Seed industry wins time
Search heats up for long-term solution to controlling disease

BY MARK LESLIE
The Oregon seed industry has won a reprieve from frightening legislation to ban field-burning, and researchers have recharged efforts to find long-term answers to the issue.

"It's status quo for 1989," said Dr. William C. Young, Extension agronomist at Oregon State University.

The Oregon House voted 34-26 against a bill that would reduce the number of seed-producing acreage that could be burned. Field-burning is the basic means the state's 800 seed growers use to purge their fields of weeds and disease and prepare the land for the next crop.

The case is crucial to the nation's golf courses because Oregon's 70 seed companies provide all U.S.-produced ryegrass, bentgrass, Chewing and creeping red fescue seed, half the U.S.-grown tall fescue seed, and about one-fourth its bluegrass seed.

Growers have burned their fields for decades, and in 1971 the legislature enacted a bill that would phase out the burning. But the lawmakers in 1979 stopped the phaseout at 250,000 acres. A renewed move to ban the burning altogether was galvanized last year when one farmer was burning a field and the wind changed direction, blowing smoke onto a major highway and causing a seven-death, 37-car pileup.

"Intense" is how Dave Nelson, executive director of the Oregon Seed Council, described feelings surrounding the debate in the state House and Senate.

Hyundai set to make its move

BY MARK LESLIE
Hyundai Precision and Ind. Co., Ltd. will make its long-awaited entry into the American golfing arena when it exhibits its new golf car at the PGA's West Coast Golf Show in August.

Kwang-Heum Um, sales manager for Hyundai Precision in the United States, said the four-wheel-drive gas or electric-powered golf car will be displayed at the Long Beach, Calif., Convention Center on Aug. 19-21 and he hopes to have it on the marketplace nationwide next February.

"We hope to find good dealers and distributors for our product at the West Coast show. We will show our product to them then," Um said, adding that Hyundai is not negotiating with any dealers now.

He said Hyundai also will start developing new courses for the future.

For more on Blackwolf Run and other new courses see pages 12 and 13.
When Other Golf Cars Get Left Behind...  Yamahas Stay Right On Course.

Yamaha knows the purchase price of your fleet is just the beginning of the cost of ownership. So we design in features that keep your rental time up and your operating costs down.  • Quiet and clean-running, our 4-stroke overhead valve engine accumulates carbon less easily.  A 3-stage air filter locks out dirt, requiring less frequent service checks. Timing adjustments are unnecessary thanks to our Transistor Controlled Ignition system. Even our suggested maintenance schedule requires less downtime than the competition.  • All this adds up to more time on the course making you money, less time in the shop costing you money. So call 1-800-447-4700 for the Yamaha dealer nearest you. And see how easy it is to keep your fleet profits on course.

YAMAHA USA
Better in the long run.
OMC puts Cushman on block

Cushman and Lawn-Boy are for sale. The Outboard Marine Corp. of Waukegan, III., has announced that its Lawn-Boy lawn mower and Cushman industrial vehicle and turf care businesses are for sale.

Corporate Chairman C.D. Strang said the sale of the two divisions would let the company concentrate on its expanding worldwide marine business. They are the owners of Donzi Marine and Chris Craft boat makers.

OMC earnings for the third quarter ending June 30 were more than 50 percent off last year's earnings. They are a 1.7 billion dollar manufacturer of marine products, consumer and professional turf care equipment and light industrial vehicles.

OMC feels the decline in sales was caused by slower lawn mower sales due to last year's drought as well as a slowdown in demand for marine products.

Dye: New courses demanding better irrigation systems

Architect Pete Dye emphasized the important role irrigation systems play on golf courses in recent remarks as keynote speaker at Rain Bird's annual Golf Distributor Meeting in Anaheim, Calif.

"Today's golf architects are designing bigger, better and more demanding golf courses that employ a greater-than-ever variety of turf grasses mixed with native plant materials," Dye said.

"They utilize frequent elevation changes, multiple tee areas and an abundance of bunkers. These factors combine to make the management of the course a nightmare for the course superintendent."

Dye indicated that the superintendent's salvation is the watering precision provided him by today's advanced irrigation control systems.

He pointed out that he did not even use irrigation on the first three courses he designed. "The requirements of new golf course designs, such as those imposed at the TPC Stadium Golf Course at PGA West in La Quinta, Calif., dictate that precise irrigation control be used," Dye said.

American Golf empire grows

American Golf Corp. of Santa Monica, Calif., announced that it has added two more golf courses to the more than 110 private and public golf courses it owns or leases nationwide.

The new acquisitions are Oakhurst Country Club, a private, par-72 course in Grove City, Ohio, and Mountain Meadows Golf Course, a par-72 public course in Pomona, Calif.

Oakhurst Country Club was designed by Jack Kidwell. It includes a clubhouse, pro shop, driving range and food, beverage and banquet facilities.

Ted Robinson designed Mountain Meadows Golf Course and it also includes a clubhouse, golf shop, driving range and full food, beverage and banquet facilities.

New Zealand disclaims noxious weed claim

Official says serrated tussock under control since 1973

New Zealand's Ministry of Agriculture and Fisheries has reported that its testing station has not found the noxious serrated tussock weed in samples of seed submitted for testing for at least 15 years.

A.A. Johnson, manager of the Ministry's Official Seed Testing Station in Palmerston North, added, "Our records prior to 1973 do not indicate when this impurity was last found, but it was probably in the early 1960's."

Johnson's statement came in the wake of a scare in the United States when the weed, which can kill cattle and sheep, was found in shipments of tall fescue grass seed from Argentina. At least one seed testing laboratory in the United States expressed concern that the weed might continue to get past U.S. Department of Agriculture testers when it is shipped through Customs.

Indeed, more than 600,000 pounds did get into the country through a governmental error, but USDA officials say they have taken steps to prevent that from happening again.

Dale Kern of Seed Technology, Inc. in Marysville, Ohio, warned people to be on the lookout for the weed in shipments of tall fescue seed from Argentina. Johnson said New Zealand has "special provisions within the Noxious Plants Act to control Nassella tussock (its formal name) infestations in New Zealand and there is an active and ongoing program for eradication of this weed in New Zealand."

He said the weed is now confined to "relatively isolated areas outside the seed-producing areas of New Zealand."

Jacobsen Greens King Users

A QUICK RELEASE KIT FOR YOU!

GUARANTEED FOR LIFE!!

This new heavy duty all metal QUICK RELEASE KIT installs into the three cutting units in less than fifteen minutes.

It is guaranteed for life of mower and will be replaced, at no cost to you, if it ever breaks, wears, or is damaged in any way. THAT IS HOW GOOD IT IS!!

QUICK RELEASE pivots with basket so that basket cannot fall off without lever being raised. Just slides into carriage frame of mower (tighten one allen bolt) and by cutting one inch off hooks on baskets, (template included) it is installed. You will never have to replace it again!!

• No more splitting of grass when removing baskets
• No more releasing of one side, then walking around to release other side
• No more pulled muscles
• Saves on wear and tear of baskets
• Save on mowing time
• Kit is for all three baskets

For free information circle #312

Golf Course Europe '89

INTERNATIONAL EXHIBITION AND CONFERENCE ON THE DESIGN, CONSTRUCTION AND MAINTENANCE OF GOLF COURSES AND GOLF CLUB MANAGEMENT

EXHIBITION

On 4, 5, 6 October '89 all golf course products and services will be on display during Golf Course Europe '89. If you are in this business, this really is an ideal opportunity for you to find out all about the latest products, services and knowledge in this field. Meet the exhibitors: first class golf course designers, -builders and -suppliers from all over the world. A visit to GCE '89 will provide you with the information you need and definitely will be one of your best investments of the year.

GCE'89 will take place in: Rhein Main Halls, Wiesbaden Fed. Rep. Germany, October 4, 5, 6 1989

For free information circle #311
Cool-season grasses, trials highlight field day

Growers, grass seed producers, distributors, educators, trade publication editors and turf management professionals gathered in mid-June for the seventh annual Turf-Seed, Inc./Pure Seed Testing, Inc. Field Day in Hubbard, Ore.

The two-day event included seed yield trials and promising new cool-season turfgrasses, presented by Dr. Bill Meyer and Crystal Rose Fricker, as well as an endophyte presentation by Dr. Bruce Clarke from Rutgers University.

The program also included displays of Kentucky bluegrass, perennial ryegrass, fine and tall fescue maintenance trials and wildflower plantings. Several Oregon State University instructors and plant pathologist Clarke discussed the latest research in the field of grass and plants.

Also featured at the field day were an Oregon-style barbecue, an oyster feeder, tennis, volleyball, and a whiffle-golfball driving range.

The eighth annual event will be held on June 20-21, 1990. For further details and registration call Turf-Seed at 1-800-247-6910.

USA writers top UK team

American golf writers finally had the last word in the World Writers Cup matches. Competing on four northern Michigan courses, the USA team led by nonplaying captain Bob Drum defeated Great Britain/Ireland counterparts, 14.5 to 9.5.


Western Texas adds golf course mechanic program

Western Texas College in Snyder, Texas, is starting a new one-year golf course mechanic program that will coincide with its golf course operations and landscape technology program.

The course, which begins in September, will be instructed by specialists in the repair of Toro and Jacobson equipment.

Among the classes offered within the program are turfgrass maintenance, precision measurements, repair and maintenance of machinery, small-engine diagnosis and repair, electrical systems, sprinkler irrigation maintenance, introduction to computer science, applied physics and diesel service.

Western Texas College offers various certificate and associate degree programs in golf course operations, landscape technology, irrigation management, landscape contracting, nursery and greenhouse operations and park operations.

For information contact by mail Golf/Landscape Technology Department.

Introducing Typar® Biobarrier® root control system.

Give unsightly roots a new direction in life. Down. With new Biobarrier, the advanced root control system that sends your maintenance costs in the same direction.

Biobarrier combines two of the most effective, longest-lasting elements in root control. One is Treflan®, one of the most proven herbicides in the country, featuring new controlled-release pellet technology. The other is Typar® fabric, made with rugged polypropylene geotextile that's porous enough to let air and water through but holds the Treflan pellets in place.

Together, they reroute roots without harming your trees and plants. And preserve the beauty of your landscaped areas — golf greens, cart paths, sidewalks, curbs, walkways, parking lots, swimming pools, gardens and others — for years to come.

Forget roots for 15 years.

Underground, Biobarrier sets up a solid rootproof zone that spans one to two inches on each side of the fabric. That's the Treflan controlled-release vapor zone. A zone so powerful, it repels roots at a controlled rate for 15 years or more.

Forget extra labor.

Without Biobarrier, you're spending plenty of time and labor to trench, trim roots and replace damaged landscaping. But with Biobarrier, you'll only do the job once every 15 years—trim roots, replace damaged cart paths and install Biobarrier.

By rerouting roots downward, Biobarrier protects your golf greens, cart paths, tennis
Cal State Poly given equipment

Jacobsen Division of Textron has donated use of two pieces of turfcare equipment to California State Polytechnic University at Pomona. Officials of Western Turf and Commercial Co. in Santa Fe Springs, Calif., turned over the keys to a Jacobsen IM-11 turf tractor and a Turfcat T436G tractor to the school’s Dr. Kent Kurtz. Kurtz said the new equipment will be used on the school’s current project testing the effects of reclaimed water on tall fescue grasses. It will also be used on a landscape research project involving kikuyugrass. Kurtz said approximately 200 students will get important hands-on experience with the Jacobsen equipment. “Our philosophy is to learn by doing,” Kurtz added at the ceremonies. “These machines certainly will help.”

Golf Real Estate seminar set for Southeast

Crittenden News Service plans two more Golf Real Estate Development Conferences to round out a four-part series covering the major regions of the country. Crittenden, which coordinated conferences in Palm Springs, Calif., and Washington, D.C., will conduct a conference Aug. 17-18 in West Palm Beach, Fla., and another Sept. 25-26 in St. Charles, Ill., according to Charles Duff.

“We’re trying to add a regional flavor to the conferences,” Duff said. “Florida is the most golf-sawy place in the country, and we believe in other conferences we have started the participants at ground zero of how to finance and develop a course, they (Florida) may be in another league. We don’t know.” He said 358 people attended the Palm Springs session and 337 the Washington conclave.

Ohio-based architect Michael Hurbanz will chair the Florida conference, which will include participation by Arvida Co. President Bud Miller; GATX Golf Capital Senior Vice President Robert C. Frampe; Gary Flayer Design Co. President Jim Applegate; Club Consultation & Management Chief Executive Officer Ken Creevy; Sun Bank/ Miami Senior Vice President Julian C. Heath; Club Corp. of America Executive Vice President Randy L. Williams. Also; Barnett Bank of Palm Beach County Senior Vice President Donald W. Carson; Dierich Architects & Associates President Richard J. Dierich; Landmark Land Co. Director of Consulting and Management Services Joe D. Hough; National Golf Foundation Vice President of Research Dr. Gordon Benson; Laventhal & Horwath partner John N. Johnson IV.

Team Plan Inc. President Michael Redd; Robert Charles Lesser & Co. partner Greg T. Logan; Hillier; Wanless & Cherry partner James E. Wanless; Urban Design Studio principal Hank Skokowski; Jim Colbert Golf Senior Vice President Steve Lambert; BancFlorida Regional Vice President Harry Nieman; Design I Interiors Senior Vice President Dennis Cagan; Club Operations & Property Manager President William E. Horne; Cushman & Wakefield of Florida Vice President Bruce K. Erhardt; Great American Clubs President Robert McDole; and Nicklaus/ Sierra Development Corp. Vice President Richard G. Robbins.

The conferences will explore topics from how and where to get financing for golf courses and resorts to the construction costs involved, how to put together market studies, what the big developers are doing next, where to find available land, market equity memberships, and what mistakes to avoid.

People may register by contacting Crittenden News Service at P.O. Box 1150, Novato, Calif. 94948.
Wish golfers would use two tees
To the Editor:
In reference to the article on the two-tee system, you write that having a forward tee for women, seniors and juniors would speed up play.
I work at a golf course that has four designated tees, from championship to beginner golfer, built with the thought that play would be faster if the tees would conform to the different players' ability.
But darned if the players who should be on the forward tees don't step back to the championship tees to play.
Asking one foursome of obviously novice golfers why they were playing the back tees, one exclaimed, "We just wanted to get our money's worth!"
Your idea is a good one. We just wish the golfers would acknowledge it!  
Sincerely,  
Liz Wolf, Manager  
Elkhorn Valley Golf Course  
Lyons, Ore.

Progress in two tees
To the Editor:
Thank you for the excellent article you wrote on the two tees for women. I see lots of progress being made and I certainly appreciate your help.
Also, I really enjoyed the article on the two young ladies (Jan Beljan and Rachel Therrien) who are becoming architects. I am delighted.
Sincerely,  
Alice Dye

First-rate thanks
To the Editor:
We just wanted to commend you and your staff on your excellent publication. We have been receiving Golf Course News for the past several months and every issue has been first-rate. We would like to see a little more emphasis on the changing golf car industry; otherwise the magazine is well balanced among editorials, information and high-quality advertising.
We look forward to future issues and to advertising our products in Golf Course News.
Sincerely,  
Arthur Mark Feuerborn  
PDQ Products  
Camarillo, Calif.

Fuzzy supported
To the Editor:
A note to Will C. Mann: Don’t jump on Fuzzy (Zoeller) for the lack of your PGA limiting Tour pros from picking up all the extra bucks available.
I was Kentucky delegate to the 1943 PGA Convention in Chicago when Ed Dudley was president. In those days we had available to the public both pro line (restricted to sale in the pro shops) and store line (sold by whoever). Wilson had just dumped a car load of pro only (closestout clubs) to Sutcliffe Co. in Louisville. The PGA Manufacturer Relations Committee would not even write Wilson to offer pro only closestout to pro shops only.
Did you ever see a Tour pro endorsement on pro-shop-only clubs?
Morgan Boggs  
3332 Woodruff Ave.  
Louisville, Ky.

Abreast of issues
To the Editor:
Please sign me up for your wonderful Golf Course News. Just recently obtained a publication. It appears you folks are abreast of correct and important information on those dedicated individuals in the golf industry.
My being a golf professional — now with eight years of construction and design accumulated and looking forward to more years of the same — do appreciate your endeavors.
Please do more interviews on the people in the field who do the genuine work — to make it all happen. There are those who sculpt this Earth — with skill and grace — yet are unknown by the pen.
Respectfully,  
Craig Metz  
The Orchard  
Atlanta, Ga.

That sandtrap beside the 7th hole goes on for another two hundred miles. And the only water hazard is that it hasn't rained in a month. What makes you so sure you can handle a turf test this tough?
Sod and seed information comprehensive

Once again the editorial staff of Golf Course News has compiled information for another special feature which will offer you a broad overview of bentgrass sod growers and turf seed producers who supply the golf course industry.

As these various lists are published it is important to point out that it was necessary to limit the chart (pages 15-16) to benigass sod growers. Did you know that there are more than 600 sod growers and 175 seed dealers in this country? The listing of turf-seed producers on pages 16 to 19 offers you a handy directory for your turfseed needs.

In case you missed it, our May issue provided an in-depth listing of wildflower seed growers. In issues to come we will again feature seed and sod growers, perhaps charting the forage growers or another important facet of the turf growers' business.

Recently, I had the pleasure of playing Glen Echo Country Club in St. Louis, Mo. The course, dating back to the early 1900s, is kept in superb condition by Wes Matheny and his staff. While playing and adjusting to the side-hill, downhill and uphill lies on nearly every fairway, I realized how much of an adjustment it takes to make the transition from the flat Florida or desert course to the rolling hills and valleys in other regions of the country.

Playing (or working) on flat Florida courses all winter really makes one appreciate the effort and skill necessary in conditioning (and playing) one of these beautiful rolling courses.

It's going to take me two or three more rounds to make the transition.

Since our premier issue was published earlier this year you have become familiar with features and comments by associate editor Vern Putney.

Vern recently suffered a heart attack and has undergone by-pass surgery. We wish Vern a speedy and complete recovery.

Thanks for your readership.

Sincerely,
Charles E. von Brecht
Publisher

The annual LESCO Equipment Early-Order Program is in full swing.

The savings on the complete line of reel mowers will never be greater. The LESCO 300 Greensmower. The LESCO 500 and 5000 Fairway Mowers. The LESCO Gang Mower and Lift. Order now because the earlier you order and pay, the more you save.

Purchase mowers before the end of August and earn a 12% early-order discount. Take delivery at your option and don't pay until April 1, 1990.

Or you can take advantage of our early-payment discount and save an additional 3% by picking up your equipment at our Sebring, Florida, manufacturing facility. Convenient leasing plans are also available.

<table>
<thead>
<tr>
<th>Month</th>
<th>Early-Order Discount</th>
<th>Early-Payment Discount</th>
<th>Pickup Allowance</th>
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<tr>
<td>July</td>
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<td>August</td>
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<td>8%</td>
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Determine your savings by combining discounts for the month you order and the month you pay. The LESCO Equipment Early-Order Program ends October 31, 1989.

Order a LESCO 300 Greensmower with 9-blade reels and smooth rollers before the end of August and here's what you'll save.

- $9,800.00 Price of Mower
- 1,068.00 12% July/August Early-Order Discount
- $7,732.00 7% July/August Early-Payment Discount
- $7,283.76 3% Sebring Pickup Allowance
- $7,016.76 Due Net August 31, 1989

Note: Example reflects total discounts of 21.2%. Sales tax not shown.

Take advantage of the savings. Order today by contacting your LESCO sales representative or calling toll free (800) 825-3726.

LESCO
LESCO, Inc., 20005 Lake Road, Rocky River, Ohio 44116
(216) 333-9250

For free information circle #315
Golf Course News
AUGUST 1989

ASSOCIATION NEWS

CMAA in temporary offices

The Club Managers Association of America had to accelerate its plans to relocate its national headquarters and moved July 7-10 into temporary offices.

Executive Vice President James A. Schuping said CMAA will still move into its Alexandria, Va., headquarters in September but in the interim can be contacted at P.O. Box 26308, Alexandria, Va. 22313-6308; telephone 703-739-9500 and FAX 703-739-0124.

Schuping said the temporary move was necessitated when the purchaser of the former CMAA property "moved his property-development program forward."

"Our anticipated move to the new facility at King Street Metro Place, 1733 King St. in Alexandria will occur in mid-September."

There's a new name in the winner's circle at Doral

Taming the famed Blue Monster course is the only way a golfer gets into the winner's circle at Doral. It's no different for turf professionals. Steve Kuhn, superintendent for all five of Doral's courses, occupies a permanent spot. John Deere, a new name at this prestigious Florida resort, just moved in.

"I've used John Deere tractors before so I know something about their quality," says Kuhn. "Most of us in this business knew that when John Deere got into more specialized turf care machines they would come out with something good."

"I bought a John Deere 280S Aerator on the spot—which is unusual for me. Since then, we've saved time and money using it to aerate all five of our courses. We can finish a course in 10-12 hours now where it used to take us 3-4 days."

"We also use a 151 Vacuum to pick up clippings and debris around the hotel. I like the fact that it has its own engine, so we can pull it with any of our vehicles. It also has a filtering system that makes it less disturbing for our operators and guests."

Talk to your John Deere distributor today for more information on all we have to offer. Or write John Deere, Dept. 956, Moline, IL for free literature. We know, like Steve Kuhn, you're going to like what you see.

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GCSAA donates funds toward grass research

The Golf Course Superintendents Association of America has contributed $25,000 to the USGA/GCSAA Turfgrass Research Committee to support ongoing scientific work on new turfgrass varieties that would require less water and be more disease resistant.

GCSAA President Dennis D. Lyons presented the funds at the June 14 annual USGA/Golf Writers Association of America banquet during the U.S. Open in Rochester, N.Y.

"GCSAA sincerely supports the USGA turfgrass research project. We look forward to working together with the USGA on other projects in the future," Lyon said.

The Turfgrass Research Committee currently supports 25 research projects and has distributed more than $2.8 million since 1983, said Bill Bengeyfield, USGA Green Section national director.

"We do thank GCSAA for the research funding they provide, and we also appreciate the time people like (GCSAA Vice President) Jerry Faulk, (GCSAA Executive Director) John Schilling contribute to the committee," Bengeyfield said. "And $25,000 is absolutely fantastic."

GCSAA names Jones to post

Pat Jones, former Golf Course Management staff writer, is directing the Communications Department for GCSAA.

Jones has written extensively on technical, industry and government topics.

He will oversee the association's programs in government relations, public relations and scholarship and research.

Floyd, Lopez picked

Raymond Floyd and Nancy Lopez have been elected to the Modern Era of the PGA/World Golf Hall of Fame by the Golf Writers Association of America.

They will be inducted at Pebble Beach, N.C., Nov. 10 at the annual tournament there.

The Veterans Committee also elected for simultaneous induction Roberto de Vicenzo and the late Jim Barnes.

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For free information circle # 316
PGA Club Operations will consult on courses

The Professional Golfers' Association of America has created PGA Club Operations, Inc., and named real-estate consultant John J. Rossi its first chief executive officer.

PGA Club Operations will operate out of Palm Beach Gardens, Fla., and provide consulting services to PGA members as well as to owners, developers and operators of golf courses. Its services will include feasibility studies, market analyses, operations reviews and financial advisory and development programming services.

Rossi, 52, will be responsible for developing business plans and budgets, obtaining financing and marketing the PGA of America's services through Club Operations, which has been in the planning stages for several years. “We are looking forward to being able to provide an expanded range of services to PGA members and the golf and real-estate industries,” said Jim Awtrey, executive director and chief executive officer of the PGA of America. “The demand for new golf facilities creates unique challenges and opportunities for all of us associated with the game. “The combined efforts of club owners, managers, investors, the financial community, the public sector and our PGA professionals will be required to meet the current and future needs of the nation's golfers.”

Rossi said, “We see our role as facilitators, assisting our clients in getting the job done. Successful golf course development and operation is a process which requires the integration of creative finance, land planning and engineering, construction, facility maintenance, management and programming— all carefully blended with a thorough knowledge of the game of golf and an appreciation of its traditions.”

Rossi has served as a senior principal and director of the real-estate advisory services practice in the Houston office of Laventhol & Horwath. He previously held real-estate, planning and development positions in Washington, D.C., Virginia, Indiana, Illinois and Mexico.

Rossi holds a bachelor of architecture degree from the University of Notre Dame and a master's in city and regional planning from UC Berkeley.

USGA fills two new posts

The United States Golf Association has named Doug Sullivan manager of handicap services and Laurie Glass to the newly created position of manager of women's sectional affairs.

Sullivan's post is a new position to assist regional and state amateur golf associations in the USGA's course rating and slope rating procedures.

Sullivan, who most recently was manager of the Stamford (Conn.) Marriott, will report to Dean Knuth, the USGA's director of handicapping, and will help Knuth in the administration of the USGA Handicap System.

A native of Zionsville, Ind., he is a 1986 graduate of Purdue University and has taught high school mathematics.

Glass, of Kearney, Neb., is a member of the USGA's Girls Junior Committee and a board member of the Nebraska Women's Amateur Golf Association.

A native of Beatrice, Neb., Glass graduated from Doane College in Crete, Neb. She was a three-time medalist in the Nebraska Junior Girls' Championship.

In her new position, Glass will serve as liaison between the USGA and various women's amateur golf associations.

Legal counsel joins PGA headquarters

The Professional Golfers' Association of America has hired a new legal counsel and added executives in its marketing and communications divisions at its Palm Beach Gardens, Fla., headquarters.

Gary M. Crist, who joined the PGA Tour administrative staff in 1982 as associate general counsel and was named director of risk management for the Tour in 1988, has been named general counsel.

Edward N. Gilbert has been appointed director of marketing and Paul Oseck has been named director of communications.

Crist, 40, was legal counsel at Wilson Sporting Goods Co. in Chicago for six years before joining the PGA Tour staff.

Gilbert, 38, has 14 years experience in marketing and promotion including four years as director of tourism for the state of Florida.

Oseck, 48, owned his own advertising and public relations firm in Houston and has extensive sports broadcast experience on both the local and network levels. He will be responsible for developing plans to support the association's marketing activities, publishing projects and publicity.
Grove Park
renovates course

Grove Park Inn and Country Club in Asheville, N.C., has completed major renovation of its 18-hole golf course.

The region's oldest private resort club opened in 1894 as the Asheville Country Club.

Willie Park Jr. was the original architect. Donald Ross remodeled the layout in the early 1900s.

In this latest renovation, the fairways, greens and tees of the back nine were redesigned and updated.

Greens were rebuilt to USGA specifications, and drainage and irrigation systems improved.

Landscape treatments included addition of 700 trees and asphalt cart paths.

An island green on No. 7, a waterfall and creek on No. 16, greenside water on 15, 12 and 2 all add spice to play, as does water that comes into play off the tee and in front of the green on the 18th hole. Multiple tees were built so golfers could match the tee shot value to their ability.

The 8th hole at Cedar Creek Golf Course in Onalaska, Wis., designed by Bob Lohmann and built by Midwest Golf Development, includes a two-tier fairway over rolling terrain that rewards a strategically placed tee shot with a shorter shot to the green. The 8th hole above is a 360-yard par 4. Lohmann feels it is a challenging and fun hole for both scratch and high-handicap golfers.

Blackwolf Run
opens third nine

A third nine holes, called The Meadow Course, opened July 1 as an addition to Blackwolf Run Golf Course in Kohler, Wis., which was Golf Digest's "Best New Public Course of 1988."

Designed by Pete Dye, the 27 holes include the River Course, characterized by glacial deposits and the meandering Sheboygan River, and the Valley Course, highlighted by the Sheboygan River and Weeden Creek valleys.

The Meadow Course is just west of the other courses on land previously part of Kohler Farms.

"The Meadow Course features openness with a forest backdrop, an endless panorama of meadows and golf holes, pendi rolling hills, and a lake which comes into play on four of the holes," said Alice Hubbard, manager of the Sports Club and Blackwolf Run. "If you don't see some of the deer, ducks, geese and fox that inhabit the area, you're probably concentrating too seriously on golf."

Blackwolf Run will add a fourth nine by mid-1990 to become a full 36-hole championship course and will expand its clubhouse, said John Green, manager-landscape for Kohler Co.

"We're currently working on the rough shaping of the fourth nine including the bunkers, greens and trees," Green said. "We plan to open by September of this year."

The project also includes clubhouse and pro shop expansion.
Graves' courses take form in West, Northwest

Robert Muir Graves is designing or redesigning six courses in California, one in Idaho and one in Washington with scheduled 1989-1990 opening dates.

The Walnut Creek, Calif., golf course architect intends a November opening for Mountain Springs Golf Club in Sonoma, Calif. Yardage measurements range from 6,770 to 5,555 for the 18-hole semi-private daily fee course owned by Kim Daters and Al Huber and being built by Randall Carre. Mountain Springs is in the heart of gold country.

Sonoma Golf Club in Sonoma, Calif., is targeted for opening in the fall, though it could be next spring. This 18-hole semi-private fee links is an existing course originally designed by Sam Whitting. Graves is renovating Sonoma to its original design. Fuji Country USA is the owner.

Spring openings are scheduled for Cherry Island Golf Club in Sacramento, Calif.; Las Positas Golf Club in Livermore, Calif.; and Whispering Forest Golf Club in McCall, Idaho, while August 1990 is the target completion date for the 18-hole, 7,100-yard, par 72 daily fee Oceanic Bakersfield.

Cherry Island, being built by Dutra Construction for the city of Sacramento, will be 18 holes, 6,900 yards, and par 72 and daily fee. The first county course in Sacramento in 20 years, it’s bisected by two creeks and built through an oak woodland.

Because of airport expansion, Las Positas will be the last construction of its 16 new holes and a remodeling of 11 holes. Nine new holes are being designed, nine holes will be executive, and the previous front nine is being remodeled.

The municipal setup owned by the city of Livermore lists Valley Crest Landscape as builder. Yardage is from 6,779 to 5,650.

Whispering Forest’s additional semi-private nine holes of 3,430 yards, to go with the first nine’s 3,242, is being carved from Robert Grif. Whitman is the owner.

Meanwhile, planning is far along on Avalon Golf Course in Skagit Valley, Wash. Being planned by Ron Hass of Sudden Valley Golf and Country Club in Bellingham, Wash., the 27-hole daily fee course will wind around two old gravel roads and woods.

Graves is also designing an 18-hole public course for the city of Fairfield, Calif.

Please keep us informed

Each month, Golf Course News—cooperating with the American Society of Golf Course Architects—will publish news stories on new golf courses being built 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.
Industry is getting results fighting patch

BY LORI FORD

In the past, fighting summer patch disease was a little like aiming a shotgun at a target that called for a rifle. That's because people were trying to prevent the problem without really knowing exactly what caused it.

Until a few years ago, summer patch diseases were believed to be the result of a Fusarium pathogen that seemed to be prevalent throughout the disease-affected area. However, according to University of Rhode Island turf pathology specialist Dr. Noel Jackson, recent studies have shown there are really five separate patch diseases: necrotic ring spot, summer patch, spring dead spot, take-all patch (a disease of bentgrass turf) and Fusarium blight.

These and other turf diseases don't just show up overnight. Jackson says. Like any infectious agent, the pathogens require a susceptible host and favorable environment to live and grow. Unfortunately, most varieties of turfgrass can play host to any number of diseases and the environmental conditions favoring them vary by disease, he says.

Thus, turf management practices can actually contribute to the development of fungal diseases, Jackson says. For example, close mowing, heavy fertilization and intense irrigation can encourage disease in turfgrass. As to this stress created by constant mowing, heavy traffic and it's no surprise divoting and heavy traffic and it's no surprise that golf courses are typically more susceptible to fungal diseases than other turf areas.

Because of this tendency, golf course superintendents like Jim Richter of Crestwick Country Club in Bloomingdale, Ill., have learned to keep a sharp eye out for symptoms. Turf disease problems at this private, 18-hole facility began in 1976 when Fusarium blight attacked certain areas of the course, planted at the time in Delta and Newport common Kentucky bluegrasses. Nevertheless, Richter was able to bring this disease problem under control using applications of fungicides such as Tersan 1991 and Teletec.

"Today, the course is still common Kentucky bluegrass, but we've been able to keep most diseases in check with the new technology and chemicals available, and by using improved varieties of bluegrass overseeded with ryegrass," Richter says.

His disease control program doesn't stop there, however. In fact, he has a relatively extensive preventive program involving the use of Subdue, Banco, Chico 2009, Allette and Rugigan. More specifically, he uses Subdue, Banco and Allette to control pythium blight; Chico 2010 for brown patch, leaf spot and dollar spot control; and Rugigan for patch disease control. In all, his fungicide budget is between $25,000 and $30,000 a year.

"This past year, we treated all our fairways with Rugigan, using it in a split application, with 3.75 fluid ounces per 1,000 square feet applied on May 15 and the same rate applied May 15 for season-long control of patch diseases," Richter says, noting that he used the higher rate listed on the label because the treated areas had a previous history of patch disease infestation. As a result, he obtained excellent control of patch diseases, despite the hot, humid weather and late summer rains the area received last year.

Ordinarily, patch disease symptoms show up in Richter's region of the country near the end of July or the beginning of August. At this time, the textbook "frog-eye" pattern can appear. This is characterized by seemingly healthy grass in the center of a full or partial ring of dead or dying grass, surrounded by more healthy grass. As the disease progresses, the rings run together until the area is totally mottled.

Many turfgrass pathologists insist that by the time patch disease symptoms appear in mid-to-late summer, it is too late for curative treatment. As a result, they advise that control measures be applied early and preventively. In essence, the fungicide must be applied in early spring, before the disease has a chance to become established.

**Cultural methods of prevention**

In addition to implementing a fungicide program, Elanco recommends the following cultural practices to help prevent patch disease development:

- **Minimize environmental stress to warm- and cool-season turf.**
- **Acetify warm- and cool-season turf to reduce thatch and encourage root growth.**
- **Lower nitrogen levels in warm-season turf in late summer.**
- **Maintain seedbed moisture in early spring while Bermuda grass is greening up.**
- **Raise mowing height in warm-season turf.**
- **Fertilize warm-season turf with one pound of nitrogen per 1,000 square feet each month to encourage fill-in of infected areas.**
- **Irrigate cool-season turf with one-half pound of nitrogen per 1,000 square feet per month to encourage fill-in of infected areas.**
- **Re-seed cool-season turf to fill in previously damaged areas.**

Because the pathogens can remain inactive for long periods, any cultural practices that promote good plant health can aid in secondary control.

"We try to watch the amount of irrigation we do on the course by only providing what's absolutely needed. Without overwatering," Richter says, noting also that he acclimates the fairways; verticuts; overheads with perennial ryegrass in the winter; and uses one pound of nitrogen per 1,000 square feet in May, July, September and November; and applies supplemental potash.

Although field tests can be used to determine if turf is infected by a patch disease (see accompanying sidebar on testing turf for patch disease) a laboratory analysis is required to determine which patch disease is affecting the turf.

Because the symptoms of various diseases are often quite similar, laboratory diagnosis is essential to pinpoint the exact culprit. Each disease requires a different fungicide that is effective against the specific disease you want to control. There is an alternative, however.

A fungicide such as Rubigan A.S., provides effective preventive control wherever patch disease has been identified. Moreover, it is effective in suppressing all five patch diseases, as well as other fungal diseases in turf, including anthracnose, powdery mildew, dollar spot, snow mold, copper spot, red thread and stripe smut. This makes Rubigan especially valuable when a golf course superintendent is unsure about which species or how many diseases are present.

**Summer patch prevention**

Charlie Gaige, superintendent at Lakeland Country Club in Brighton, Mich., began using Rubigan last year to control summer patch on this 18-hole course, built in the 1920s. Pointing out that he applied the product in split applications in April and May and got season-long control, Gaige says he's been so pleased with the results—50 percent control on problem areas in just one season—that he plans to use Rubigan again this year to control patch diseases.

"The first symptoms of summer patch appeared a couple of years ago when some areas began turning yellow and we identified the classic 'frog-eye' pattern," Gaige says. "So, we took some turf samples to Michigan State University, which is only about 45 minutes away, and a plant pathologist there diagnosed the problem as summer patch and we began a preventive treatment program last year."

Gaige feels that summer patch has been one of the most difficult diseases to control thus far— even more so than dollar spot, brown patch, Pythium blight or anthracnose. Typically, turfgrasses susceptible to summer patch include Kentucky and annual bluegrass, fescue, ryegrass and Bermuda grass.
zoysiagrass and centipedegrass. In addition, depending on the region of the country, it is most active in warm weather from June through September, occurring when one to two weeks of hot weather follow a heavy rainfall. Early symptoms of summer patch show wilted turf in infected areas. Later development, however, shows scattered circular patches of dead grass with healthy grass in the center. These patches may be several feet in diameter. Once the disease becomes more severe with excessive irrigation during hot weather. Heavy thatch, slow mowing in midsummer, improper amounts of nitrogen, soil compaction, exposure to heat, steep slopes and using inappropriate cultivars are some of the factors that encourage disease development.

To boost his patch disease prevention program, Gaige plans to increase the amount of nitrogen used on the course from April through September and will try to decrease the amount of irrigation.

"Normally, we use about one-quarter pound nitrogen per 1,000 square feet each month," he says. "But turf experts from Michigan State advised us to increase the amount to one-half pound per 1,000 square feet during these months."

Meanwhile, summer patch has been equally annoying for Bruce Dodenhoff, superintendent at Brandywine Country Club in Maumee, Ohio. During his first five years at the course, he experienced only minor bouts with fungal diseases. However, when unsightly yellow patches and dead areas began appearing on some of his bentgrass greens three years ago, he immediately sought solutions.

"There were four greens that really had a problem," he says, noting that the malady was later diagnosed as summer patch. "One of the worst troubles was on the last hole, which didn't settle too well with golfers because nobody likes to play on diseased greens—much less a diseased 18th green," Dodenhoff insists.

In conjunction with this fungicide program, Dodenhoff uses several cultural methods to reduce the chance of disease development on greens and tees. Practices include aerifying in the spring and fall, verticutting once every two to three weeks during the season, applying a light topdressing of sand every two to three weeks, avoiding overwatering, and overseeding in the fall.

"We've seen our disease program change during the last few years," Dodenhoff says, adding that it's become more preventive. "The development of new chemicals has really changed the outlook for us as far as keeping down the chance of disease—especially summer patch. Before Rubigan was available, there wasn't anything we could use to combat that disease. "At times, it seems like some of the cultural practices we're using to help the turf can actually end up working against us by helping promote disease. In some instances, Dodenhoff says, "Therefore, it's important to find and maintain the right balance between cultural practices and control methods."

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- Tersan 1991 (benomyl, DuPont)
- Bayleton (triadimefon, Mobay)
- Rubigan (metalaxyl, Ciba-Geigy)
- Banol (propamocarb, Elanco)
- Daconil 2787 (chlorothalonil, Fermenta)
- PMAS (PMA, W.A. Cleary)
- Scotts ProTurf (PCNBV, O.M. Scott & Sons)

Lori Ford is a public relations editor with Doremus & Co. in Kansas City, Mo.
It's just 'The Most'

Fazio's Vegas course breaks the mold with the most sod, most earth-moving, most trees...

BY MARK LESLIE

Tom Fazio may have designed himself right out of Las Vegas.

"After Shadow Creek I don't know that I could ever do another golf course in this town — because how can you do anything that can ever compare to this?" Fazio said.

The team of Fazio, Wadsworth Construction Co. and hotel magnate Steve Wynn are turning a tract of barren desert outside Las Vegas into what Fazio believes will be the "benchmark" desert golf course when it opens in October.

"I would have to rate this course on a scale of being almost the most of everything," said Fazio, the designer of such fabled courses as Wild Dunes in South Carolina, The Vintage Club in California, Barton Creek in Texas, PGA National in Florida and Wade Hampton in North Carolina. "When you think about it, this is 'the most'."

"This is maybe even the biggest challenge in some regards," he said. "Not all desert is unattractive, but this particular desert in the Las Vegas area is.

So Fazio and the developers planned, and created, an entire environment at the Shadow Creek site from scratch, importing trees and creating waterfalls.

But that's a last resort. You usually have something to work with. Fazio said, and that something presents a different challenge.

"In terms of effort, each course is the same. It's just different in terms of the execution and what you have to work with," he said.

What Fazio called "next year's challenge," the Champion Hills course to be built in Hendersonville, N.C., is "a tremendous, spectacular, exciting, dramatic piece of property with rock and trees, and hillside and streams to work with," he said. "If you saw it you'd say this is going to be an excellent golf course. But it doesn't just happen. It takes a lot of hard work. And we are in the process of planning that project."

The Golf Club of Tennessee, which he is working on in Nashville, he said, is "a tremendous, great piece of property with a major running stream and rock cliffs and big trees and a lot of wonderful things. And the challenge there is to fit golf into those natural features. And it is just as hard to fit (a course) into the natural features to make it look like it was always there as it is to create it from nothing."

"The fun part (about designing golf courses) is that it is so different — like this Shadow Creek project is different than... a Champion Hills or a finished product like Wade Hampton or even a Black Diamond where we had holes in a rock quarry."

"The quarry at Black Diamond, for example, with its five holes was difficult... it was bizarre and unique and very different, a different challenge than in Vegas."

Fazio said he is not even sure which job is harder or more fun — creating a course from nothing or designing around spectacular environments.

"The good part about it is the difference. It certainly is not boring."

"I'm enjoying this (Vegas course) today," he said. "Creating this, that's the fun thing for me. But once it's created some of the fun goes out of it, and then it's good for other people, the golfers. But the challenge for me is over.

Fazio credited Steve Wynn for what got his attention and got him involved in the project.

"So Fazio and the developers created a tremendous, spectacular desert. All desert is not unattractive, but the particular desert in the Las Vegas area is.

The Wynn brothers, owners of the Golden Nugget casino, are known for quality golf per se — basically because of the environment and flatness of the terrain."

"Also, Las Vegas has not been known for quality golf per se — basically because of the environment and flatness of the terrain."

The Wynn brothers, owners of the Golden Nugget casino, are building the course as a private facility. They are planning a separate, half-billion-dollar project in the same vicinity that will include other golf courses.

"I see this golf course as being an attraction for people to come as they do in other places to come just to see it," Fazio said. "This will be a benchmark in what he (Wynn) is doing. He is establishing a quality level of golf here and is kind of pioneering a new product here that will be great for the golf market from the public courses through the private courses because this will be the benchmark and measurement of what a golf course can be."

"And everyone (in Las Vegas) is trying to outdo the next person, so it will be interesting to see who's going to do something of this size and quality."

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BY MARK LESLIE

Each new golf course project presents a different challenge, but the expectations for the owners and Tom Fazio are the same, regardless of the site involved, he says.

"The aim of all the projects by all the owners... is to produce a world-class, spectacular, outstanding, magnificent golf course," Fazio said. "So, in a sense it's all the same; it's getting to that finished product that's different... The execution and what you have to work with are the difference and what keeps up your attention level."

Fazio compared the Shadow Creek course in Las Vegas with others he has built or has on the drafting table.

At the Vegas course "we had flat, uninteresting, boring, unattractive desert. And there's different kinds of desert; for example, the Vintage Club in Palm Springs (Calif.) is in desert but there are outcroppings. Then in Tucson (Ventanna Canyon Golf and Raquet Club in Arizona), up against the foothills of the mountains, there was desert vegetation and spectacular desert. All desert is not unattractive, but this particular desert in the Las Vegas area is."

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Turfworks 'making architects look good'

'We are the last people there. It's very critical work.'
— Bill Riggan
Turfworks president

A North Carolina-based company is apparently the only firm in the country that specializes in "finish work" on golf courses. "We're the last people in on a course — making the architects look good," says Bill Riggan, president of Turfworks, Inc. of Louisville, N.C. "As our ad says: 'We're putting finishing touches on some of the finest golf courses in the Southeast.'

Riggan says that in the South, and particularly the Carolinas, dozens of golf courses are being reconstructed or renovated, so there is plenty of work for his 3-year-old company. "Our service has been received very well by the industry because people feel it's easier for them to get an independent contractor to do that rather than do it inhouse," Riggan said. "We're quicker and more proficient, and they tell me they feel it is cheaper for them to hire us than to do it themselves because they are not experienced in this work."

Riggan said, "A tremendous number of old courses in this area are not able to maintain quality equal to the new courses. So a lot of architects are being brought in to renovate the courses. We are the last people there. It's very critical work."

Whereas extensive sodding in the past was prohibitively expensive, Riggan said, "Now that developers are spending $10 million to $20 million on a development, they are deciding to spend what's necessary for sod in critical areas in golf courses. These people want to be able to put people on a golf course and sell property around the golf course. It's difficult to sell a $200,000 house lot when your course doesn't have any sod on it. "Now it has become cost efficient to do that."

Turfworks' part of this renovation process, Riggan said, is "a tremendous amount of hand labor — good old-fashioned work."

Ewing buys Pacific

Ewing Irrigation Products has bought Pacific Products, Inc., taking over management and operation of PPI's California locations in El Cajon, San Marcos, Rancho Cucamonga and Orange, and reopening PPI's Carlsbad store.

Ewing Chief Executive Operator Ray York reported the purchase. Both Ewing Irrigation and PPI are wholesale distributors of landscape and irrigation products. Ewing now has 21 wholesale locations in California.

Irrigation school changes times

The Professional School of Irrigation in Chantilly, Va., has switched to a special summer schedule of night classes and a few day courses, and plans to change schedules in the fall. Full-time day courses will begin again on Nov. 1.

More information is available by calling 703-435-8019.

Vegas

Continued from page 14

Steve's enthusiasm," Fazio said. "He's so bright, such a good manager ... and seeing his ideas, concepts, expectations and desires — that got my interest.

"He has some ideas and perceptions of the way he likes golf holes and the visual approach to golf ... and the things he has studied in knowing the sun and how strong it gets in the desert in the summer time and how it reflects off the water, and how he wanted to develop where slopes should be in relationship to the sun angles to stop the glare. I listened and realized this guy really has it together and would be fun to work with."

Fazio added, "It certainly keeps your interest level and your attention, because the responsibility and the expectations are so high and that's where the money part makes me a little nervous because people will say that if you spend enough money it's automatic that it's going to be good, and to me that's not true ... When you come out here and see this finished golf course and play it, it won't matter whether we spent $7 million or $9 million, $12 million, or $50 million. How good is it? That's all that counts."

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Bentgrass sod is

BY MARK LESLIE

Frenzied calls from golf course superintendents desperately seeking bentgrass sod for greens and tees is an annual spring rite at the American Sod Producers Association in Rolling Meadows, Ill.

ASPA Executive Director Doug Fender said, "We get frantic calls every spring for sod for greens and tees. Their (superintendents') members are screaming because the greens are in bad shape, and their jobs are on the line if they don't correct the situation. They need bentgrass ... especially in the northern climates but in the South, too."

"Typically when they have a need it's a serious need," Fender said. "Many superintendents try to grow small supplies of their own, but oftentimes that is not enough."

ASPA has 575 to 600 sod-producer members from all points of the country, and they handle both the production and sales of both bentgrass and Kentucky bluegrass. ASPA members do not sell bentgrass only in the South, but they do have more members there, where bentgrass has been the green of choice for more than 25 years, according to Fender.

"In the North and Midwest there is a struggle to keep the greens looking good in the spring," Fender said. "Bentgrass is the grass of choice for the golfer and the superintendent has to keep it going."
marketing; no distribution chain exists like in the seed industry, Fender said.

He said about 55 percent of the nation’s sod producers have 200 or fewer acres. Another 25 percent sod 500 or more acres and the remaining 20 percent are 200 to 500 acres, he said.

"There are real market geography-limiting factors that make the market what it is: a large number of sod producers serving small areas," Fender said. Those factors are a short "shelf life" and high cost of transport.

He said 200 miles is "the peak-end average of how far sod can be shipped. Some companies will ship it further but the combination of cost (because of the weight) and that it starts to decay ... limits this option."

After the sod is harvested, you have 12 to 48 hours to laying it in the ground. The distance factor can be beat if the sod producer can hire refrigerated trucks.

"Foster Turf of La Quinta, Calif., shipped 130,000 square feet (about three acres) of bentgrass aboard 18 refrigerated trailer trucks to the Tanglewood Park course in Clemens, N.C. — a three-day trip."

Jeff Cole, Foster’s marketing director, said the trucks are normally used to transport produce and therefore were equipped with vacuum chambers that can reduce the temperature of the product to basically whatever you desire.

"We wanted the sod at 40 degrees," Cole said. "Our ground temperature is 80-85 degrees. If we harvest that, it’s still going to take a long time for the sod to go down in temperature, so it isn’t nearly as fresh using a truck that’s only refrigerated as it is if you put it in a vacuum chamber."

"We’re seeing more and more mixtures and blends (of different types of grasses) in sod," said ASPA’s Fender. "People are also experimenting broadly with all kinds of mediums for planting grass. An outfit in

Continued on page 30

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Agriculture evaluates lawngrass at turfgrass specialists at state land grant universities have access to this information as do those who formulate lawn seed blends and mixes. County agricultural agents can also provide information on which grasses grow best in their area.

Robert says more than 300 varieties of improved grasses are being evaluated for lawn and turf purposes, and "these are all
and disease-resistant grasses bred

better varieties, in one way or another, than the United States because they green up sooner —

Which type is best?

In more northern locations, however, bermudagrasses not only have a short growing season but are also likely to winter kill. Zoysias are more winter-hardy but growth is restricted to the frost-free period. Thus, in selecting a grass, he says that bluegrasses, fine fescues, perennial ryegrasses, tall fescues and colonial bentgrasses will provide longer periods of green turf in the North where the grasses are adapted to fall, winter and spring conditions in the transition zone and upper South. But they suffer from hot summer conditions, and are increasingly difficult to maintain because of their lesser value as one moves further south, Roberts says. "Zoysias and bermudagrass are used effectively in these locations."
Continued from page 1

developer sells the homes or condominiums, the sooner he gets return on his investment. The buyer makes no money watching the grass grow.

There are other benefits as well — benefits that may counter the much higher cost of sodding a course.

"It certainly," said McCumber Golf Vice President Mike Beebe, "that if you have to spend a minimum of three to four months, sometimes six months, for grow-in from seed ... you'd almost break even or even save a little by sodding instead. You'll save with fertilization, chemicals, repairs during grow-in."

Beebe said, "We're doing slopes, bunker faces, tee slopes — places we're concerned

about losing to erosion.

"Basically," said golf course architect Jeff Brauer of Golfscapes in Arlington, Texas, "you have a course you have to figure that you will have to repair the soil if you have a washout. Plus you must figure the cost of re-fertilizing and resprigging and the Additional water that it takes to get that re-established because you use a lot more water at the beginning of (grow-in)."

Speaking about "a first-class resort that does the upscale mounding, et cetera," Brauer added, "It would be my guess that you would recoup most of the cost. From the grassing date to opening day, your grow-in budget would go up almost as much as the difference in cost between sod and seed."

Brauer said it would cost $75,000 to sod the typical 18-hole golf course, and the minimum a developer would want to spend on a modern golf course is $300,000 in sod. The difference, he said, would be three times as much for sod as seed.

Asked what developers aren't sodding courses, Brauer said, "because the upfront costs seem so staggering."

A washout or not

Keith Foster, who is in charge of the Western United States for Arthur Hills and Associates of Toledo, Ohio, said that when considering sod for a new course the region it is located in is critical.

"If you're looking in the West you certainly don't get many rains," Foster said. "And if you were to go ahead and seed and sprig a course in May or June you have two or three months of decent weather before the monsoons hit out West. But if you were seeding and springing in August your chances of survival, significant erosion, is greater. You lose it, it's a washout."

"I would almost recommend sodding all renovations because obviously people are trying to get back and play quickly," said architect Tom Fazio of Jupiter, Fla.

Fazio, who is seeing 110 acres of his Shadow Creek course outside Las Vegas being sodded at a cost of $1.2 million to $1.4 million, said the sodding is "not as expensive as it sounds... in this particular case because of the amount of dollars it takes to grow it in the desert — the fertilizer, the water..." With sod you're buying maturity," Fazio said. "Long-term, the sod is not an expensive operation. Plus the play factor. It's what I refer to as the 1980s and '90s concept of golf: You build maturity into the golf course — putting in big trees and putting in sod."

"We started in October (1988) and we're going to ready to play in October," he said.

Fazio said he designed two courses last year and the year before — Halbrook Farms Country Club in Leawood, Kansas, and The Farm in Dalton, Ga. — where the fairways were sodded with zoysia sod. That sod was more expensive, costing $750,000 to sod about 35 acres of fairways.

In Las Vegas, he said, sodding most of the tee-to-green areas cost between $10,000 and $12,000 an acre.

"That's not necessarily just to get on the course quicker," Fazio said. "It's to get it grown in because of all the steep slopes and contours and we want to prevent erosion and we want it to be smoother and to have it more mature even when we open. It's not a question of opening a month or two earlier; it's a question of having it right, instead of having to wait a year or two to have it mature and grown in."

At Halbrook Farms CC the sodding was done to beat a timetable. It worked, according to KLM Bio-Systems, Inc., 19700 Normandale Blvd., Bloomington, MN 55437 414-580-4081 1-800-353-0661

"The residential side was moving ahead so we considered the course the sooner the better," Lavery said.

Asked if the extra cost was worth it, Lavery said, "It's hard to say. It's like saying, 'Does your advertising pay?' We don't know, because we did it. But we still feel today that it was the right decision."

"We got to the point (in 1987) here in the Midwest where we were not having a good summer weatherwise," he said. "We thought if we were going to meet our schedule of opening in 1988 sodding offered a tremendous opportunity to get a jump on the grass."

"We wanted it to be playable most of 1988, and it opened June 25... It's highly possible we couldn't have opened until this year if we hadn't sodded."

Lavery said the private course is surrounded by homes in the $250,000 to $1 million-plus range.

"My client, Applewood Park in Clemens, N.C., decided to beat the clock and re-sod all their greens when they renovated them in preparation for a Senior Tour tournament in July."

"They totally redid all the greens. It made more sense to sod them then to seed them and try to make them playable by October," said Jeff Cole, marketing director of Foster Turf which supplied the bentgrass sod for the renovation.

"It was an exciting project for us," Cole said, adding that the company had until then worked mainly in the West. The sod was sent in refrigerated trucks on the three-day trip and the plans went "flawlessly," he said.

"I offered one more reason behind the sodding decisions:

"Construction is always behind time for whatever reason, and it's hard to seed warm-weather seed in the cool season or cool-season seed when it's warm, so many people are ending up sodding it."

Major change

Sod being laid on golf courses is one of the most significant changes that has taken place in golf courses in the past 25 years in the business, Fazio said.

"In the early '80s and maybe almost the entire '60s we almost used no sod, even for mini greens because it was so expensive," he said. "Then, in the '70s, we started using some sod around the edges of the bunkers... We used different sod than Bermuda so that runners would not go into the sand; it was kind of a maintenance barrier."

"In the '80s we would do some sodding after we had some erosion, but you didn't start off sodding. You'd take the chance that you could grow it in with no extra expense."

"Then in the '70s the industry started building steeper slopes and steeper contours and the only way to have them grow in and not wash out was to sod them."

And then you got into the '80s and we started talking about sodding the banks and slopes of greens and around bunkers; and then we talked about sodding the fairways and replacing the roughs with zoysia sod. That's what we started talking about when we sodded it, ... "With the amount of dollars it takes to grow it in... you have to sod it."

"And we started talking about using zoysia grass and sodding fairways. Jack Lupton did that at Chattanooga at the Honors Club and that opened the door for other people to say they could do it and justify it."

"So zoysia was no longer used just for doing plugs. Then you put different grass in bare spots and fill it in and eventually the zoysia would cover it. You'd start out the sod as bluegrass or bluegrass and whatever filler grass was put in. And then people started to realize that was less quality conditions, that if you went out and sodded, you would not only have good quality turf, but you could play the golf course quicker and it wouldn't cost you as much to grow in turf."

McCumber Golf's Beebe said, "In the past we'd sod 50,000 to 75,000 square feet (of a course). Now we're seeing more sod more sod 300,000 square feet or even more in some places."

He added, "Now that the whole standard of the industry is being raised, we'll see more remodeling of courses" to keep up with new courses being built around the corner.
Landmark promotes Wilcox, Aaronson to leading posts

Landmark Land Co., Inc. has announced the promotion of Terry Wilcox to vice president of desert projects and Nancy Aaronson to project director at Mission Hills Country Club and Country Club La Quinta, Calif.

Landmark owns and operates Mission Hills and La Quinta as well as numerous other golf clubs, including Oak Tree, Oak Harbor, Kiawah Island, Stanford Oaks Country Club, Palm Beach Polo and Country Club and PGA West, all of California.

Wilcox was project director at Mission Hills for the past eight years.

He has been with Landmark since the early 1960s and has worked in various capacities, including assistant professional at Quail Creek Country Club in Oklahoma City. He was an organizer and former golf director and general manager at Cardinal Golf Club in Greensboro, N.C.

Aaronson, who replaces Wilcox, has been assistant project director at Mission Hills since 1988. Before that she was involved in real estate operations at La Quinta. Before joining Landmark she spent two years in Los Angeles with Welton Becket Associates, an architectural and engineering firm, in the business development division, and three years with U.S. Gypsum Co. in sales and product management.

Karsten appoints golf director

Duff Lawrence, golf professional at Desert Highlands Golf Club in Scottsdale, Ariz., has been named director of golf at the new Karsten Golf Course at Arizona State University.

Lawrence, a 1959 graduate of ASU, spent the past five years as golf professional at the Jack Nicklaus-designed Desert Highlands. In 1983 and 1984, he was host professional for the original PGA "Skins Game."

"I am at a point in my career where an opportunity of this nature would be most fulfilling," said the 51-year-old Lawrence. "At the new Karsten Golf Course, there will be a definite sense of purpose and hopefully my contributions will be sustaining."

"This move will lend a better opportunity to fully utilize my training and abilities as a golf professional."

"I'm looking forward to being able to have a direct impact on shaping the future of the younger players' game."

Before joining Desert Highlands, Lawrence was 15 years as head golf professional at Canterbury Golf Club in Cleveland. He also played on the PGA Tour for three years.

RMA tabs Moore

Resort Management of America, a Phoenix-based company specializing in operation and management of golf courses and resorts, has named Brett Moore to the newly created post of merchandising manager.

Moore will be responsible for managing inventory at golf shops in Stonecreek, The Golf Club, and the Karsten Golf Course at Arizona State University. She will also continue to serve as buying consultant for The Outlook at Gainey Ranch, where she was formerly merchandising manager. Golf Shop Magazine named The Outlook as one of America's best 100 golf shops.

Moore, a graduate of Trinity University in San Antonio, is president and founder of the Professional Golf Buyers Association.

The organization was established to provide members with a forum for education and professional advancement. As president, Moore will work with officers and members to implement various educational programs, such as seminars and speakers, conduct a membership drive and institute a job bank.

Royal Fox GC names staff

The recently opened Royal Fox Golf Course in St. Charles, Ill., has appointed Steve Cheresney as general manager, Tom Jauch as superintendent, Jeff Kent as head golf professional, Tim Schmelting as staff pro, and Richard Vest as food and beverage manager.

Greenvisions Inc. will manage the facility.

Royal Fox, a 140-acre, par 72 course, is part of a real-estate development with 300 residential housing units. Golf club memberships are open to both non-residents and residents.
Art Snyder and Chet Mendenhall have witnessed changes galore on America's golf courses

BY VERN HutNEY
WITH WILL BartletT

Art Snyder and Chet Mendenhall, at ages 90 and 94, respectively, are two golf course superintendents who, in their lifetimes, have witnessed almost every major change in golf course technology. Snyder has been called by the National Association of Greenkeepers of America, the three-time president of the GCSAA. In Wichita he helped build one of the nation's most famous golf courses and a reputation for himself.

Art, a 61-year member of the Golf Course Superintendents Association of America, and a resident of Phoenix, Ariz., visits Skyline Country Club daily to enjoy either playing or observing the course where his son, Jim, is superintendent.

Chet is a Kansas native and in 1945 was elected president of the GCSAA. In Wichita he helped build one of the nation's most famous golf courses and a reputation for himself.

How many superintendents now can recall constructing a course with worms cast every morning? When mowing greens had to be swept with long bamboo poles, then swept again to break up clods of mud.

That Snyder is tuning up for his 91st birthday Sept. 13 by playing twice weekly is remarkable, considering longtime Spartan working conditions. He worked as a golf course architect, designing several golf courses in Missouri and Kansas. The last remaining charter member of the National Association of Greenkeepers of America, he undoubtedly never got used to using modern-day PVC pipe.

Changes a-plenty

Art Snyder's seen changes a-plenty since hugging his first golf bag in 1908 as a 9-year-old caddie at famed Oakmont Country Club in Pittsburgh, Pa.

For many superintendents now can recall constructing a course with worms cast every morning. When mowing greens had to be swept with long bamboo poles, then swept again to break up clods of mud.

Throughout most of Snyder's super days, there was no Environmental Protection Agency. Many dangerous materials such as mercury and lead arsenic were used without proper protective equipment. A handkerchief tied over your nose was the extent of protection.

“Insecticides” in those days were kerosene oil mixed with naphtha soap.

Having survived nicely these potentially disastrous pitfalls, as well as a stroke last year, Snyder revels in tee shots of at least 200 yards and power rakes have all but replaced hand raking.

Way back when, though, greens were covered with worms casts every morning. When mowing, greens had to be swept with long bamboo poles, then swept again to break up clods of mud.

That Snyder is tuning up for his 91st birthday Sept. 13 by playing twice weekly is remarkable, considering longtime Spartan working conditions.
In recent years, DeRocco has been the crack maintenance man at Poland Spring Country Club. Despite the low pay, long hours and Maine’s mercurial weather, none of these three could think of a better way to spend a lifetime. The outdoor work has been healthy, the contacts pleasant. They have met celebrities by the score and goggled with them.

The new breed of supert, in most cases not having learned the game "from the ground up," understandably isn’t as familiar with the game nor as proficient a player as the ex-caddie. Many, though, are accomplished players. More than 100 of the 500 competing in the last superintendents’ championship were low-handicappers.

Superintendents frequently play with greens chairmen and members, partly to view the course from a player perspective. During this playing tour, things which might never have been brought up can be pointed out and discussed. For instance, “Why was a tree planted in a certain spot?” In most cases, it was placed for a purpose, to penalize a player who perhaps took too much risk. Chopping a tree without understanding the reason for its presence could lessen the challenge of the course as well as its appeal.

Greens chairmen and members might profit similarly from the superintendent’s viewpoint. “Here’s an area that cries for attention? Why can’t it be taken care of now?” The reply likely would be, “I’ve tried to address that problem several times, but the answer always has been, ‘We don’t have the money.’” Scores might lack the professional touch, but a few birdies might be bagged in the area of communication.

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**COMMENT**

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By Vern Putney

Caddies long formed the base of the game during future pros. Apprenticeship steps were caddiemaster, shop boy and assistant.

Course superintendents were groomed in much the same fashion — hauling hoses, knitting weeds on greens while kneeling on mats, clearing traps and adding muscle to maintenance chores. Caddies have thinned to a trickle. Colleges largely furnish the pro talent pouring into golf’s money market — the tours. Their expertise is in par-busting, golf’s money market — the tours. Teaching might not be high on the interest list. There may not be much time for members when you’re concentrating on perfecting your own swing.

So, too, has the golf course superintendents’ scene changed. No more is the future superintendent likely to emerge from the course work crew. Instead, he’ll be the product of an agricultural and/or business college, knowledgeable in chemistry and physics and trained to approach a problem scientifically.

Rather than the traditional bottom of the heap in a club’s salary scale, he’ll deal from strength as a professional man in a highly specialized field.

He’ll approach the current No. 1 super’s problem — pesticide use and control — from a technical standpoint, and his voice will carry as much authority and credibility as an environmentalist’s.

Superintendents who learned by trial and error are a vanishing breed. Maine claims at least three grizzled veterans who took their first tentative fairway steps as caddies in the 1915-1917 period and still are going strong.

Jimmy Jones of Cape Elizabeth started at Augusta Country Club in 1917. At 80, he oversees operations at Salmon Falls Golf Course in Bar Mills, one of five Maine courses he’s helped design and build.

Walter Jackson of Kennebunk started at Augusta Country Club in 1915 at nearby Webhannet Golf Course. Except for a 10-year stint with the railroad, during which he found travel not too delightful, he’s been at home at Webhannet. He’s 85.

Tony DeRocco of Poland is in Jackson’s age range. Like Jones, he went the pro-superintendent route after caddie background. He served more than 50 years in that dual capacity at Wilson Lake Country Club in Wilton and Oakdale Country Club in Mexico.

_Golf Course News_ August 1989
Information contact Chuck and Barbara Wilson at 714-651-8547.

46 — Golf Course Europe, an international exhibition and conference on the design, construction and maintenance of golf courses and on golf club management, at Rhein/Main Halls, Wiesbaden, West Germany. For more information contact Allan J. Hoogland at Expovconsult, P.O. Box 200, 3600 AE Maarssen, Holland; telephone 03465-72777.

22 - 24 — Texas Seed Trade Association annual convention at the Sheraton Gunter Hotel in West Palm Beach, Fla. Organized by Crittenden News Service, Inc. The conference will be chaired by golf course architect Michael Hardman of Columbus, Ohio. To register, at $450 per person, contact Crittenden, P.O. Box 1150, Novato, Calif. 94948; telephone 415-382-2466 or 800-443-8318.

19 - 21 — West Coast Golf Show, sponsored by the PGA Southern California Section, at Long Beach (Calif.) Convention Center. Contact 30 — The annual meeting of Utah State Turfgrass Association, at Salt Lake City, Utah. For more information contact 30 — The annual meeting of Utah State Turfgrass Association, at Salt Lake City, Utah. For more information contact Dr. C.R. Skogley, Plant Sciences Department, Woodward Hall, Utah State University, P.O. Box 1532, Logan, Utah 84329.

September


23-26 — Golf Real Estate Development Conference at Pleasant Run Resort Hotel at St. Charles, Ill., coordinated by Crittenden News Service, Inc. To register, at $405 per person, contact Crittenden, P.O. Box 1150, Novato, Calif. 94948; telephone 415-382-2466 or 800-443-8318.

28-29 — Hawaii’s annual turfgrass conference at Pacific Beach Hotel in Honolulu. For further information contact Karen J. Dento of HGP, Inc. at 808-881-3095.

October

4-5 — The annual Southern California Turfgrass Expo, devoted to the exhibition of equipment, materials and services for establishing and maintaining turfgrass and landscape, at the Orange County Fairgrounds in Costa Mesa. More than 230 manufacturers and distributors will display and demonstrate their goods and services. Bluegrass music and a barbecue are included. For more information contact Chuck and Barbara Wilson at 714-651-8547.

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- Broadleaf weeds

New Gallery™ is available from CGSA at 2000 Weston Drive, Suite 136; 416-249-7304.
Industry, environmentalists cooperating

Professional pesticide applicators and environmentalists are cooperating more than in the past, according to some lawn care experts. "Both groups now realize that there must be some give-and-take. Recent compromises seem to point toward some progress," said Dr. James F. Wilkinson of the Professional Lawn Care Association of America in Marietta, Ga.

In an effort to accommodate requests by people with environmental and health concerns, many applicators now inform their customers of the exact product mix they will apply and whether any precautions need to be taken during the application. Some applicators, upon request, will notify nearby property owners in advance about any treatments. Nowadays, they also will sometimes post a small sign at the entrance way to treated properties, he said.

A random sampling of members of the Professional Lawn Care Association of America indicates that more and more professional applicators are using pesticides only when and where they are required. Many do-it-yourself pesticide users, however, still practice with the 'more is better' attitude, according to the PLCAA.

"We're (PLCAA members) beginning to use more of the newer, less toxic, EPA-registered pesticides," Wilkinson said. Wilkinson added, "Some of these products require greater customer education and cooperation to achieve good results, but it shows our industry is willing to do what it takes to care for our customers and environment."

Continued from page 1

Field-burning

Continued from page 1

That intensity remains, with two organizations mobilizing referendums against the field-burning.

Bill Johnson, a 75-year-old retired teacher and founder of End Noxious Unhealthy Fumes, wants to ban the burning immediately, while Jay Thiele and his Oregonians Against Fuel Burning propose a four-year phaseout. They each need 65,000 signatures of registered voters on their initiatives by July 3, 1990, in order to get the issue before voters in the November 1990 general election.

Nelson said the Oregon Seed Council will conduct an extensive campaign to educate the public about the industry, and added, "We're going to need $2 million to $3 million for an election campaign if it should get on the 1990 ballot."

He said the issue may not get to vote because "there's a much broader understanding of the industry and less animosity exhibited by the public then by the legislature."

Until any future vote and law changes, "status quo" means that 250,000 of Oregon's 345,000 grass seed-producing acres can still be burned.

Yet various people in the industry — from farmers to manufacturers to universities — will "intensively research," Nelson said. For its part, the Seed Council may raise its membership fees and use those extra funds to support that research.

"The industry clearly understands that we have to modify our production process so that we can do it economically without burning," Nelson said. "We're moving as fast as we can toward whatever is available to us."

But, "it's unrealistic to expect a four-year (phaseout) program to discover anything because you basically have only a two- to three-month period to do your work," Nelson said. For its part, the Seed Council may raise its membership fees and use those extra funds to support that research.

"The seed industry will study and see what we might do in this research. We've got to keep our eye on the goal, which is to continue to grow grass seed with quality and in quantity."

The research

Meanwhile, researchers will probe "some engineering possibilities and other kinds of harvesting" to improve the situation, said Oregon State's Young.

"The problem is, all the work hasn't been done," he said. "The issue of disease is a difficult one to research. Like it or not, disease is a kind of epidemiological spread of things. When we evaluate a crop 6- by 20-foot and it looks like it burns all right, we can't sell that result without a little bit of caveat that it's not the same as if you..."
Golf House cites 'Golfing Art' for annual award

"Golfing Art," by Phil Pilley, has been selected as the winner of the second Golf House International Book Award. The Golf House International Book Award is presented by the United State Golf Association in recognition of outstanding literary contributions to the game. Pilley's book, published by Salem House Publishing in Topsfeld, Mass., was selected from 50 books published in 1988 on the game of golf.

The award was announced at the Golf Writers Association of America dinner sponsored by the USGA in conjunction with the 1989 U.S. Open Championship at Oakmont Country Club in Rochester, N.Y.

"Golfing Art" is a collection of golf-related artwork from around the world. British professional Tony Jacklin wrote in the book's foreword, "Golfing Art is a wonderful book for me because the superb pictures reflect the history and tradition of golf." USGA's Golf House holds the world's largest and most complete library devoted solely to golf.

Field-burning

Continued from page 25

traveled 100 acres or 1,000 acres. And we're talking about 350,000 acres in Wisconsin every year," Young said. The practice of field-burning has been a "single-source solution to the problem, taking care of it in one operation. With it, we get complete, weed control, improved herbicide efficacy."

Referring to the propane burners, which some farmers are using to torch harvested fields with 30-foot-long burners, Young said two improvements are necessary for them to be more efficient: "You have to slow them down to 1 mph (from 3-4 mph), but that costs money" and it has to burn hotter because "propaning doesn't product enough heat to kill the germs" so now it just burns the stems, stubble and chaffy aftermath left from the harvesting.

One engineering company indeed reportedly is trying to make a more complete-combustion propane burner.

Young and the Seed Council's Nelson both said hope is offered by a machine three farms are field-testing for Rear's Manufacturing in Eugene, Ore.

Mike Rear is optimistic about initial results from the machine but warns that a one-year test is not sufficient. The machine — "we call it a rear-bagger or a big sucker" — is a modification of a flail mower with a vacuum field, Rear said. "We wanted to see what would happen if you removed the straw and attempted to sanitize the field other than with heat — or to add heat after the bulk of mass has been removed."

The three farms used the machine on 1,000 acres and did not propane the fields afterward. Rear said the test with the machine was successful, but they don't yet know exactly how effective the process was.

After cutting the fields, the machine vacuums up the host for disease — the vegetation, chaff, etc., that is on the ground. "I don't think there's any doubt we'll make progress (in the research) each year...," Rear said. "Our goal is equal or increased yield without burning. But we're looking at four or five years down the road at the current level of commitment from growers, which by the way we view as phenomenal." He added, "Growers are concerned that they can supply the market with the quality they need and that they can keep (their share of) the market. Obviously additional funding (for research) would be nice but these guys aren't going to wait for a political solution to the funding issue if that means waiting years."

"The problem with research," Rear said, "is that it always is slow."

NEW LITERATURE

Irrigation group looks at future

"No Water ... No Future," a brochure completed by the Irrigation Association's Water Conservation Development Committee, is being used as the centerpiece of an industrywide campaign to educate the public.

The four-color brochure outlines the water problems facing the country and explains how the irrigation industry can help conserve water in both urban and rural areas.

It has been endorsed by a dozen other national organizations.

The Irrigation Association, which is now producing an audiovisual program about irrigation, stated:

"As the representative of the irrigation industry, IA is the source of expertise when it comes to questions regarding the use of water for irrigation. We stand ready to assist anyone interested in conservation irrigation."

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1. Flow Control

The central schedules all irrigation in conformance with the user-specified order of watering, while maintaining sprinkler flow demand within the maximum efficiency range of the pump station, resulting in the lowest cost-per-gallon. Flow control is retained even if communications are "cut" or the central is "out," because all of the flow control data is downloaded daily to the satellites.

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Satellite programs are run in the most efficient order. This means they run in the grouping order specified by the user, with minimum total elapsed time and without gaps. In other words, they are linked together. For each program, TORO 4.0 automatically searches for the longest program running time in the next group and schedules it to follow immediately upon completion of the shortest running time of the preceding group for perfect linkage — or concatenation.


This feature provides an additional method for programming stations at satellites. Irrigation programs continue as before but now you have the flexibility to program groups of the same satellite stations in a multi-manual format, for such non-irrigation purposes as removing frost or cooling the turf. With this feature, you can assign any station at a satellite to a sequence group (maximum of 6 to a group), and there are enough groups to allow all stations to be assigned. The run time (common to all groups) may be set from 1 to 30 minutes. In cold climates, this lets you lengthen the playing day.

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Up to 15 specified functions stored in the central may be initiated for the whole system from any one satellite on the golf course. You can cancel a program, call up rainholds, go into multi-manual — any or all of 15 such special situation programs, from any satellite, without returning to the central. It gives you quick-fix problem-solving capability from the field.

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Field-burning

Continued from page 25

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Southern Turf growing hybrid grasses in Spain

Southern Turf Nurseries has established a farm near Malaga, Spain, where hybrid Tifway 419 and Tifgreen 328 are being produced to standards of greens-qualities certified grass.

The farm's opening in Spain is in response to the expanding golf course market worldwide and the exportation of American golf course architect expertise. Those factors have created a demand worldwide for high-quality hybrid Bermuda grasses, especially in tropical and sub-tropical regions of Europe and Asia, the company says.

The newly organized firm will be called Southern Turf Nurseries/Spain and, according to Southern Turf President Tim Bowyer, it is the first international production facility of an American-based turfgrass producing company.

Larry and David Cooper will run the operation in Spain. They intend to import live plants and use specially designed machinery from the United States to the site in Spain.

V.I.T. Products relocates

V.I.T. Products, Inc., recently bought by Arthur Arns and Don Pagano, has been relocated from Huntington Beach, Calif., to Escondido, Calif.

V.I.T. manufactures and distributes staking and tying devices for landscape staking and tying devices for Arbor Care. “Our product line is especially significant to landscape architects who must specify the after-care equipment to protect newly installed trees from damage,” said Arns.

Rain Bird promotes three

Bill Ryan and former golf course superintendents Alan Clark and Jim Schumacher have been promoted to new positions with Rain Bird Sales Inc. of Glendora, Calif.

Ryan of Claremont, Calif., has been appointed marketing coordinator for the golf division while Schumacher and Clark were named golf specification managers for the golf division.

A graduate of the University of Colorado, Ryan will be involved in new product development and the maintenance of the existing product line. He will participate in new product introductions and assist with implementing the annual marketing program.

Schumacher, a graduate of Mississippi State University in agronomy-turfgrass management, lives in Huntsville, Ala., and is a former agronomist and former deputy director of parks for the city of Huntsville. A certified course superintendent, Schumacher has managed two golf courses in Alabama and has authored numerous published articles on irrigation.

In his new position, Schumacher will be involved in updating golf course superintendents and contractors on Rain Bird’s new golf course products, services and new developments. Schumacher’s territory includes the Southeast from Louisiana to Florida.

Clark, a former superintendent at Ridge Top Golf Club in Medina, Ohio, will cover a territory that includes the Midwest and Northeast from Missouri to Maine.

Kubota appoints Rohrbacker product manager

Keith M. Rohrbacker has been named national product manager of pumps and generators of Kubota Tractor Corp. of Compton, Calif.

Rohrbacker will provide support to KTC’s division offices in the area of generator and pump product training, trade shows and sales and will assist in development of new pump and generator product lines.

A native of New Orleans, La., Rohrbacker resides in Huntington Beach, Calif.
Spectrum’s Cardy reads pH on the run

Spectrum Technologies, Inc. is marketing what it says is a completely new concept in pH measurement technology. Cardy, the credit-card-size pH meter slips into your pocket to provide speedy measurement of pesticide spray water or soil samples anywhere and at any time. The sample goes directly on a flat meter and slips into your pocket to provide speedy measurement of pesticide spray water or soil samples anywhere and at any time. The sample goes directly on a flat meter. Cardy reads 0-14 pH with a repeatability of ±0.1 pH on its liquid crystal display.

The unit comes complete with an accessory kit containing standard solutions pH 4 and 7, cleaning fluid and sampling sheets.

Contact Spectrum Technologies, Inc., 12010 S. Aero Drive, Plainfield, Ill. 60544; 1-800-248-8873, or in Illinois 815-436-4440. Circle No 353

Scott takes aim at micronutrient deficiency

Two new ProTurf fertilizers from O. M. Scott & Sons Co. take aim at micronutrient deficiency problems. Fertilizers with Minors (26-4-13) is formulated to provide all the major nutrients plus selected minor and secondary nutrients — sulfur, copper, magnesium, iron, manganese, molybdenum and zinc — to help prevent deficiencies from occurring in the turf plant under most conditions. The dense, homogeneous product is for use on all turfgrasses used on golf courses, fairways, tees, greens and other fine turf areas.

High density (MD) fertilizer plus manganese (22-0-12) supplies sufficient plant-available manganese (0.18%) to help, correct and prevent deficiencies, plus a feeding of nitrogen (N) and potassium (K). The small particle size allows a range of N, K and Mn rates for programming flexibility on greens, tees and fairways. The dense, homogeneous product is designed for quick greenup plus sustained release of nitrogen.

For more information, contact the O. M. Scott & Sons Co., 14111 Scottslawn Road, Marysville, Ohio 43041; 1-800-543-0006. Circle No 368

Golf Course Market Place

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

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THE BALLMARK REPAIRER

This unique repair tool was developed over 40 years ago by Pete Stewart, Superintendent at Butterfield Country Club, Hinsdale, Ill. It was widely distributed by George A. Davis Company and is still in demand by many Golf Course Superintendents. It is now available through MASTER of the LINKS.

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ACCU-GAGE

ACCU-GAGE is a precision measuring instrument for making highly accurate height-of-cut adjustments on greensmowers or other precision mowers.

FEATURES
• Adjustments can be made with the gage on the mower. Simply read the gage while turning the adjusting knob.
• Measurements are made at the front edge of the bedknife regardless of bedknife wear.
• Eliminates the inaccurate "feel" method of old-type adjusting bars.
• Available in 15", 18" and 24" bars.

For more information on this and other precision tools call Toll Free: 1-800-253-2112

For free information circle #335

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

Golf Course News

AUGUST 1989
Ryan Rollaire smooths the way

Two new turf rollers, the Ryan Rollaire and the Riding Rollaire, are available from the Cushman Division of Outboard Marine Corp.

The Rollaire units are a convenient way to put a smooth finish on new sod, freshly seeded turf, or wherever the ground surface needs a smooth, packed finish.

The walk-behind Rollaire has a 30-inch-wide drum and weighs 840 pounds when filled with water.

The Riding Rollaire covers a 24-inch swath, with a 24-inch diameter front drum and an 18-inch diameter rear drum. The Riding Rollaire weighs 1,107 pounds with the water drums filled.

The water drums have rounded edges to minimize chances of leaving ridges in the surface.

Wrangler tall fescue said disease-resistant and hardy

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 reportedly is winter-hardy and at the same time 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 570

Talking machine a 'GreenSaver'

GreenSaver, a recorded "voice" fastened to the green flag stick, is said by its manufacturer to save 40 percent in green maintenance cost.

Once the pin is lifted from the hole and placed at a 45-degree angle, the voice message will announce one of six different commands which can be programmed according to needs.

Commands include: "Golfer... Please repair your ball mark..." Allow faster players to go through..."Keep carts in rough (or on golf path)."

Made of durable plastic with an aluminum bottom casting, the GreenSaver minimizes intrusive course signage and also serves as a pin indicator.

Contact The GreenSaver, RD2 Box 1192 • Route 896 Landenberg, Pa. 19350. Circle No 351

Growth Products adds four fertilizers

Growth Products is expanding its professional liquid slow-release fertilizer line for 1989.

Four new products are available, led by a complete liquid blend of slow-release nitrogen, P, K, and EDTA micronutrients. It is packaged in 2- and 1/2-gallon containers for special tee and green applications.

Contact Growth Products, P.O. Box 1259, White Plains, N.Y. 10602; 1-800-648-7626, or 914-628-1316. Circle No 354

Safe storage possible

A new line of prefabricated steel buildings, designed specifically for storage and handling of hazardous materials, is available from X. S. Smith, Inc., Red Bank, N. J.

These buildings qualify as secondary containment structures, prevent spills or leaks from contaminating groundwater and are said to be a cost-effective alternative to cinder block and concrete structures.

Features include removable floor sections to permit visual inspection for leaks and spills; doors that open to accommodate forklift entry, and a static ground connection to protect flammable/combustible materials from electrical discharge ignition.


FOR SALE

BRRRR ETT
cart rumble strips

"BRRRR ETT" CART RUMBLE STRIPS

MASTERS of the LINKS introduces its BRRRR ETT cart rumble strips for use along cart paths. Made of quality plastic, the BRRRR ETT is a deterrent to unauthorized dirt paths on your course. The strips are attached to the blacktop and spaced so golf carts cannot "cut the gap". Test marketing of the BRRRR ETT showed that golfers would not cross the strips, spaced so golf carts cannot "cut the gap".

For the distributor nearest you, contact:

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PLACE YOUR AD TODAY!
Hyundai

Continued from page 1

a utility vehicle it hopes to introduce at the end of 1990.

Finding a distributor is a key to Hyundai's future in the United States.

"Our dealership is open to anybody," Um said. "We don't have any specific agreement with John Deere or anyone else." But he said no dealers have been ruled out either.

He did, however, nix the idea of using Hyundai auto dealerships to sell the golf car. The golf community and car dealers are too different," he said. "They're quite distinguishable. It wouldn't work."

A Hyundai official in New Jersey mistakenly reported in January that the car would be introduced in the second quarter of this year. The company's Chicago officials in February moved that date to the third quarter of the year, but reported that the car already was being sold in Korea.

A senior manager in the Chicago office said Hyundai would concentrate on selling in Korea until it was ready to distribute in the United States.

Now Um says sales in Korea are going "pretty well."

"Actually in Korea the situation is quite different," he said. "They haven't had any golf cars; they've used personal caddies."

Hyundai's golf cars, then, came onto the marketplace at a good time, he said.

He said that for the car, which for the foreseeable future will be built in Seoul, Korea, is a source of pride for his company.

"We took the most advantage of things from other golf cars and put them into ours," he said. "We are very proud of our design interior and appearance, and we're proud of its comfort, its smooth ride."

He said the Hyundai car is quiet, has good "climability" and will be competitively priced.

"We'll start advertising it probably in October," he said.

Ron Rogginger, vice president of Backer, Spielvogel, Bates Inc. in Irvine, Calif., said his firm has a verbal commitment to handle advertising for Hyundai Precision.

Bentgrass sod

Continued from page 17

France is using wood fiber. Others have tried peanut shells.

"Several guys are experimenting to grow it faster, and with containerized growing. Those are beyond the experimental stages but not in wholesale distribution."

Fender said only about 20% of the country's sod growers lay their product, and those that do "may not want to take on a golf course — it's so big."

"Eighty percent is sold to landscape contractors who install it, and most sod growers feel they would be competing with their best customers (if they laid it)," he said. "Some, however, are making installation an option in the bidding process."

ACCLAIM KEEPS CRABGRASS AWAY FROM THE CLUB!

Safe, effective crabgrass control.

Here is what golf course superintendents need for crabgrass and goosegrass control. Here is Acclaim® 1BC Herbicide— an aggressive rescue treatment that is truly effective, yet easy on turf. Unlike the old arsenates, Acclaim is effective with just one treatment. And Acclaim won't harm seedlings when applied to new or reseeded turf.

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The best time for rescue treatments is early, beginning within 2 weeks of July 4th—but Acclaim controls emerged crabgrass up to 5 tillers and goosegrass up to 3 tillers anywhere, anytime.

So be ready to treat those high-use areas with Acclaim while crabgrass and other problem grasses are still small.

You'll stay on top of crabgrass—and get nothing but compliments on your lush, beautiful turf.

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Introducing the Cushman® GT-1. Suggested retail price: $3,395.00*.

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The new Cushman GT-1 utility vehicle will outperform and outlast any converted golf cart on the market. Its frame and chassis are stronger and more durable. You'll find a bed made of 14-gauge steel instead of 16-gauge steel. One-inch axles instead of 3/4-inch axles.

And a proven Kohler industrial engine that's more reliable and easier to maintain.

When you need a utility vehicle that's been specifically designed for work instead of one that's been converted from play, contact your Cushman dealer for a GT-1 demonstration. Or call toll-free 1-800-228-4444 for more information today.

*Does not include sales tax, freight or dealer prep. Prices may vary with dealer.

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For free information circle #337
Certain death for the dinosaurs.

The new Jacobsen Tri-King 1684D makes heavy cumbersome 84" mowers things of the past.

Jacobsen ushers in a new age in heavy-duty 84" triplex mowing with a truly lightweight, highly maneuverable package. So now you can say goodbye for good to those costly, one-ton monsters the competition turns out.

Lightweight and compact, this agile, rear-wheel steering machine maneuvers around trees and other obstacles in a hurry. A foot-controlled hydraulic lift with automatic reel shutoff makes cross-cutting fairways and striping sports fields quick and easy. Plus, the wide 10" overhang simplifies trimming around traps, while optional on-demand 3-wheel drive smoothes out tough hills. And the Jacobsen Tri-King maintains a productive mowing speed in 3-wheel drive, so it trims circles around bulky, sluggish would-be competitors.

Simple, cool-running hydraulics deliver exceptional control of cutting frequency. This smooth, consistent power and a choice of 5- or 10-blade fixed or floating reels produce a uniform, carpet-like cut — even in dense, wet grass. Unlike heavier competitors, the 1684D's balanced, lightweight design and wide tires minimize turf compaction. And optional easy-on/easy-off grass catchers make clean-up a breeze.

A liquid-cooled 16.5 hp diesel provides plenty of power with longer life, simpler maintenance and better fuel economy. Or choose the 1671D, a unique, durable 71" triplex with all the same quality features of the 1684D. Yet smaller reels cleanly cut tricky undulating terrain and those really tight spots.

Don't be saddled with a dinosaur of a triplex when you can have the advanced new 1684D. Ask your Jacobsen distributor for a demonstration today. Attractive lease and finance plans available.

Jacobsen Division of Textron Inc., Racine, WI 53403.

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