 04096.

Golf Course News is particularly interested in:
• The city and state of the course.
• The owner, topper, developer or architect.
• The number of holes and total yards.
• Whether the course is private, public or municipal.
• The target date for completion.
• The type of terrain or any outstanding features of the layout of the course.
• Color or black and white photos of unique holes.

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James Brandt — a turfgrass pioneer for 'the educated'

BY VERN PUTNEY

As with so many future golf course superintendents "way back when," James W. Brandt learned the game "from the ground up," gaining national and international status on the way.

The Jenks, Okla., native, who retired last winter after 35 years as superintendent at Danville (Ill.) Country Club, launched a near-lifetime connection with the sport by "from the ground up," Turf Center, Inc., has begun her first-hand how a turf management program at Okla-homa State University, so he con- tinued working summers at the golf course while studying soils, field crops and plant pathology, earning a bachelor's degree in agronomy in 1948. After receiving a master's degree in agronomy from Purdue University in 1950, he became an assistant superintendent at the famed Tam O'Shanter Country Club in Niagra Falls, Ill., which was host- ing the "World Championship of Golf" tournament at the time. He learned first-hand how a course was prepared for a major tourna- ment. The next year, Brandt became director of golf for the city of Indianapo- lis. Served as a director in 1962 and 1963. While at Indianapolis, Brandt was elected secretary of the Indiana GCSA, but longed for the Midwest Regional Turfgrass Foundation Award in 1981 and the Outstanding Lifetime Service Award of the Central Illinois GSA in 1988. He has spoken at seven international Turfgrass Conferences. Brandt notes one big change in the superintendent's job. When I applied for the job at Danville, there were only two other candidates. My successor was chosen from among 45 applicants. "When a desirable position be- comes available, there are many well-qualified candidates." He was responsible for hiring all personnel to operate the six mu- nicipal courses, buying all supplies, and formulating maintenance pro- grams for the courses. "Probably the greatest achieve- ment there was the purchase of spraying equipment for each course and formulating the spray programs to eliminate dandelions and plantains from the courses," he says. When Brandt went to Indianapo- lis, courses were being dragged with chain link fence drags to elimi- nate the dandelion seed heads and were being mowed with cycle bars to try to control the seed head spikes of the plantains. While at Indianapolis, Brandt was elected secretary of the Indiana GCSA, but longed for the day-to-day and hands-on in- vovlement of his own golf course. The Danville Country Club post became available and he was hired in March 1953. At that time, the only organized Illinois superintendents group was the Midwest Association, whose meetings were in the Chicago area. Attendance usually required an overnight stay. Brandt thought a similar organi- zation was needed in central Illi- nois, because climate and mainte- nance problems are quite different there. So he and Joe Kelly of George A. Davis Co. in Chicago contacted area superintendents, and in June 1954 the Central Illinois Golf Course Superintendents Association was formed. Brandt was elected president. He was elected another four terms. The 16 charter members have increased to 143, of whom 121 are current superintendents. Brandt in 1968 was president of the Midwest Regional Turfgrass Foundation of Purdue University, and with Ben Warren and Bert Rost founded the Illinois Turfgrass Foundation. This body was the prime mover in furthering turfgrass research at the University of Illinois' Ornamental Horticulture Department. Brandt headed that group in 1962 and 1963. Brandt was an early adviser to the turfgrass program at Danville Area Community College, and regularly used students to allow them to complete their college occupational experience. For 13 years, Brandt was superintendent-general manager at Danville CC, but returned to be- strictly superintendent when the position became too demanding. Brandt received the Illinois Turfgrass Foundation Dis- tinguished Service Award in 1981 and the Outstanding Lifetime Service Award of the Central Illinois GSA in 1988.

At 16, he began working on the maintenance crew there under John Price and decided to make this interesting and challenging profession his career. That long-ago choice was capped last February at the annual Golf Course Superintendents Associa- tion of America's Congress, where Brandt received the group's 1989 Distin- guished Service Award, an honor reserved for those who have ex- ceeded over a lifetime of work in the industry.

The 37-year GCSAA member served as a director in 1962 and became president in 1968. The road to the top was long but rewarding. When Brandt was a teen-ager, most superintendent positions were filled on an appren- ticeship basis. Brandt decided a college education would better prepare him for such a career. There was no turf management program at Okla- homa State University, so he con- tinued working summers at the golf course while studying soils, field crops and plant pathology, earning a bachelor's degree in agronomy in 1948. After receiving a master's degree in agronomy from Purdue University in 1950, he became an assistant superintendent at the famed Tam O'Shanter Country Club in Niagra Falls, Ill., which was host- ing the "World Championship of Golf" tournament at the time. He learned first-hand how a course was prepared for a major tourna- ment. The next year, Brandt became director of golf for the city of Indianapo- lis. Served as a director in 1962 and 1963. While at Indianapolis, Brandt was elected secretary of the Indiana GCSA, but longed for the day-to-day and hands-on in- vovlement of his own golf course. The Danville Country Club post became available and he was hired in March 1953. At that time, the only organized Illinois superintendents group was the Midwest Association, whose meetings were in the Chicago area. Attendance usually required an overnight stay. Brandt thought a similar organi- zation was needed in central Illi- nois, because climate and mainte- nance problems are quite different there. So he and Joe Kelly of George A. Davis Co. in Chicago contacted area superintendents, and in June 1954 the Central Illinois Golf Course Superintendents Association was formed. Brandt was elected president. He was elected another four terms. The 16 charter members have increased to 143, of whom 121 are current superintendents. Brandt in 1968 was president of the Midwest Regional Turfgrass Foundation of Purdue University, and with Ben Warren and Bert Rost founded the Illinois Turfgrass Foundation. This body was the prime mover in furthering turfgrass research at the University of Illinois' Ornamental Horticulture Department. Brandt headed that group in 1962 and 1963. Brandt was an early adviser to the turfgrass program at Danville Area Community College, and regularly used students to allow them to complete their college occupational experience. For 13 years, Brandt was superintendent-general manager at Danville CC, but returned to be- strictly superintendent when the position became too demanding. Brandt received the Illinois Turfgrass Foundation Dis- tinguished Service Award in 1981 and the Outstanding Lifetime Service Award of the Central Illinois GSA in 1988.

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She's got 'a ticket to ride'

Jan Beljan, Rachel Therrien and Alice Dye are the only three women among the 200 golf architects in the United States. Beljan and Therrien are profiled here. See page 14 for a story on Dye.

BY VERN PUTNEY

Jan Beljan is high on travel. Golf has been her ticket to faraway places.

However, her role as course architect/senior designer for Tom Fazio of Jupiter, Fla., initially brings puzzlement from counterparts in foreign countries. The latest example came in April in Japan. She later learned from the translator that there is such a desire for courses there that it would be easy to be a "golf vagabond." I had the good fortune to meet her ticket to the future. Her long-range goal was to become a "very good architect." Therrien sensed almost immediately that golf was her ticket to the future. Her view on up," she says. "I made the decision to become a very good course architect." Sixteen years later, she's comfortably in that role with the firm of Geoffrey S. Cornish and Brian M. Silva of Amherst, Mass.

Her path to that position took several detours, each one providing in-depth background. Therrien literally learned all aspects of the game "from the worm's eye view on up," she says.

Shop association with Bangor pro Austin Kelly was pleasant, but nature lover Therrien wanted to experience golf in the field and behind the scenes. Kelly the next summer arranged her transfer to the maintenance staff. "I am delighted to have been associated with Little and Little in Raleigh, N.C., who had given me that opportunity," she says.

Times Square and within the most populated urban setting in the United States. "Westchester County is an incredible setting for golf courses. I had 40 to study within a 10-mile radius of Winged Foot. I did not keep score while playing Winged Foot because my chief interest was in experiencing, not so much the numbers, but what was required to play either the East or West course. I could reach the greens in regulation if I put my mind to it, but I was more captivated by course subtleties."

After one year at Winged Foot, Therrien moved with Horton to nearby Westchester Country Club in Rye. Her six-year stint there as landscape manager and assistant golf and grounds superintendent for 350 acres of private recreational facilities involved managing 45 golf holes, tennis and related land uses, and preparing the tournament sites for professional golf and tennis.

The long-range task at Westchester was to restore the golf course and club grounds. Holes were rebuilt, reseeded and replanted, fairways contours and ponds expanded.

"Working with Horton, contributing to and implementing parts of the planning framework for this rehabilitation work was a rare experience. Horton is a most knowledgeable and professional person, and never fears a challenge," says Therrien.

While pursuing a master's degree in landscape architecture at North Carolina State University in 1988, Therrien was from 1986 to early 1989 project manager/designer with Little and Little in Raleigh, N.C., involved in this process are engineers, hydrologists, environmental specialists, landscape architects, land planners, contractors, irrigation specialists, golf course superintendents and agronomists.

Speaking with prospective clients and former colleagues who have demonstrated a desire to work at their job with dedication and hard work, Therrien has learned the value of a ticket to a future of golf course design.

Responsibilities have ranged from planning (preliminary routing, final routing, clearing, drainage, earthwork, grassing, circulation, erosion control and presentation drawings) to specifications writing and the interpretation of blueprints. Therrien was able to show the client how to design and build a golf course.

From boots to drafting, Therrien's learned ropes

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CURRENT RESEARCH

**WHY THE TWO TEE SYSTEM IS GAINING MOMENTUM**

1. There is a new diversity among women players. The type of player has changed and more women with less previous experience are playing. Because of this disparity, two tees should be created to accommodate the various types of women players. The longer yardage tee should provide for a course to be played from 5,400 to 6,000 yards, while the shorter yardage forward tee should provide for a course that measures from 4,600 to 5,400 yards.

2. Women are not the only consideration. The use of the golf cart has prolonged the playing activity of elderly players. They too would be able to use the forward tees to have a challenging, yet playable course that would accommodate their difference in strength. Courses have extended holes for stronger players, but have neglected shortening holes for those with lesser strength.

3. Junior golf programs are not limited to the teen players, who have bargaining strength and need to sharpen their accuracy skills. Instead, junior golfers are learning the game at younger and younger ages. By offering them a shorter distance forward tee placement, these young junior golfers will find golf more enjoyable, and will be more likely to continue to find golf both rewarding and interesting throughout their lives.

4. The new forward tee system would return playability of the course to the original intent of the design of the fairway in front of the forward tee.

This same research shows that low handicap women hit the ball 85% as far as the men do and the average woman hits the ball 75% as far as men do. Using these statistics, it would indicate that the low handicap woman golfer would be most comfortable playing a course that is approximately 5,400 yards long and the average woman golfer would find golf most pleasurable on a course that is 4,800 yards. The current survey of women’s golf courses shows that 75% of these golf courses are overwatered. Women “have become a big economic factor in golf courses, according to the latest figures from the National Golf Foundation.”

**Costs for forward tees spelled out**

The following breakdown represents the average cost of creating a new 600-square-foot forward tee:

- **40 yards good sand or topsoil (S12/yard)**: $480
- **600 sq. ft. bentgrass sod, surface (6.30/ft. laid)**: $350
- **600 sq. ft. bluegrass sod, surface (3.80/ft. laid)**: $180
- **New irrigation heads, plus installation**: $500
- **Subtotal**: $1,340
- **Labor costs**: $870
- **TOTAL**: $2,210

**Women big bucks at courses**

Women have become a major economic factor for golf courses, according to the latest figures from the National Golf Foundation. NFG figures not yet publicly released show that 22.4 percent, or 5.2 million of the country’s 23.4 million golfers are women, and those women spend an average of $51.50 per year on golf, or a total of $2.7 billion.

At the same time, men golfers spend an average of $560.80 per year on golf.

Senior golfers (those 60 and older) and juniors (6-19-year-olds) — many of whom would use the forward-yardage tees — also spend a lot of money on golf.

The NFG said seniors spend an average of $308.20 a year, while juniors spend $268 a year. The expenses include green fees, club membership, golf apparel, bags, clubs, balls and all other equipment, lessons, driving-range fees, golf-car rentals, caddy fees, food and beverage and tips.

Many in the golf industry feel this large portion of the sports market represents a good deal of the spending involved, should be given the most enjoyable playing experience possible. That includes forward tees and the chance to get reasonable scores.

Women “have become a big economic factor at the club, so what we need to do is give them a manageable golf course,” says Alice Dye.

*In weekday golf they (courses) need to welcome new women to try out the game, as well as their families. The course should be welcoming to the handicapped too, as many of these golfers are overwatered.*

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Curtis a pioneer ahead of her time

Margaret tirelessly promoted 'women's tees' in the early 1900s but few paid attention.

Alice Dye's campaign for forward tee markers recalls the dream of the pioneer in that movement.

Margaret Curtis of Essex County Club in Manchester, Mass., who with sister Harriot donated the Curtis Cup which is played for alternately in England and the United States by selected teams of amateur women, was an unflagging advocate of that revolutionary idea.

Margaret, Ladies' National Amateur champion in 1907, 1911 and 1912, didn't rest on those laurels. She was tirelessly devoted and innovative in promoting golf.

The Curtis sisters' membership at Essex dated from the club founding in July 1893.

The late Eugene S. "Skip" Wogan, Essex professional from 1907 to 1954, recalled spending many a morning on the course with Margaret, measuring distances to determine length of carry from the women's tee.

She would often demonstrate the futility of women trying to meet par on certain holes, and the difficulty in carrying over water hazards set up for men.

Wogan's son, Philip A., now a golf course architect based in Topsheld, Mass., didn't escape Margaret's missionary zeal.

"However," he added, "she'd break up these serious sessions with her best 'Silly Billy' joke."

Margaret's sports interest was not confined to golf.

In 1908 at Philadelphia, Pa., Margaret paired with Evelyn Sears for the Ladies' Tennis Doubles championship. Still holding the national golf title, she became the only woman to have held both national titles concurrently.

Margaret was as persuasive as she was talented.

Recovering from an appendectomy in 1906, she was not allowed to play golf. Margaret forced Harriot to practice — and practice pitching and putting. That persistence, and insistence, paid off.


Margaret campaigned hard for a forward movement in women's tees. In 1903, she wrote:

"If a Good Girl is obliged to play a wood club to greens which a Good Man can readily reach with a pitching club, then something probably is wrong."

"Because when we play our golf on courses primarily laid out for men, courses for us are a good deal harder than the architect intended, and relatively much harder than for men.

"As one proof, women's par on most courses is higher than men's par, even though USGA yardages for guidance in computing par make due allowance for men's physical superiority. Ideally, should not par be the same for both sexes?"

"Let's consider the shot to the putting green, the most crucial shot in golf for women.

"Most greens have interesting surroundings, with bunkers, mounds, hollows and generally unlevel surfaces. Such greens usually call for pitch-shot approaches, some with appreciable backspin. But is a pitch the shot which the Good Girl is asked to play?"

"Women's dilemma is further complicated when greens are protected by brooks, ponds and other water hazards. Tactical golfing problems which are merely interesting for men can be serious ones for women."

"A brook crossed the whole fairway at just the questionable distance for two good woods. The sensible woman usually played short, using perhaps a 5 iron to be safe. Then she had to approach the green with a 2-wood." (For the modern woman golfer, that weapon is a now-oumodated brassie. It's too hard to control and hasn't enough clubface loft.)

"Where courses do not have proper women's tees, what steps can be taken?"

"First, a careful course study, including knowledge of what clubs the Good Men use to approach each green. Then, a definite program. In the main, men's golf committees have been sympathetic to women's tee problems."

"Making and maintaining women's tees is not prohibitive in cost. It is a real asset for a club to have a course as popular for women as for men.

"Naturally, we don't want our course made too easy. Stiff courses help players improve. But why not the same par for men and women on each course?"

"It's pretty hard to argue against a competitor in the USGA's Women's Amateur Championship 25 times over a 50-year span, the fourth winner of the Bob Jones Award for distinguished sportsmanship in golf.

"She was termed "a great lady, a great golfer who through the years in every move made in golf has been one of the greatest sportswomen of all time."

ASU chooses Phoenix firm

The Sun Angel Foundation has chosen Jones Studio, Inc., a Phoenix, Ariz., firm, to design the clubhouse for the Karsten Golf Course at Arizona State University.

Foundation President Robert Davies said Jones will be responsible for designing a $3.5 million, 24,000-square-foot clubhouse at the course which will open in September.

"Groundbreaking will take place after the money has been raised by the Sun Angel Foundation," Davies said.

Henry DeLozier, president of Resort Management of America, the course's management company, said, "Jones' energy level and ingenious solutions to typical golf course problems made this decision a simple one."

Groups donate to Cornell research

Arizona Turfgrass Foundation directors to the New York State Turfgrass Association's Matching Funds Program at the NYSTA's annual gathering were the Fingerlakes Association of GCs, the Women's Association of the Fingerlakes, Fcono Turfgrass Association and Hudson Valley GCSCS.

Joseph Hahn of Oak Hill Country Club was an individual contributor to the 3-year-old program which supports turfgrass research at Cornell University.

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For free information circle # 114
Drought threat is real from East to West Coast

Continued from page 1

trees and fairways will still have a pretty high level of maintenance.

However, the northern areas may mandate 40-percent reduction which, Hoos said, would be severe. "It would require decreasing or eliminating watering in the fairways and roughs. Maybe they could water once or twice a week. A lot of grass would be lost."

Most of the turfgrasses in that area are the poa annua, annual bluegrass, bentgrasses.

According to Hoos, under minimal watering conditions, perennial grasses go dormant but "a lot will come back. They will also have to resowed. That makes the seed companies happy."

Some regions are not affected. Oklahoma, for example, often thought of as dry because of the dust bowl era in the 1930s, has not suffered drought conditions. At Oak Tree Golf Club, site of last year's PGA Championship, they have had more water than average the last two years.

"Last year they had 90 percent of normal," Hoos said. "They are in good shape."

The Midwest

In many parts of the country fall rains helped. At Butler National Golf Club in Oakbrook, Ill., golf course manager Oscar L. Miles feels they are more fortunate than many places in Illinois. Their rainfall is normally plentiful because they are close to Lake Michigan.

"We had nice rainfall last fall," Miles said. "It wet the surface 12 inches. However, we are deficient this year. Last year we had 107 percent of normal. November was very wet here. But this year we've had 46 percent in January, 79 percent in February and 75 percent in March."

The moisture isn't replenished when the ground is frozen, he explained.

"We had rains, but the ground was frozen, so it ran off," Miles said of conditions in early winter. "But we've had 1.14 inches recently and that wet ground 8 inches deep. We need substantial rainfall soon. It takes 2 to 3.3 inches of rainfall to wet a foot of soil. We need to have the soil wet 2 to 3 feet deep."

Miles feels conditions farther south and west in Illinois are more severe. A big concern are the trees.

"We won't see it (extent of damage) until budding," he said. Damage shows with less budding and reduced vertical shoot growth.

Scientists make advances in grasses

Developing new turfgrasses and management techniques that will reduce golf course maintenance costs and water use by 50 percent by 1993 remains the goal of researchers.

Relative ranking of evaporation rates for the most commonly used cultivars of the major cool- and warm-season turfgrasses. (*Grown in their respective climatic regions of adaptation and optimum culture regime. Cultural or environmental factors that cause a drastic change in leaf area or shoot density of a given species may result in a significant shift in its relative ranking compared to the other species.)

Relative Ranking

Evap. Rate (%) Cool-Season Warm-Season

Low

Very low <6

7-6

Medium

7-8.5

Hard fescue

Bermudagrass hybrids

Bermudagrass

High

8.5-10

Perennial ryegrass

Tall fescue

Annual bluegrass

Kentucky bluegrass

Italian ryegrass

Scientists have imported water from the town water supply. Another 10,000-square-foot-foot water area on the course is not used for irrigation. TPC has not seen a tree problem yet. However, according to Hoos, severe tree problems will not materialize until next year.

The first sign of trouble is defoliation, he said. "If there is a second year of substantial loss, then you lose the tree. It depends on how efficient the type of tree is and what kind of root system it has. Needle trees are more efficient. They don't transpire as much. But the root system of other broadleaf trees may be better."

At Westchester Country Club in Rye, N.Y., they are in a water-cutback situation. 'If you have your own water, you can water greens and tees, but not the fairways," said Paty Knaggs, superintendent at Westchester. "April 17th, Phase II of the water conservation program started, and then we could water tees and greens."

The Comparative Water Use Rates of turfgrasses species used throughout the United States detail progress in development of superior playing qualities. The differences among 19 turfgrass species used throughout North America are substantial, they point out.

The release of Sahara, a superior Bermuda grass species, holds firm. Excellent research progress also is reported at New Mexico State University, where Dr. Arden Batteberg has developed Sahara, an improved variety of seedbed common bermudagrass soon to be on the commercial market. Dark green in color with exceptional drought resistance and lower growing habit with shorter internodes (tiller turf), Sahara has proven an excellent seed producer. Dr. Terry Riordan at the University of Nebraska is developing new buffalo grasses. The release of a superior vegetative cultivar is due this year, and improved seeded types are expected within a few years.

Reports from Texas A&M, Dal-las, the DSIR in New Zealand, and Penn State and Rhode Island universities detail progress in developing improved bentgrasses with greater heat tolerance, lower water and fertilizer needs, and disease resistance—all without loss of superior playing qualities. The target date of 1991 or 1992 for release of the early, promising new bentgrasses holds firm.

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Golf courses critical care units in droughts

Turfgrass experts have a number of suggestions for care in drought situations.

Nutrition
In drought situations, superintendents have to be cautious about feeding" their golf courses, says Jim Snow of the USGA Green Section's Golf House in Far Hills, N.J.

"You wouldn't want to overstimulate the grass," Snow says. "Too much fertilizer use..." he says. "We'll be cautious with..." take care of the plant structure.

Water
Many factors have to be considered when deciding watering practices, Snow says.

"Good cultivation practices are important because you want the water to penetrate into the soil as uniformly as possible," he says. "If it drops below the pump intake levels, then people won't be able to pump water," he added.

Southern California
Back on the West Coast in Southern California, the Los Angeles and San Diego basins face problems that will become severe with the summer heat.

Hoos cautioned that the Northern California reservoirs serving the Los Angeles and San Diego basins were at 50-percent capacity for storage in April, before the snow melt and any spring rains that arrived.

"If they do not get enough rainfall to recharge the storage this winter, 1990 could be a real problem," he said, noting that normally the reservoir is kept at 75 to 100 percent.

If reservoirs are not refilled, cutback may be necessary in the greater Los Angeles and San Diego areas.

California's desert resorts, an area everyone ordinarily believes is troubled by water problems, were less dependent on "spring rain," Knaggs said. "But we need 6 inches a month to put the reservoirs back to normal. They should be at 50 percent now, and they are at 30 percent."  

The Southeast
In the Southeast, Hoos said that even more irrigation problems plagued the states of Florida, Georgia, and Alabama. "In 1988 — January to May — Florida was OK, From May on, they were behind in water. September to December they had 2 inches of rain. Normally, they get 50 inches in that time."  

According to Hoos, what happens then is that canal levels drop. Lifeline continues through the spring and summer, they could see problems. "Most people irrigate out of the canals. And if it drops below the pump intake levels, then people won't be able to pump water," he added.

Western California
As summer progresses, though, root systems deteriorate and plants must obtain water that enters the soil as uniformly as possible, according to Snow.

"Unfortunately, water use will probably be higher due to a more vigorously growing turf," he says.

In non-drought periods, Hummel says, "Watering frequency will depend on turfgrass species and use, soil type and evapotranspiration." But Hummel said that during drought stress periods, light, frequent waterings will produce higher quality turf than that under heavy, infrequent applications.

Pests
"You wouldn't want to overstimulate the grass," Snow says. "Too much fertilizing use..." he says. "We'll be cautious with..." take care of the plant structure.

Mowing
Snow also suggests hand-watering higher or drier spots on the course.

Snow says that in the northern two-thirds of the United States, maintaining a high-cut turf during the summer causes larger water losses due to the greater leaf area and lower resistance in the canopy to soil evaporation. He suggests that where practical, gradually reduce the mowing height starting in late spring and keep it at that height until early fall.

Traffic
Keeping traffic off the turf areas is important to the turf's survival, according to Snow.

He suggested the course officials look at restricting golf carts to specific areas. An example would be to keep them on the paths, or if the course doesn't have paths, have golfers drive in the rough areas.

The issue of water for golf courses is an ongoing one. Perhaps Butler National Golf Club's Miles has the best philosophy: "It's everybody's responsibility to be responsible."  

Kathy Nessell hosts a nationally syndicated golf television show and is vice president and director of public relations for Landmark Land Co., Inc.

Planning
Architecture
Landscape Architecture
Communications

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Tax act costing clubs millions

Club managers in the United States project a $26.6-million loss as a result of the Tax Reform Act of 1986, according to a poll by Public Opinion Research, Inc., of Washington D.C.

The poll of Club Managers Association of America members, conducted in conjunction with the CMAA, said 29 percent of those polled noticed a slight reduction in usage of their clubs while 9 percent reported a considerable reduction. Greatest losses were reported in the South.

The random poll also found:

• Currently, 18 percent of the club workforce is being paid at the minimum wage. Managers estimate that a $1 increase in the minimum wage will cost the average club about $600 per week, or about $34,000 a year.

• Sixty percent of the sample reported increases in their insurance premiums; however, only 24 percent were able to give actual dollar amounts. The average increase reported was 39 percent a year.

• Twenty-six percent said the new immigration laws have made hiring more difficult. This difficulty, however, seems to be the law’s only significant adverse economic effect on the clubs.

• Fourteen percent of the managers reported a case of AIDS either in the club’s membership (4 percent) or labor force (10 percent).

• Total employment in the clubs served by CMAA members was reported as 265,957, up from 229,942 in 1986.

• Fifty-six percent of managers claim to have heard about the requirement to have a hazard communication program while 45 percent say they actually have such a program. (See story on page 1.)

More information about the poll is available at CMAA’s national headquarters at 301-229-3600.

Prohibited FiFFRA changes to be unveiled

Proposed revisions to occupational safety requirements under Federal Insecticide, Fungicide and Rodenticide Act will be made public in late June or early July when they are presented to the Office of Management and Budget.

A final ruling on the proposals is expected in October.

Some 40 to 45 people from the Council for Lawn Care Information attended a hearing on the requirements in Washington, D.C., in May.

The council was formed because of the adverse media attention and various concerned groups across the country, and also the Public Citizen report on health hazards associated with lawn care chemicals, many of which are used on golf courses.

PLCAA names state gov’t affairs director

Thomas Delaney has joined Professional Lawn Care Association of America as new director of state government affairs. He will work directly with state and local governments on lawn care issues.

With the Georgia Department of Agriculture, Pesticide Division, the past 15 years, most recently as agriculture manager, Delaney’s responsibilities have included administration of the pesticide application certification, recertification and licensing programs.

Delaney currently chairs the American Association of Pesticide Control Officials chemigation committee and represents AAPCO on EPA’s Interagency Pesticide Usage Data Planning Committee.

CMAA has new home

Alexandria, Va., will be the new national headquarters of the Club Managers Association of America.

Relocation from its Bethesda, Md., will be completed Sept. 5. A grand opening is planned Sept. 19 during CMAA’s annual leadership conference.

GOVERNMENT UPDATE

IRS demanding that companies switch to accrual method

Several members of the American Seed Trade Association reported Internal Revenue Service insistence that their accounting method be changed from cash to accrual.

The 1986 Tax Reform Act reportedly is the basis for IRS position.

Certain exemptions under which a firm can continue the cash method were cited by ASTA legal counsel. For a copy, contact Terry Sullivan at the ASTA office.

BENTGRASS

“We planted the 12th hole on Singing Hills’ Willow Glen Course to SR 1020 two years ago, and it performed admirably. What’s really significant is that members keep asking what we’ve done to the 12th hole that makes it putt so well! The members like SR 1020’s performance from the player’s point of view; we like that too, but we also value that we haven’t had to change our normal greens maintenance program to achieve the results.”

David Fleming, C.G.C.S.
Superintendent, Singing Hills Country Club
El Cajon, CA

“Finally! New Cultivars Bred To Meet the Needs of the Superintendent and the Golfer!”

At Seed Research, we listen to your needs. You’ve been wanting a bentgrass that’s tough, looks great, and is easy to maintain... but one that’s also fine-textured, with good putting green quality. And available.

So when the bentgrass shortage became apparent in 1983, we acted quickly and acquired parental germplasm from two of the finest bentgrass collections in the country – the University of Rhode Island and the University of Arizona. From those collections, we developed two exciting new creeping bentgrass cultivars, Providence (SR 1019) and SR 1020.

Evaluation on golf courses and at universities has shown that both these bent grasses produce the kind of turf you demand: dark green, aggressive, competitive, easy to manage, good disease resistance, good stress tolerance, and compatible with existing bents for overseeding.

And, for real golfers like Peter Trenham, SR 1020 has proven it provides everything desired in a putting green bent: fine texture, uniform surface, and most importantly, an absence of grain, so the ball holds the line for true putting accuracy. SR 1020 is already in production, and excellent quantities of certified seed are available. Providence will be available in August of 1989. With either of our exclusive new bent grasses, you can look forward to a good-looking grass that will give you the performance you demand and the putting green quality your golfers prefer!

Peter Trenham
President, Philadelphia Section PGA
St. David’s Golf Club
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More Varieties Available
Other Seed Research cultivars bred for golf courses include:
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- Titan Tall Fescue
- Trident Tall Fescue
- Prominent Creeping Bentgrass

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This is how serrated tussock looks in its various stages of development: (A) spikelet, six times the real size; (B) floret, 16 times the real size; and (C) Caryopsis, 16 times the real size.

Oregon
From page 1
Seed growers must burn their fields each fall to purge them of the weeds and disease that endanger the grass seeds. Without this process the industry is in serious danger.

"We need to tell people in the state of Oregon, and across the country, that we really don't want to ban this industry, because it means a lot," said a spokesman for the Oregon Fine Fescue Commission.

"People don't know this industry contributes $200 million a year to the Oregon economy, or that we are raising seed that is shipped to every state in the nation and to 60 foreign countries. They only know the field-burning part.

"There are more than 300,000 acres of grass seed in this state that pay property taxes; they pay for schools, fire departments... emergency services and a lot more. And where are they going to replace that revenue that those growers are paying?"

The state's five grass seed commissions -- Oregon Fescue, Tall Fescue, Fine Fescue, Highland Bentgrass and Orchard Grass Commissions -- are raising money through members and others in the industry to fund an educational advertising campaign.

Meanwhile, legislators, industry officials and field-burning proponents are negotiating.

If the field-banning legislation does not pass, the law will remain as it is now -- at 250,000 burnable acres costing $3.50 per acre.

But two petitions that would ban are being circulated; and if the necessary 63,000 signatures are collected on those petitions by the deadline of July 1990, voters will decide the issue in the November 1990 election.

That means the debate on the issue will be going on during the fall field-burning.

"The timing couldn't be worse," an OFPC spokesman said.

Contributions can be sent to: Oregon Seed Council, 866 Lancaster SE, Salem, Ore. 97301.
Beditz
Continued from page 1

"In five years, we hope to improve at least as well as in the past five years when the membership jumped from 1,800 to 3,600," he says. "We think we can beat that goal with our newfound research and bigger staff.

"Five years ago when we really started digging, there was not as much information to go by. Now, we have advanced our technology so we can face problems with a good idea of what causes them and how to fix them," Beditz says.

The board believes Beditz is the man to lead the NGF into the challenging years ahead.

"I personally believe (Beditz) may prove to be one of the most dynamic and far-sighted leaders the NGF has ever had," said board Chairman W. Morris Walton, president of Bankers Trust Co., in announcing Beditz's appointment.

"The foundation has grown significantly in both scope of services and stature over the past five years," said Beditz. "This has not only been an integral part of this story but has also demonstrated exceptional leadership qualities during his tenure as a senior management member."

Beditz, who was promoted to executive vice president in 1987, joined the NGF in 1984 as director of research. Last winter he was named chief operating officer of the National Golf Foundation, a for-profit subsidiary that the NGF formed to stimulate golf course construction through feasibility studies and other planning and development services. Beditz says the new entity will have the financial resources to work with the foundation.

"Both the selection committee and full board were unanimous in their belief that Dr. Beditz was indeed the best qualified to lead us into the 1990's," Walton said.

A recognized authority in golf market research and development in the United States, Beditz has been a major force in the NGF's emergence in recent years as a major source of U.S. golf course planning, development and operational information and expertise. Under his direction, the NGF has created, a statistical database that is being used by manufacturers, architects, builders and developers and golf course management consulting firms.

"There are 1,500 charted companies with vested interests. There are golf manufacturers, turf producers, publishers, golf associations, golf course architects, builders, consultants, ad infinitum."

"We're searching for some qualified men to help us now as we have our hands full of research and golf course development," Beditz says. "At the Golf Summit this past November) we explained the industry plan to develop the potential of the golf industry over a decade. We have approximately 1,800 courses now and we expect to have 3,600 courses within five years. And to double that amount in the next five years.

"If the membership continues to grow and we get the needed financial support, there is no reason why we cannot lay out the fundamentals to get a golf course built.

Designing women
Beljan gains respect in the industry ...

Continued from page 13

Beljan became a summer and weekend laborer on the golf course under her golf pro-superintendent father. "Of course," she underlines, "these were morning duties."

"What a wonderful way to learn golf — at such a young age and from the many support facets of golf!" she says. When the family moved to Kingwood, V.V., Jan enrolled in landscape architecture at West Virginia University on a scholarship.

She continued her love affair with golf, commuting to the university and working at Presto Country Club, initially as a pro shop attendant.

Beljan was chosen as assistant superintendent. Her younger brothers and sisters worked in the pro shop. Fifteen to 20 years ago it was quite an oddity to see a woman maintaining a golf course, she recalls. Jan and her sister Pat, five years her junior, were similar in appearance. "Golf often would have to go in different directions to avoid the woman operating equipment. Then they'd wonder how Pat changed clothes and got out on the course on a machine so quickly after taking their money in the pro shop."

Beljan learned how a golf course could be maintained on a limited budget — with hard work, long hours and total dedication. Dawn till dark, seven days a week, was common during the playing season.

"Most assistant superintendents do not have the opportunity to see the other side of golf, particularly from the workers' point of view, said Beljan. "At every club, there are players, male, female and good and not-so-good. There was always a conversation in the locker rooms by the low-handicap women who should play from the same tees as the high handicappers, because the former generally were young (53ish) and more athletic. So as amusing, etc."

"He expected to see a nephew and was surprised to find a niece instead. He took an interest in me because of my background, and arranged for me to meet Tom Fazio at the 1978 PGA Championship at Oakmont."

"I have seen golf course management and design work change from much manual effort to skills highly mechanized and technical. More surprisingly, perhaps, I've witnessed a male-focused culture give way to a more cosmopolitan one."

"Therefore," he said, "the goal of our family golf program is two-fold: To introduce more non-golfers to the game and to increase the frequency of play among established golfers.

JUNE 1989

"If everyone just does a little bit or more, there will be plenty of funds. The more funds, the more research, the more recommended golf courses. You can't beat that."

Bob Drum is a longtime golf writer and television commentator.

Family Golf
Week promoted

The National Golf Foundation has designated the week of July 9-15 as National Family Golf Week as part of its fourth annual summer-long campaign to encourage golfers to share the experience with family members and friends.

This year's campaign will include advertisements in leading golf magazines; posters that will be distributed to the nation's 15,400 golf courses, and a promotional JUNE event in June of the 1989 Jack Nicklaus Family Golf Award.

NGF President Joseph F. Beditz pointed out that research shows that one of the main reasons today's golfers do not play more often is because it takes them away from their families.

"Therefore," he said, "the goal of our family golf program is two-fold: To introduce more non-golfers to the game and to increase the frequency of play among established golfers."

... and Therrien, too, is at ease

landscape architects and land planners.

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K mart ad not 'A-OK' with fellow pros

BY VERN PUTNEY
Fuzzy Zoeller was out of bounds in doing an ad in the April issue of Golf Illustrated that said, "Make a stop at K mart before you head for the golf course." That declaration triggered a resentful stance by most golf professionals — many of whom are superintendents — around the nation. And, according to Will C. Mann, owner-director of golf at Quarry Hills Country Club in Graham, N.C., many amateurs to whom the ad was beamed are equally upset at what they feel is Zoeller's insensitivity to his fellow PGA members.

"Such an and seemingly endorse-ment of a discount department store at the direct expense of the pro, most of whom derive a major source of their income through shop sales, is surprising and disappointing," declared Mann.

Mann, vice president of the Caro-linian PGA, is aware that Zoeller, ironically the son of a pro, has contributed much to golf.

"However," Mann asserts, "the ad proclaims, 'We carry a com-plete line of quality signature golf clubs and just about everything else for your golf game, short of the green.'"

"Zoeller must bear responsibil-ity for that statement, and for simi-lar scripting in national TV spots during recent tour tournaments."

Heated exchange
"Short of the green, indeed," fumed Mann. "How about short of the golf ball, rough, bunkers, greens, putting green, pro shop, club repair, practice tee, etc.? And, most importantly, short of a PGA golf professional."

Mann further wrote Zoeller, "I think you will find it difficult giving clinics off K mart parking lots. Better yet, when you get the yips, or when the ball gets going side-ways, call your local K mart for a lesson and see how much help you get."

"You have made a lot to golf and we all are thankful and appreci-ative of your efforts," Mann told Fuzzy. "However, in suggesting that club members not support their PGA pro, you have simply slapped every PGA member in the face. In selling us out, you may well have just become 'Public Enemy Number One' to the PGA golf professionals."

Zoeller's plug for K mart might be compared to a Lee Iacocca pub-lic stamp of approval on Toyota's line, said Mann.

Zoeller's response to this back-
ON THE MOVE

Rafos heads Cushman division

Stuart Rafos has been named a vice president of Outboard Marine Corp. and division manager of the company’s Cushman Division, headquartered in Lincoln, Neb. Rafos has replaced Clarence P. Bangert, who retired after 42 years with Cushman.

Before joining OMC, Rafos was president of FWD Corp. in Clintonville, Wis., which manufactures firefighting vehicles and other equipment for the construction, municipal, public utility and military markets.

He earlier held management positions in the Construction Equipment Group and other divisions of Ingersol Rand Corp.

He holds bachelor’s and master degrees in business administration degrees from Wagner College in New York.

Rafos “has a track record of achieving profitability and stimulating product innovation,” said OMC President and Chief Operating Officer James C. Chapman.

Tara Ferncroft’s Johnson takes on 2nd course

Presiding over a sprawling golf complex that might also include athletic fields and tennis courts can be a giant task.

Overseeing two major golf courses 10 miles apart is even more unusual and taxing.

Paul Johnson, the past 19 years course superintendent at Tara Ferncroft Country Club in Danvers, Mass., since January also has been supervising golf operations at Tara Colonial Country Club in Lynnfield, Mass.

Tom Flatley Co., has bought the courses.

Johnson was quick to delegate Colonial course superintendent duties to longtime Ferncroft aide Wally Orechia and Scott Mailey.

Their help is requisite, because Johnson and associates are building another nine holes at Ferncroft. The par three course will take some playing strain off the 18-hole layout.

Among Colonial renovation and revitalization projects are overseeding, adding machinery, and replacing the irrigation system.

The Boston Five Classic, a tour stop for the women professionals, is due at Ferncroft July 20-23.

Do you know what these innovations were designed to do for golfers?

The innovative clubheads atop this page may puzzle you. Fore-Par’s innovative practice green markers shouldn’t. They’re simple. One piece. Designed to last. Made of cast polymers, with fused components that will never come apart. They’re designed to take abuse. From weather. From over-zealous players. Even vandals. There’s no paint to chip or peel—the color is impregnated, even in the bright white shafts. The head and numeral are integrally cast, and the logos are silkscreened. You can specify Fore-Par markers unique to your course. Choose from solid-color or translucent heads. Plain or with numerals or your logo. In any combination of colors. Any. Best of all, these markers are designed to be absolutely maintenance-free. Practice green markers from Fore-Par. The innovators. Send for our catalog of quality, innovative golf course equipment and accessories. Fore-Par, 16761 Burke Lane, Huntington Beach, CA 92647 (714) 842-8494.

For free information circle #117

JUNE 1989
Fermenta signals changes

Fermenta Plant Protection Co. of Mentor, Ohio, and Houston, Texas, has changed its name to Fermenta ASC Corp.

"The name change positions Fermenta in the agricultural and specialty chemicals industries and signals our desire to grow in the business, develop new technologies and products in these fields and beyond," said Urbanowski, who is President and CEO of the parent company, Fermenta AB, and the strong support it provides to us.

Atwater Strong expanding

Atwater Strong Inc., a leaf blower and vacuum company, has expanded into new offices and warehouse space at 1355 Evans Ave. in Akron, Ohio.

Manufacturing will remain at the Atwater facilities, but sales, marketing, and new product development and inventory has been moved to the Akron site.

Atwater Strong Vice President of Sales Thomas J. Barrett said the expansion "is a visible sign of Atwater Strong's bigger commitment to northeastern Ohio and to our dealers and customers nationwide."

He added, "Now it's possible for us to support our dealers with the kinds of programs it takes to compete in today's outdoor power equipment markets."

Atwater Strong originated commercial blowers for leaf and litter cleanup and markets them under the trade names Lo-Blo, Lit-R-Blo, and Mi-T-Vac.

Rain Bird cites distributors

Turf Equipment Supply Co. of Las Vegas, Nev., and Wolf Creek Co., Inc. of Trotwood, Ohio, have accepted for registration the new flowable formulation of Morestan 4 Ornamental Miticide from Mobay Corp.

Mobay also announced the EPA has accepted amended labeling of Oftanol 5% Granular insecticide.

The water-based flowable formulation of Morestan 4 is registered for use on flowers, shrubs and trees to control mites and mealybugs. It has no solvents that burn plants.

John Ivey, manager of research and development in the Specialty Products Group, said, "The liquid flowable formulation is more convenient because it is easier to measure. Also, its general physical characteristics allow for greater efficacy."

The smaller particle size of the formulation allows for more thorough distribution on the leaf surface, thus better coverage and better control. It also eliminates the problem of visible residues on practically all leaf surfaces.

The Oftanol 5% Granular, which was already registered for use on turfgrasses, can now be used on ornamental areas as well.

"A lawn care operator can now go from treating a lawn for insects directly to treating ornamental beds. He doesn't have to change products in the middle anymore," said Hal Paul, Specialty Products Group Marketing manager. "The same goes for golf course superintendents. They can go straight from treating around the 18th hole to treating around the 19th hole."

Oftanol 5% Granular is an organophosphate insecticide that controls both soil and surface-feeding insects.

Flowable Morestan 4 OK'd

The Environmental Protection Agency has accepted for registration the new flowable formulation of Morestan 4 Ornamental Miticide from Mobay Corp.

Bob Jackson, Superintendent MEADOWLANDS Country Club

"...The water quality and algae problem were cleaned up; so last year we purchased our second OTTERBINE® Aerator."

"...The water quality and algae problem were cleaned up; so last year we purchased our second OTTERBINE® Aerator."

Literally thousands of golf courses around the country are already benefiting from OTTERBINE® Aerators. These aesthetically pleasing, floating mechanical aerators help keep water hazards clean and clear by controlling algae and its unpleasant odor.

Available in a wide variety of models: OTTERBINE® Aerators serve as an on-going water management tool. They reduce or eliminate the need for chemicals — And when water is used for irrigation, help to purify the water before it passes through the irrigation system.

Highly efficient, economical and self-contained, OTTERBINE® Aerators are safety tested and approved by the Electrical Testing Laboratory. Simple to install and easy to maintain, their elegant beauty and "down-to-earth" practicality make them a welcomed addition to any course.

For more information call or write to:

Barebo, Inc.

P.O. Box 217, R.D. 2, Emmaus, Pennsylvania 18049 • 215/965-6018

For free information circle #118
The Golf Course a 'classic'
Architects profiled and world's courses listed

"The Golf Course," now in its fifth printing, has been chosen by The Classics of Golf to be one of six books it will make available to subscribers this year as among "the finest golf books that have ever been written."

The Golf Course is said to be the widest-selling golf "coffee table" book in history. Known as the "bible" of course superintendents and golf architects, it is written by Geoffrey Cornish and Ronald Whitten, contains the history of golf architecture. Included are profiles of 600 architects and listings of 16,000 courses worldwide and their designers.

The handsomely illustrated (367 pages) book features special photography by Brian D. Morgan and foreword by Robert Trent Jones. Available at many pro shops, it also is obtainable direct from W. H. Smith, 80 Distribution Blvd., Edison, N. J. 08817 at $19.92 per copy including postage.

Introducing Cutless.
A new kind of turf growth regulator that gives your course a bottom line boost:

More playability.
**NEW PRODUCTS**

**Vanguard engine line added**

Briggs & Stratton is making a new Vanguard engine line. The 4.5-, 8.5- and 12.5-horsepower singles and 12.5- and 15-horsepower V-twins are designed for maximum operator comfort and quiet operation. The 4.5 OHV engine features full pressure lubrication for outstanding bearing life, and the spin-on oil filter adds lube efficiency. The 200-square-inch tri-phase air filter insures clean air to the carburetor.

Contact Briggs & Stratton Corp., P.O. Box 701, Milwaukee, Wis. 53201; (414) 259-5333. Circle No 269

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**Jacobsen adds power and speed**

Jacobsen has improved on its Turfcat models by adding more power and faster ground speeds to its top-of-the-line Turfcat out-front rotaries—the 36-hp gas T436G and 22-hp diesel T422D.

The gas-powered, four-cylinder Continental engine makes the T436G the most powerful Turfcat, producing up to 58-foot pounds of torque.

The new 72-inch Deep Tunnel rotary deck mounts up front on both units for productive cutting of tall, thick grass with smooth, efficient clipping discharge.

Jacobsen's double-range transaxle now gives 10.1/2 mph in high range and 5 1/2 mph with increased engine torque for driving the rotary deck and a variety of other implements.

The two machines have hydraulic PTO implement drives that use specially designed high-efficiency gear motors to power the front-mounting implements. The company says this design eliminates maintenance problems associated with many moving parts of a mechanical PTO.

For more information, contact the Marketing Department, Jacobsen Division of Textron Inc., 1721 Packard Ave., Racine, Wis. 53403. Circle No 231

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**Cutless also reduces your water use, resulting in less turf wilt. And lower irrigation costs.**

But Cutless does more than that. Much more. It also gives your turf a rich, darker green color.

Because Cutless-treated grass grows at a slower rate, there's also a dramatic reduction in clippings. Up to 50% less. With less mowing frequency. Also up to 50% less. You not only save time and labor costs, you can also manage your hard-to-mow areas more efficiently.

Here's another added benefit with Cutless. As your turfgrass grows up thicker and more competitive, there's less room for troublesome weeds to interfere. Cutless also helps crowd out Poa annua for conversion to a more desirable turfgrass such as bentgrass.

Don't just take our word for Cutless. Take it from Scott Niven:

"I've reduced clippings 30 to 50% when we mow frequently. My guys don't have to empty the baskets as much, so we save time and money on labor. But I think the best advantage is the reduction in the amount of water you have using Cutless. It's a marked difference.

"Initially, you get so little discoloration with Cutless that a golfer would never notice it. But after 4 weeks, the difference was between night and day on how dark green the Cutless turf was.

"Cutless helped us convert from 80% Poa annua to over 95% bentgrass within five years. But I'm just as impressed with how Cutless creates a much thicker turf. It makes the grass as tough as nails, helps the ball sit up higher for our golfers."

---

**Distant pruning made easier**

The development of Power Pruner by Technic Tool Corp. has made pruning trees easier and less expensive.

Power Pruner's patented telescoping splined aluminum drive shaft extends or retracts with a twist of one knob from 7 feet to 11 feet so you can trim up to 10-inch limbs 17 feet high while standing on the ground.

The gas-driven 16-pound pruner has a patented cutting shoe that steadies the tool for a quick, clean cut.

It is designed for safety with its telescoping shaft that allows workers to stay clear of falling branches.

Contact Technic Tool Corp., 0309 Second St., Lewiston, Idaho 83501; 1-800-243-9592. Circle No 251
Kubota unveils wheel loaders

Two new articulated wheel loaders, the R310 and R410, have been added to Kubota Tractor Corp.'s growing product line of compact machinery. They are said to be ideal for construction and landscaping. They have a strong channel frame design and feature L.S.T.—load sensing transmission—which automatically changes from high speed with low torque to low speed with high torque as load conditions vary.

Each is equipped with a liquid-cooled, four-cylinder super five engine. Both engines are designed for low noise and offer a self-bleeding fuel system. The R310 has a TVCS injection system.

These loaders have four-wheel drive and fully articulating steering at angles of 41 degrees for the R310 and 40 degrees for the R410.

Contact Kubota Tractor Corp., 550 W. Artesia Boulevard, Compton, Calif. 90220. Circle No 234

Sun Caddy System taps solar power

The Sun Caddy System, which charges golf car batteries by converting sunlight into direct electrical current and is said to save money and energy, has been introduced by McCoy Industries, Inc.

The Sun Caddy canopy over the golf car collects solar energy as a continuous power source when exposed to sunlight, allowing cars to travel more rounds without a charge.

McCoy says courses can reduce battery charging by 70 percent or more, and extend the life of batteries by reducing the number of conventional charges they must take. A solid-state charge meter is included.

The lightweight frame and easy installation allow the Sun Caddy to be removed from old cars and installed on new ones easily. It fits any make or model of electric golf car, McCoy says.

For more information contact McCoy Industries, Inc., P.O. Box 2200, Suite 388, Sarasota, Fla. 34236; 813-371-0139. Circle No 245

Get a firm grip on key buying influences.

Golf Course News. The newspaper of golf course business. Edited for your key buying influences—superintendents, golf course architects, developers and builders, and greens committee chairmen. 20,000 in all—guaranteed.

Golf Course News, published monthly, is edited for the busy reader with to-the-point articles and departments of high interest. Government Update. New Courses, Equipment News, New Products and Literature, Moves and Promotions, Superintendent Focus. It's fast-paced. Wide ranging. And designed to fill a void in the field that will provide the ideal environment for your product or service.

Call Charlie von Brecht, publisher, today for more information and advertising plans that save you money. Advertising deadline for the July issue is June 16th. We'll help you come to grips with your sales projections.

July Feature: Mowers, Tractors and Accessories.

7901 Fourth Street, Suite 311
St. Petersburg, FL 33702
(813) 576-7077
Cushman makes low-profile sprayers

Two new turf sprayers with low-profile tanks are now available from Cushman Division of Outboard Marine Corp. The sprayers are available in either a 120- or 150-gallon tank size, and both are designed to mount easily on Cushman Turf-Truckster chassis.

Both spray tanks are lightweight, centrifugally cast fiberglass, colored to resist ultraviolet action on the contents. The tanks feature a new quadra-jet agitation system that constantly recirculates the contents to maintain proper chemical mix. Fifteen- and 26-foot booms are available, both in three sections with outer boom guards and four-way spring-tension hinges to provide break-away action if the outer boom hits a tree or other object. The spray booms are "dry" type, with half-inch supply hose attached that allows for variable nozzle spacing. Sprayer controls are mounted on an adjustable pedestal for easy operator access from the Turf-Truckster seat.

The sprayers can also be equipped with an optional spray gun to spray trees or other hard-to-reach areas.

Contact your local Cushman dealer or Sales Department, Cushman Division, P. O. Box 8249, Lincoln, Neb.; 1-800-228-4444. Circle No 232

Radio called most powerful of palm size

Advanced Videotech Corp. has introduced what it calls the world's most powerful palm-sized two-way radio.

The Advanced Tech Talk 5 watt, four-channel, hand-held portable radio can fit in a shirt pocket and keep you in touch with others on your frequency within a 5- to 7-mile radius.

Its four-channel capability makes it possible to selectively speak to specific individuals on assigned channels.

Advanced Tech Talk comes with one channel of crystals, a 6-inch rubber duck antenna, wall-type charger, 450 MAH NiCad battery, stainless steel belt clip, and soft protective case.

Contact Advanced Videotech Corp., 1840 County Line Road, Huntingdon Valley, Pa.; 1-800-233-0013, or in Pennsylvania 215-322-4600. Circle No 247

Wrangler tall fescue dense

The new Wrangler range of leafy, low-growing, dark green tall fescue grass is said to be impressive.

Medium textured, with good density, Wrangler is moderately tolerant of close mowing, exhibits good heat and drought resistance and performs well in sun and moderate shade.

This new grass is a 14-clone advanced generation synthetic variety that is winter-hardy and exhibits excellent performance in cool season environments.

Bonsai is dark and short and has an amazing number of tillers per plant.

Contact Turf Merchants, 33390 Tangent Loop Road, Tangent, Ore. 97389; (503) 926-8649. Circle No 268

All in a day's work...

1. 3, 5 or 7 Gang Tractor Mount Mowers
2. Turf Rollers 130, 224 & 235 3. 24 in. Seeder/Over Seeder
3. Triplex 376-A
4. Sod Cutter MK.2™
5. Triplex 376-A
6. 3, 5 or 7 Gang Hyd. or Manual Lift P.T.O. Mowers
7. Brouwer Greens Mower
8. 5 Gang Vertical Mower
9. Large Capacity Brouwer-Vac™

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The team to make easy work of your turf maintenance program.

For golf courses, school boards, municipalities, highway parks and recreation departments, airfields and landscapers, there is a Brouwer product for you.

Brouwer builds rugged dependability and superior quality into every product, and that means value - not only when you buy but also in the "second to none" after sales service that will keep your machinery down-time low, and you happy to have Brouwer on your side. Check the products above, from the rugged, economical tractor mount mowers with unbeatable 4-WD traction and the high capacity Brouwer Vac to the turf renovating team of the Sod Cutter MK2 and one of those turf rollers, no matter, the Brouwer team can fit the bill...and your budget.

For a live or Video demonstration of Brouwer products contact your area Brouwer dealer...TODAY

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For free information circle #120
Hazardwaste law

From page 1
hazard communication program is the number one violation of the law in the country. Breaking this law can carry civil and criminal penalties.

Yet the 45 percent compliance rate found in the CMAA poll is inflated, according to Wharton. "That's probably twice or three times what it's really made up to do the training, put a program together, check over the inventory and those things that turned around. But even 30 days is a short order."

Wharton said Hall-Kimbrell has been focusing on the requirements for the maintenance operation and the superintendent is the key player in that. Most of the time your green committee and board of directors rely on the superintendent to make sure things are in compliance.

He feels superintendents haven't complied with the law before now because of "lack of knowledge of the law and also lack of enforcement activity."

A golf course development manual — exposing layout configurations, site factors and community planning issues — is also provided.

Drawing board exercises, monitored by instructors, and class critiques are featured. Key topics include routing the course and siting the clubhouse; parking, cart storage and maintenance areas; integrating golf with other facilities and access roads to achieve both safety for walkers and playing interest in the course; design in golf course architecture.

Also, interrelationships among individual golf holes; creating course traffic areas, construction of greens, trees and airways, and construction equipment, techniques and development costs.

For further information, contact William Saunders, Professional Development Program, Harvard University Graduate School of Design, 48 Quincy St., Cambridge, Mass. 02138. (617) 495-0540.

Please inform us

If you have an event coming up, please write to Golf Course News about it. The address is P.O. Box 767, Yarmouth, Maine 04096.

Seminars for super spot light changes

Seminars are being coordinated to keep course superintendents informed of increasingly complex problems and the changing technological society.

A presentation on a wide range of allied subjects, held annually at Harvard University in Cambridge, Mass., will be conducted June 15-16.

Lecturers are architects Geoffrey S. Cornish of Amherst, Mass., and Robert Muir Graves of Walnut Creek, Calif., both past presidents of the American Society of Golf Course Architects.

Corning, an honorary member of the equivalent British association, has designed more than 200 courses now in play. He has taught courses related to golf course design at the University of Massachusetts.

Graves has been involved in designing, remodeling or consulting on 300 courses throughout the United States and abroad, working in all vegetative and climatic zones.

The Cornish-Graves course is intended to train superintendents in the design of golf course architecture, site planners and others.

The basics of golf course design are reviewed, and problems inherent in the integration of golf with homes, highways, other forms of recreation, offices and industrial parks are explored.

Participants receive a text describing the history of golf course design and its influence on contemporary courses.

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Superintendents have options

Compliance to the OSHA hazardous communication law can be achieved in several different ways. The superintendent can obtain materials and put together his own program, using his inventory, gather his information together, safety data sheets, et cetera, and sit down with his employees and train them.

"That's fine if he has the time to do all of that," says self-audit project manager Steve Wharton of Hall-Kimbrell Environmental Services. "The superintendent can buy (for about $20 from his regional OSHA office) a package that has boiler-plate forms to use in their chemical inventory, request for safety data sheets, some suggestions on the plan, et cetera. Again, at that point, it's a do-it-yourself project.

The superintendent can purchase any one of a number of pre-packaged programs available nationwide, some made up of mere boiler-plate programs that include the various elements. Those programs then have to be made specific to the particular course. Those programs can cost anywhere from a couple of hundred dollars to $500.

The superintendent can actually contract with a firm to come in and review the inventory, review the safety data sheets, fill out the requests for those if they don't have any, and then they provide the training at the course. This usually costs about $1,200 to $2,000 for the initial training, depending to a certain extent on the size of the facility. Whatever materials it has, the number of employees it has.

The National Club Association has joined with Hasco International Inc. to provide to its members a basic program cost of $1,500. Hall-Kimbrell, which has produced its programs in coordination with the Golf Industry Council of America, can provide either the self-audit material or perform the audit itself, according to Wharton.

One course can try to give them (superintendents) the proper perspective about where they stand and where they need to be and how quickly they have to get there— which in this case was yesterday," he says. "If you don't have a program right now you're in violation of federal law.

"Now if I were a golf course superintendent and I had an OSHA inspector come in, I would much rather be in a position to say I certainly did not have a program or an OSHA compliance and this is what I've done, as opposed to confessing ignorance of the law," Wharton says, "because that is no excuse and anything, it can worsen your situation with the enforcement agency and could increase the extent and severity of the fine."

"This is just one issue the courses have to come to grips with. That's why we put our programs together because sorting out what's out there, both at the federal and state level, is a very involved and time-consuming process," he adds, "so we are trying to give these guys some tools so they at least can say, 'This is where I stand; maybe I don't have all the resources available to make my operation compliant, but at least I know what to do and where I'm going and how I can get there.'"

State laws called ever-changing

Trying to comply with OSHA's hazardous materials regulations is "like trying to hit a moving target," says Steve Wharton of Hall-Kimbrell Environmental Services.

Twenty-three states and the U.S. Commonwealth of Puerto Rico and the Virgin Island have variations to the federal law and the regulations are "always changing, evolving," Wharton says. "States are passing more stringent regulations all the time. They copy one another..."

"That's why it's a monumental undertaking but you have to take a comprehensive approach to it in being knowledgeable not only of what's going on in your own state but what's going on next door or across the country."

Wharton says many states have used Prop. 65 as an acid test of what can be required.

He says about 15 states are now drafting laws patterned after Prop. 65. "Prop. 65 isn't going away. We're moving toward more and more stringent regulations all the time. It's an issue that these fellows (superintendents) have to concern themselves with for the viability of the industry," he says.

Wharton says a "curious note" he has found is although "we feel that the level of compliance has to do with the level of a club's resources, that's not true" in the case of meeting environmental regulations. He said municipal operations are in compliance with laws more often than are private clubs.

"That's been my experience in polling these people across the country," he says. "They say, 'It's because of this.' It's because cities, counties and other government levels running courses are in the mainstream of regulatory and enforcement activity and they have to provide equipment and compliance personnel. And because the golf course may be part of that overall municipal operation they fall subject to those same laws. We need to get a hazardous communication in place and here's what we do...'

The Connecticut and New York state plans cover public employees only and OSHA is checking to see if anumber of federal enforcement authority in California, Wharton reports.

Wharton listed the states with OSHA-approved plans that differ from the federal

Other issues felt important

Environmental expert Steve Wharton, who is traveling the country talking with course superintendents about adhering to the laws, says several major issues rank close to one another at the top, but "hazard communication is certainly near the top, but generally it is universal because it is a federal standard and it does apply to all golf courses." Various other regulatory requirements may apply but they may be somewhat regionalized, he says. He cited ground-water concerns as an issue in the desert Southwest, California and Florida, and the coastal environment as an issue in the New England area.

"The whole issue of pesticide use— handling, application, disposal and storage— that's one of the most obvious concerns throughout this industry," he says. "Worker protection is certainly a big issue," as in how it applies to the hazard communication standard.

Osha compliance kits available

The Occupational Safety and Health Administration has made available a kit to help employers comply with its expanded hazardous materials regulations is "like trying to hit a moving target," says Steve Wharton of Hall-Kimbrell Environmental Services.

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The kit is available for $18 for domestic users and $22.50 for foreign users through order number is 929-022-00000-9. Wharton listed the states with OSHA-approved plans that differ from the federal

Talke scheduled with super around country

Steve Wharton, GCSSA project manager for Hall-Kimbrell Environmental Services, Inc., in Lawrence, Kansas, has spoken to several GCSSA chapters about what superintendents must do to comply with the environmental laws. Upcoming talks include:

• June 13 to Old Dominion GCSSA at Falls Church, Va.
• June 20, tentatively, to Central Pennsylvania GCSSA at Camp-Hill, Pa.
• June 27 to West Texas GCSSA at Lubbock, Texas.
• July 11 to Metropolitan GCSSA at a New York site to be determined.
• July 25 to Tidewater PGA at Kitty Hawk, N.C.
• Aug. 8, tentatively, to North Texas GCSSA at Carrollton, Texas.
• Sept. 12, tentatively, to Philadelphia GCSSA at Malvern, Pa.
• Oct. 2 to Wisconsin GCSSA at Pewaukee, Wis.
• Oct. 13 to Peaks and Prairies GCSSA at Billings, Mont.


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Sarasota golfing community planned

Radnor Corp., a subsidiary of the Sun Co., plans to develop a country club community in Sarasota, Fla.

In a multimillion-dollar transaction, Radnor has acquired an 800-acre wooded tract from Ruth Popkin of New York. The exact purchase price was not revealed.

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