Seed firms: Gov't cost us $1M

BY MARK LESLIE

Not satisfied with the mere "regrets" of the U.S. Department of Agriculture for a snafu that cost his company $200,000, Sonny Pennington of Pennington Enterprises Inc. is on the verge of suing the USDA.

Pennington's Madison, Ga., firm is one of seven seed companies that absorbed a total $1 million loss when 2 million pounds of tall fescue seed imported from Argentina were found to contain a noxious weed, serrated tussock, and the seed was ordered recalled.

Pennington says he will decide by early August whether he would sue the government, but first he would seek an audience with Secretary of Agriculture Clayton Yeutter.

"We're attempting to go through Congress rather than lawyers," Pennington said. "Congressmen work cheaper than lawyers."

Possible cure found for cricket

BY LARRY KIEFFER

After four years of testing in pastureland by researchers with the University of Florida's Institute of Food and Agricultural Sciences, "the most promising biological control agent for mole crickets we have ever had" is ready for field trials at 20 Florida golf courses.

"Everything looks extremely promising as far as finally having something we can brag about," said Bob Rehberg, chairman of the Florida Turfgrass Association's research awards committee.

What Rehberg and the FTGA are bragging about is a Uruguayan nematode that carries a bacterium "at least four times more virulent on the mole cricket than some of the other materials that have been pulled in from commercial organizations."

The microscopic nematode crawls in the mole cricket's mouth, infects it with the lethal bacteria, and then crawls out before the insect dies "within one to several days."

Eureka! Golf gold being mined

1989 is prime time for nation's builders

BY MARK LESLIE

This is the best of times for golf course builders.

A short while ago, Golf Course Builders Association Executive Director Don Rossi said: "There's no way to buy the land, build a golf course, and make money except to charge exhorbitant fees — unless the land is given to you — because the cost of the land is so, so expensive."

Poof! Suddenly real-estate developers are giving the land away to golf course builders because the developers want a golf course to attract home buyers but don't want to get involved in something they're not expert in.

Beware snags, but money can be found

BY KATHY BISSELL

Getting a golf course from dream to reality requires at least as many complex maneuvers as getting a team to the Super Bowl.

It takes money, talent and time.

Because more people want to play golf, because research reports from groups such as the National Golf Foundation say we need more courses, and because people seem to think there's a lot of money to be made, many individuals and developers want to take the plunge into golf course development.

The difficulties are knowing how to get the funds to start and how to make a project
HERE ARE THE MOVING PARTS THAT MAKE A YAMAHA LAST LONGER.

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Drought resistance of grasses

<table>
<thead>
<tr>
<th>Relative</th>
<th>Turfgrass Species</th>
<th>Warm-season</th>
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<tbody>
<tr>
<td>Excellent</td>
<td>Cool-season</td>
<td>*Bermudagrass (Cynodon dactylon)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Bermudagrass hybrid (Cynodon hybrid)</td>
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<td>Good</td>
<td></td>
<td>Buffalo grass ( Buchloe dactylolies)</td>
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<td></td>
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<td>*Seashore paspalum (Paspalium vaginatum)</td>
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<td>*Zoysiagrass (Zoysia spp.)</td>
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<td>Bahiagrass (Paspalium notatum)</td>
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<tr>
<td>Medium</td>
<td>Fairway wheatgrass (Agropyrum cristatum)</td>
<td>*St. Augustine grass (Stenotaphrum secundatum)</td>
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<td></td>
<td></td>
<td>Centipedegrass (Eremochloa ophiuroides)</td>
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<td></td>
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<td>Carpetgrass (Axonopus spp.)</td>
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<tr>
<td>Poor</td>
<td>Colonial bentgrass (Agrostis tomentosa)</td>
<td>Annual bluegrass (Poa annua)</td>
</tr>
<tr>
<td>Very Poor</td>
<td>Rough bluegrass (Poa trivialis)</td>
<td>*</td>
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</tbody>
</table>

**Based on the most widely used cultivars of each species.**

**Significant variability occurs among cultivars within the species.**

**Turfgrass scientists' research is bearing fruit with critical findings.**

Dr. James Beard of Texas A&M prepared this table to show the comparative drought resistances of the major turfgrasses — based on the most widely-used cultivars of each species — when grown in their respective regions of climatic adaptation and preferred cultural regime.

Dr. James Beard, who displayed the table at a speech in Japan in June, explained that it takes into account drought resistance and the dehydration avoidance components: evapotranspiration rate and genetic rooting potential.

The species rankings are based on results with cultivars currently in widespread use. The individual cultivars are listed because the interspecies differences within each of these three parameters are as great as between the species.

Research shows that species and cultivars with a low shoot ET rate and deep, extensive root system have good dehydration avoidance — a key component.

Poellot moves into U.S. market

J. Michael Poellot, who for 20 years has designed golf courses in other parts of the world, has reorganized his company in Sarasota, Fla., to place emphasis on designing world class courses in the United States.

J. Michael Poellot Golf Design Group is offering design, construction and supervision services internationally, including conceptual and detail design for new communities, private and resort golf course developments.

Winner of the Crescordia Environmental Excellence Award for his design of the Hyatt Resort Gainey Ranch Course in Scottsdale, Ariz., Poellot has worked on more than 200 golf courses. He has worked extensively in Japan and other parts of Asia and designed the first private course in the People's Republic of China, the Beijing Golf Club, where Premier Zhao Ziyang hit the first ball during opening ceremonies last year.

Poellot's firm has more than 25 projects in progress in the Far East, several of which will open this summer.

"By maintaining the game's integrity on all our new projects," he said, "we are successful in resurrecting the classic values that have made the great courses of Ross, MacKenzie and Tillinghast just as popular today as they were generations ago."

Formation of the new company follows reorganization of the firm Benz and Poellot Inc. which included promotion of Mark F. Rathert to vice president/design director and addition of Robert J. Stroh as vice president/general manager.

GCSAA plans new offices

Citing a growth in programs serving more and more members, the officers of the Golf Course Superintendents Association of America have voted to break ground early next year on a $4-million headquarters complex in Lawrence, Kan.

"GCSAA's growth has mirrored that of the rest of the golf industry," said President Dennis Lyon. "We now have more than 8,600 members and the association offers more services to them than ever before. This new building will allow us to keep meeting the needs of our growing membership and the golf community at large."

The officers approved schematic plans for the project during a meeting at the U.S. Open in Rochester, N.Y.

The new site is one mile from the group's current offices at Alvamar Golf & Country Club, where the association located when it moved to Lawrence in 1974.

The course and building are expected to be completed in 1991.

GCSAA Executive Director John M. Schilling said the building could be ready by the spring of 1991 "if the Kansas weather cooperates."

The 35,000-square-foot facility will nearly triple the space for the association's 42-member staff and still leave room for projected growth. In addition to the four-story headquarters building, the new complex will feature an attached 70-seat class and meeting room.

Traverse Cup wins Doral tourney

A 14-under-par Scramble team score at the Grand Traverse Resort at Traverse City, Mich., propelled a foursome into the Masters tournament title final Nov. 16-18 at Doral Country Club in Miami, Fla.

Prevailing by two shots in the Traverse Cup were Charles (Sk) Dragalski of Michigan Bell Telephone; Bruce Harms of PMH/Carraminning, Inc.; Bill Jenkins of FMC Corp.; and Ron Ullett of ILSCO.

The Traverse Cup is sanctioned by "The Golfer," an association industry golf enthusiasts.

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Groede Lair plans to snare title as world's best

BY MARK LESLIE

The ultimate destination golf resort, a sort of Disneyland of golf, is taking form on paper, and will be a $300 million reality in 1992, planners say.

Don Wizeman of the U.S.-Japan Golf Association, formed two years ago to promote golf between the two countries, is coordinating the giant venture on Johns Island off the coast near Charleston, S.C.

"We're talking about a project that gives everybody involved immortality," said Wizeman. He said the Grande Lair International complex, on which ground will be broken next spring, will open with:
• four golf courses;
• a career counseling center to help in areas from sports medicine to financial management;
• the world's largest golf school, which will include two sets of practice holes (one a par 3; the other a par 4 and 5);
• a golf course maintenance and management school to teach courses from design to course management as well as study and test grasses and irrigation systems;
• a complete golf video and library;
• a $4 million to $5 million state-of-the-art health and fitness facility;
• a broadcast facility to air tour events, and its advertising budget alone would be bestowed upon you in the first serve."

Wizeman said, "We're not trying to build perhaps 1,000 home sites rather than the 20,000 you might expect."

It sounds like a distance dream but Wizeman insists, "We are going after the 'Who's Who of Golf,' " and names U.S. Japan Golf Association partners and rivals as Edward D. Stone and Associates land planning group; Timbesh, Wilund, Usry and Carter building architects, the Bellamy law firm; Palm Beach Institute of Sports Medicine; and Architectural Graphics of Virginia Beach, Va.

The project will be financed 80-90 percent by a Japanese company, while Wizeman's group will handle construction, development and management. Wizeman said five Japanese firms have expressed interest in being the one company involved, and the American partners will offer the deal first come first serve.

The American partners have optioned 4,500 acres on Johns Island, which actually includes 11 small islands 15 miles south of Charleston. They have options on three plantations for $50 million.

"Everything will be done on the front end. We will all be completed when we open," Wizeman said. "But we will be able to expand the hotel and add courses as needed." The income sources will be tremendous cash flow-wise, from a spa to the teaching facility, courses, hotel with food, room and beverage, cottages, corporate retreats, and leases at International Square (the shopping, restaurant, night club area).

The complex will employ 1,600 and it will probably be $3 million a year, he said. He said Economic Research Associates of San Francisco is doing a feasibility study on the project.

The cornerstone of the golf courses will be a 18-hole Monster Course designed by 18 different architects "to be the hardest course in the world." Wizeman has solicited 60 architects to show the partners their ideas, and a review will pick the final 18 for the course. Those 18 will select three to be in charge of the entire course.

The architects will also be asked to design an entire course, giving the complex four complete courses when it opens.

Wizeman envisions another 18 to 22 courses being built in the years ahead — one apiece by the 18 original designers as well as a Japanese course and perhaps one on which 18 golf professionals will design signature holes.

"All (the architects) were concerned about participating, are participating," Wizeman said.

Wizeman feels golfers the world over will be drawn to the complex — if only to play the Monster Course. He said it will probably cost them more than $300 a round and he envisions 130 golfers a day playing.

The developers haven't chosen a golf course builder yet. But that question mark hardly puts a wrinkle on Wizeman's brow. Between now and next spring he faces a few decisions immensely more challenging.

ASPA gives grant money

The American Sod Producers Association has awarded $15,000 to five university research projects in an attempt to determine the environmental contributions of turf management.

ASPA awarded grants to:
• Dr. James B. Beard of Texas A&M for his project on "the benefits of turfgrass in favorably modifying the microclimate of urban areas."
• Dr. H.D. Nieumczyk of Ohio State for his study on "the effects of turfgrass on the quality of air and vertical mobility of insecticides and herbicides applied to turfgrass."
• Dr. A. Martin Petrovic of Cornell University for his study to model the leaching of pesticides applied to turfgrass as influenced by soil type and irrigation management.
• Dr. T.L. Watschke of Penn State for his study on "the effects of turf establishment on water control."
• Dr. H.T. Wilkinson of the University of Illinois for his work on "an integrated biological control program to reduce fungicides used for the control of lawn diseases."

ASPA hopes the projects will provide better directions to sod producers and turf managers.
Architect Wencel a man with special 'finishing touches'

Golf course architect Grant Wencel has opened his own offices in the Atlanta, Ga., area. Wencel, who has been designing and renovating courses around the country since 1981, has added an artistic touch to his work. He paints water colors of scenic holes on courses with which he's been involved and presents them to club officials to display in the clubhouse.

Wencel graduated in 1981 from Kansas State University as a landscape architecture major.

He has worked for golf course architects Richard Phelps of Evergreen, Colo.; Larry and Roger Packard of Chicago, Ill.; and Willard Byrd of Atlanta, Ga.

Wencel recently remodeled the Brown Acres and Creek's Bend courses in Chattanooga, Tenn. He also has written articles for Golfing Week, a national publication.

His new offices are at 6263 Southland Forest Drive, Stone Mountain, Ga.

International students see 'real world' theory and reality meshed at the recent 22nd annual Jacobsen College Student Seminar in Racine, Wis. For the first time, British students of turf programs participated in the three days of intense, hands-on learning.

Christopher Harvey and David Williams were accompanied by British Institute of Groundsmanship representatives Eddie Seaward and Brian Robinson.

A similar program, sponsored by the Institute and J.D. Towne, will be held near London Aug. 20-23.

Others in the class of 36 were from the United States and Canada.

"The idea behind the seminar is to pass along as much first-hand knowledge and experience to these young people as we can pack into three days," said Jacobsen President Robert Reid. "We want them to know what to expect when they step into the job market, and how they can make the most of their opportunities."

Preparation for the "real world" began with a presentation on how these future turf professionals might effectively select equipment. Students were given tips on picking the proper machinery to maintain a golf course, methods to compare product features, and ways to estimate equipment life expectancy.

John Piersol, an instructor at Lake City, Fla., Community College, covered topics ranging from preparing a resume and job interviewing to what to wear on the first day at a new job.

Golf course superintendents were prominent in the lecture series. Monroe Miller of Blackhawk Country Club in Madison, Wis., a seminar alumnus, spoke on planning and implementing golf course budgets.


For students such as John Gasper of Ohio State University, the sessions offered a broader view of industry developments.

"In school, you know what's going on in your program, but you don't necessarily see what's happening elsewhere," Gasper said.

"This (seminar) has given me a chance to find out what's being done in other areas."


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Dunlop Japan buys into Dye Design

Dunlop Japan Ltd. has bought 7,500 shares of Dye Design, Inc. in order to become its exclusive agent in Japan. The $3 million purchase will raise Dunlop Japan's share to 33 percent in the firm operated by Perry Dye and based in Denver, Colo.

Dye Design has designed over 170 golf courses in 10 countries.

Dunlop Japan officials said the firm is planning to expand its sporting goods business to include design and management of golf courses in Japan.

Partnership formed

Four Seasons Hotel Inc. of Toronto, Ontario, Canada, has signed an agreement with Hillman Properties of Newport Beach, Calif., to operate and act as minority partner in a luxury resort in Carlsbad, Calif.

Four Seasons said it will own between 5 and 10 percent of the resort. Other partners in the project are Hillman and TSA International Ltd. of Honolulu, Hawaii.

The resort, to open in 1992, will feature a 450-room luxury hotel, 18-hole golf course.

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Pennsylvania sells land to be turned into courses

Two 400-acre parcels of land sold by the state of Pennsylvania will be developed into facilities including golf courses.

Ricon managing partner Richard Stambroisky said, "The development of a world class golf course and residential area will create jobs and other commercial development and substantially increase the area's tax base."

Bradleys get family award

Pat Bradley, the first LPGA player to win more than $2 million on the Tour, her mother and five brothers are the 1980 recipients of the Jack Nicklaus Family Golf Award.

The award has been presented since 1985 by the National Golf Foundation to focus attention on the importance of families in introducing players to the game.

Research shows that most golfers were introduced to the game by family and friends.

Previous recipients include the families of Jack and Barbara Nicklaus, Nancy Lopez and Ray Knight, and Jim and Lyda Cook.

Pat and brothers Richard Jr., Thomas, Mark, Christopher and John were introduced to golf by their father Richard, who died last year.

Mother Kathleen has been playing golf many years.

"Richard enjoyed golf as a youngster, when he learned to play by caddying with my brothers," Mrs. Bradley said. "He felt golf taught discipline and that it was a game of honor. He wanted his family to enjoy golf together. Had it not been for Richard, none of the children would have learned golf, and certainly Pat wouldn't be where she is today."

Joseph F. Beditz, NGF president and CEO, said, "The Bradley family epitomizes all that is good in golf — sportsmanship, fair play and enjoyment. Despite their busy schedule which included raising six children and owning a family business, the Bradleys encouraged their family to enjoy the lifetime sport of golf."

Grand Slam raises $100,000

More than $100,000 was raised for the PGA Junior Golf Foundation during the recent annual Grand Slam of Golf at Kemper Lakes Golf Club in Northern Woods, Ill.

The event features four top professionals competing in the exhibition.

The foundation conducts several programs for youngsters such as Clubs for Kids, First Swing, School Golf Development and the National PGA Academy of Golf.

"The goal of the PGA Junior Golf Foundation is to provide the materials, organization, encouragement and manpower to develop programs for youngsters," said Patrick J. Rielly, PGA of America president.
Product feature series opens

Golf course mowers, tractors and related products showcased

The July issue marks the first in an ongoing series featuring various products and services that will be of interest to you. The plan is to provide you with a wealth of information from a product or service category in an easy-reading format that will help you in your purchasing decisions.

The first category we feature is Mowers, Tractors and Related Products. Admittedly, we may have selected a category that is so complex and varied that we will miss several important products in our listing.

In the future, the plan is to break down this large category into more specific divisions that will serve you, our readers, and your suppliers in the most effective manner. Please take some time to evaluate this new format (which appears on pages 16-17) and the product showcase (pages 26-29).

The chart on pages 16-17 can be pulled out of the newspaper and tacked onto a wall.

If you're interested in a specific product, use the reader reply number and mail in the reader service card enclosed in the newspaper to receive more information from the manufacturer.

I would also like to hear your comments on this type of feature.

In the June issue I outlined the list of features we will be reporting through December, with the exception of November. The decision has been made for November to provide our readers an up-to-date listing of all the architects and builders who are challenged with this exciting industry.

Golf Course News is proud to let you know that the July issue has grown to more than 20 paid advertising pages. This is a major goal in our publishing plan to be the newspaper for the golf course industry.

Continue to enjoy Golf Course News.

Sincerely,
Charles E. von Brecht
Publisher

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that the prayer breakfast will grow and in-

colleagues has organized annual Golf Course

Hills (111.) Country Club who with several

in the garden to work it and take care of it,"

Golf superintendents

work, will serve as the association's

PGA of America makes changes

O'Brien and Steranka earn promotions...

The Professional Golfers' Association of

America has promoted two executives to

the newly-created level of senior director.

Joe O'Brien, a member of the headquar-

ters management staff for 16 years, has

been named senior director of strategic plan-

ning.

Joe Steranka, director of communications

and public relations the past year, will be

senior director of marketing and promo-

tion.

O'Brien will work directly with the inter-

national management and consulting firm

of Booz, Allen and Hamilton, retained to

assist the PGA in development of a five-year

strategic plan.

The comprehensive study will provide

input in several key areas.

Steranka brings ten years of sports mar-

keting experience to his new position. He

will be responsible for all PGA marketing

programs, including sales and licensing,

and a new golf promotions department

which will manage programs such as the Oldsmo-

ble Scramble and National Golf Day.

Steranka also will oversee the PGA Mer-

chandise Show and the PGA Junior golf pro-

gram.

PGA of America, he said, "has made as-

surances it's going to be a promising, re-

warding career."

Group's directors

The GCSAA members involved in the Prayer Breakfasts have in-

corporated under the state of Illi-

nois and have received charitable

status.

Directors are:

• Len Berg of Village Greens of

Woodridge in Woodridge, Ill.

• John Ebel of Barrington

Hills (111.) Country Club.

• Tim Kelley of Village Links

of Glen Ellyn in Glen Ellyn, Ill.

• Palmer Maples of Summit Chase

Country Club in Lawrenceville, Ga.

• Jim Reed of Chicago Turf and

Irrigation Co. in Itaska, Ill.

• Bruce Serling of Glenview (111.)

Club.

Ebel said the GCSAA members have firm

objectives in coordinating the breakfasts: "to seek God's blessing on the GCSAA con-

ference, its affairs, our nation, our member-

ship, our directors, our staff, and to share

God's love."

Hodnick replaces

Kurtz for STMA

Mark Hodnick, Cal Poly at Pomona's

superintendent of grounds, has been

to replace his former teacher, the retired Dr. Kent Kurtz, as executive

director of the Sport Turf Managers

Association.

Kurtz, who received a life member-

ship in STMA in recognition of his

education coordinator for national and

regional conferences, a newly created

position. During his five-year tenure,

the group grew from 60 members to

nearly 900.

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John Ebel

breakfasts.

"Our purpose is to glorify God in our

lives," Ebel said, "and I think golf course

superintendents have a unique position in

recognizing God's handiwork and His om-

nipotence in what we do because we are at

the mercy of conditions beyond our control.

"His glory is all around us. We see it every
day and we just tend it."

"The seed for the breakfast was planted in

1975 when "several people in our organiza-
tion sensed the need and saw that the spiri-
tual aspect of our profession was really miss-
ing," Ebel said. "We have much professional,

educational and other things like that to offer

but we didn't offer anything spiritual.

"In 1980 the seed germinated when Ebel

and his wife, Juanita, "stepped out in faith" to

bring the first Prayer Breakfast to the St.

Louis conference. John had secured a speaker

he felt would communicate well with
golf course people. The GCSAA as-

signed them a room at the conference hotel

and scheduled the meeting as the first on the

agenda.

"The Ebel's drove around in a taxi the night

before, looking for a Dunkin' Donuts, and

brought back 12 dozen doughnuts to serve

with coffee.

One hundred and twelve people showed

up. "That was very encouraging," Ebel says.

The encouragement has continued. Acore

group of GCSAA members from the Chi-

cago area meets every month or two. Other

people are getting involved, Ebel said, "and

we feel there will be others coming along to

keep it going."
Jimmy Jones the main Maine man 60 years

BY VERN PUTNEY

Jimmy Jones isn't much bigger than a dozen hefty divots, but the Cape Elizabeth resident rates the heavyweight "Maine Greenkeepers/Greenkeeper" handle.

For 60 years, the golf professional-course superintendent has shaped stubborn earth in Maine's most mercurial weather.

His contributions to the game, which he discovered in 1917 as a caddie at Augusta Country Club, were recognized in 1986 by the Maine Golf Course Superintendents Association. Jones received that group's Distinguished Service Award.

Jones didn't rest on that coveted laurel. He continued his many years of mowing and maintenance duties at nearby Purpoodock Club as an aide to his course superintendent son Gary.

Jones tapered off a bit last summer. He oversaw operations at Salmon Falls Golf Course in Bar Mills, one of five Maine courses he's helped design and build, and he's active there again this year.

Austin Kelly, veteran pro-sup at Bangor Municipal Course, says, "I learned more from Jones in one day than from anyone else in months. I have tremendous respect for his talents."

Jones was back injured while wrestling a timber from the old Purpoodock clubhouse is kicking up. The 110-pound frame lost that tug-of-war.

Jones was the Maine Golf Course Superintendents Association's first president, in 1940, and from the early 1930s to the mid-'50s was a tournament threat. And about 225 yards was his longest tee shot," confesses Jones. "but I was accurate and had a sharp short game." Dr. Ray Lebel of Falmouth, several times Maine Amateur champion, termed Jones "the best putter I know."

Oddly, Jones remembers most a 4-iron shot on the 381-yard eighth hole at Portland Country Club. This dramatic eagle during the 1936 Maine Open propelled him into the beginning of the time-saving hydraulics revolution.

"I can command a good view of the course, see what's going on and frequently spot trouble areas," Jones explains.

Like most pros who reveled in Maine's ideal summer and fall, Jones preferred to spend winters in warmer climes. His first southward venture was in 1938, a five-month pro post in the Panama Canal Zone. After 45 discouraging days of rain, Jones gave 715 lessons to Army (14th Infantry), submarine and air base personnel. World War II ended Jones' pleasant refuge.

From 1974 to 1984, Jones worked winters at Mountain Lake Country Club in Lake Wales, Fla. Older brother George, who had been a pro at several Maine courses, fled the state for good after World War II. He made Mountain Lake his work headquarters until 1985, and now resides in Haines City, Fla.

Had anyone for 25 years incurred in the Mountain Lake dining room, "Where's George?" the answer would have been, "Not here."

Jones eventually made it — through the front door. After playing an exhibition with Arnold Palmer and Gary Player, they ate. When Player learned that George was making his long-deferred dining room debut, Player cracked, "Do you suppose you can wrangle me another steak?"

It was part of clubhouse folklore that the Prince of Wales (later King Edward VIII) also was denied entry. "Members Only" meant just that to the security chief.

Relaxing in Purpoodock's lounge two days after Thanksgiving, as lightly clad golfers delighted in no-breeze, 60-degree weather, Jones reflected on more Spartan times. "Purpoodock frequently was playable after other area courses closed. Most players, though, carried whis brooms to brush the snow from their line of putt."

It's a long way back to the days of horses equipped with leather shoes so as not to damage the fairways during mowing operations.

"Then," recalls Jones, "a course might have three or four horses. If a horse worked one day, two or three days of rest would follow. Bangley Country Club had five horses, a pair for each unit.

Jones has seen it all, from horses to Fordson tractor to triple units, the beginning of the time-saving hydraulics system.

He might be a tad envious of modern tools at course superintendents' disposal, but admits they'll come in handy for his next course-building venture.

If you know of a standout golf course superintendent who is long overdue for peer recognition, please let us know. Golf Course News welcomes nominations for such accolade.

Super Focus is a monthly feature. Just write to us at P.O. Box 767, Yarmouth, Maine; or call 207-846-0600.
**NEW COURSES**

**Aesthetics, playability are Larry Nelson's aim for Nashville layout**

With rock bluffs along the west side of the property, the Cumberland River along the east side, and farmland in between, a new course in Nashville, Tenn., will be enjoyable to play and see, architect-player Larry Nelson feels.

Springhouse Golf Club, Opryland Hotel's resort golf course, is being built and play is anticipated in the fall of 1990.

"Our goal was to create a golf course that would be enjoyable — in terms of aesthetics and playability — for the resort golfer who may play only occasionally and yet be challenging enough to host a major championship," said Nelson, a U.S. Open and two-time PGA champion.

Springhouse golf director Chuck Eade said 27 holes had been planned on the 220-acre site, but wetlands protection and the unusual shape of the property have reduced it to 18 holes. "However, that 18 is spectacular," he said.

**Hawaii getting PGA Tour course**

The first PGA Tour Tournament Players Club golf course in Hawaii will be built as part of an 11,000-acre resort residential complex overlooking the North Kona Kohala shore.

The course is designed by Jack Nicklaus, his first project on the Big Island. A traditional Hawaiian ground-blessing ceremony in May heralded the Fourth Seasons Resort's $160-million, 300-acre first phase, which is scheduled to be completed in the fall of 1991.

**It wasn't meant to be a secret.**

It is a real shame when good friends lose touch. When we moved to Florida a few years ago we lost touch with many of you and we want to change that.

We have rededicated ourselves to providing you with proven designs and quality manufactured mower sharpeners including the Models 800 and 1300 Reel Sharpener, the Model 59 Bedknife Grinder, the Model 21A Rotary Blade Grinder, and the Model 150 Lapping Machine. We also continue to provide almost any part for all of our older models.

Let's renew old friendships. Please drop us a line and let us know what you've been up to. Or better yet, give us a call at (800) 388-4689.

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**Walker designs and renovates**

Robert C. Walker Inc. lists one course opened and two scheduled in October.

The county-owned public-St. Johns County Golf Club in Elkton, Fla., built by W. R. Townsend, Par 72, Inc., and designed by the Walker golf course architectural firm based in Atlantic Beach, Fla., opened in January.

Play averaged more than 4,000 rounds the first three months. The 18-hole course measures 6,890 yards and embraces 100 acres of course-dividing native wetland and 44 acres of excavated lakes and lagoons.

San Jose Country Club in Jacksonville, Fla., 6,700 yards, 18 holes and private, is of 65-year old Donald Ross design. Work involves total redesign and reconstruction, including rerouting of 3 holes. San Jose CC is the owner.

River Run, Davidson, N. C., 18 holes and 6,875 yards, also will be private. PGA Touring professional Raymond Floyd is acting as design consultant.

"Rocky River" runs through the course, hilly with a heavy stand of pine and oak. Edgeco is the owner.

**McCumber team busy on Florida courses**

Mark McCumber and Associates, working with McCumber Construction, Inc., is busy on several courses in Florida, and has completed a couple of major projects.

The grand opening was held in May for the clubhouse at Marsh Creek in St. Augustine, where the course was woven in and out of sensitive wetlands. McCumber and the developer, Stotes O'Steen of Jacksonville, worked with environmental agencies for about two years to ensure protection of the marshes throughout much of the course.

Four holes are on tidal marsh and several others have interior marsh areas.

The private country club plays on four sets of tees ranging from 6,845 yards on the back tees to 5,300 on the forward tees. Construction costs ran $1.7 million.

**New York State Kay's domain**

Stephen Kay of Westchester, N.Y., is doing extensive work — from renovations to master plans — at golf courses around New York State.

The grand opening for Kay's Hilland Golf Club in Glen Falls, which opened for play last September, will be held in June. The 6,800-yard layout plays to a par 72.

Kay has also completed an extensive remodeling and renovation to The Seawane Club on Long Island.

**Lohman's Cedar Creek CC opening**

Nine holes of the new Cedar Creek Country Club in Onalaska, Wis., will open in July.

Construction and seeding for the second nine is complete. The 18-hole layout will open in late spring of 1990.

Bob Lohman, president of Lohman Golf Designs, Inc., in Crystal Lake, Ill., was designer-architect, Lohman subsidiary Midwest Golf Development is the course's builder. With multiple tees, course length ranges from 5,305 to 6,815 yards.

Water comes into play on six holes, and the par three seventh features an island green.

Lohman also is working with Fuzzy Zoeller on the new Boulder Ridge Course in Lake in the Hills, Ill.
Paris site challenges von Hagge

Robert von Hagge of von Hagge Design Associates has been chosen as the architect for a 36-hole premier golf facility at Chateau Corse-Montloup near Paris, France. The Courson chateau southwest of Paris is known for its annual resplendent flower shows.

Seductive Francisca, a 13,000-member national sporting association now in its 16th year, obtained the rights to develop the four nine-hole courses radiating from the chateau. This will add flexibility to the facility by allowing variation in the pairings of the nines, making six different 18-hole combinations possible.

The plan calls for the ability to host major tournaments as well as provide a fair challenge for the beginner. Each nine-hole course is expected to be about the same length, to ensure that one 18-hole combination does not get an exaggerated reputation.

During the final design phase, the tournament course will be identified. By incorporating design subtleties, a championship challenge will be created.

Meanwhile, a little further north, Europe's first stadium-style golf course is under construction at St. Quentin en Yvelines. Golf Club National was conceived and is being built as the permanent home of the French National Open. With only four holes roughgraded, the 18-hole layout promises to be a playing challenge and a delightful test for the spectator, von Hagge feels.

Associate Rick Barr says that the final four holes represent the definitive finishing quartet for stadium golf. Dubbed "The Gauntlet," three of the final four holes may be viewed from a single stadium area near the clubhouse.

Barr and associate Jim Shirley recently accompanied von Hagge to Seignosse to outline fairways and bunkers in preparation for the club's preview opening.

In the United States, construction is under way at Hardyston, N.J., where von Hagge has designated an 18-hole course for the Crystal Springs development. The project, on a site of cliffs, streams, wooded hills, wetlands and rolling meadows is being overseen by the Swedeland Forge Associates, headed by Joe Riggs.

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**Golf course development plans**

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<tr>
<th>Location</th>
<th>Course Name</th>
<th>Type</th>
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**Please keep us informed**

Each month, Golf Course News— in cooperation 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 rehabilitating or expansion of existing ones, to write to Golf Course News, P.O. Box 957, Yorktown, Va. 23693.

We are interested in:

* The city and state of the course.
* The owner, builder and architect.
* The number of holes and total yards.
* Whether the course is private, daily fee or municipal.
* The target date for completion.
* The type of terrain or any outstanding features of the layout of the course.
* Color or black and white photos of unique holes.

*— Information from NGF reports, direct contact with developers and architec ts, and newspaper and magazine accounts.
FAI, environment expert collaborate

Responding to concerns about golf courses' environmental liability, FAI Insurance Counseling, Inc. has joined with an expert in the field to develop an environmental risk management program.

FAI, which administers the National Golf Foundation-endorsed insurance programs, will work on the program with Versar, Inc., a nationally known environmental and engineering consulting firm.

"Environmental regulations at all levels of government are becoming more restrictive, and the costs of non-compliance — like fines, potential liability and remedial actions — are increasing," said Tom Marks of FAI.

"If golf courses are to maintain their reputation as safe, scenic places for recreation, the potential for environmental liability must be reduced...

"Environmental risk management is the name of the game."

The program begins with an interview with the course superintendent and others who handle toxic materials, and an on-site environmental audit by Versar, which documents conditions and operations; identifies toxic materials and their associated hazards.

Also, assesses environmental management procedures; reviews regulatory compliance; provides a qualitative assessment of potential liabilities; and presents recommendations to reduce potential liability.

Once a potential problem is identified, Marks said, the golf course generally has four options:

• Act to reduce the risk.
• Conduct another study to further define or characterize a potential liability.
• Transfer the risk through insurance or other mechanisms.
• Take no action.

Working with Versar's engineers and scientists and with FAI's insurance counselors, Marks said, a golf course can select actions that best fit its needs and circumstances.

Versar provides courses with environmental assessment services, multimedia sampling and analysis, remedial investigations and cleanups and management plans.

Al Bryant hit over 4500 fairways with this iron last year

Rain used to be the problem. The reason Al Bryant, superintendent at Florida's Riviera Country Club, missed a lot of fairway mowing. No more.

"Since the John Deere 305 replaced our ground-driven mowers a year ago, I've been able to work on days and in areas I couldn't before," says Bryant. "I mow our fairways five times a week with the 305 — put over 1500 hours on it last year.

"Our fairways have also improved because of the 305. The quality of cut is so much better. Its constant reel speed and ability to better follow ground contours have made all our fairways more uniform."

Bryant also uses a John Deere 855 Tractor, 1650 Tractor, 151 Vacuum Sweeper and two 22-inch Walking Greens Mowers at his course.

"Parts back-up has been a big factor in our decision to continue buying John Deere equipment," says Bryant. "We get almost all our parts in one day — and that means a lot in this business."

"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 Al Bryant, you're going to like what you see.

Other John Deere machines at work at Riviera CC include a 151 Vacuum Sweeper, 1650 Tractor, and two 22-inch Greens Mowers.
Turfgrass foundation presents scholarships

The Musser International Turfgrass Foundation in Sharon Center, Ohio, has awarded $6,000 scholarship grants to Andrew Ralowicz of the University of Arizona’s Department of Plant Sciences and to Gwen Stahnke of the University of Nebraska’s Department of Horticulture and Forestry.

The grant is awarded in the final year of study to Ph.D. candidates who have displayed “high scholastic achievement and presented a well-conceived, relevant thesis problem with an element of ‘pioneering’ toward problem orientation.”

“Our financial support of these two exceptional doctoral candidates is the best investment we can make for the future of all sports turfgrass,” said Frank Dobie, president of the MITF and superintendent of The Sharon Club.

For his doctoral dissertation, Ralowicz, an agronomy/plant genetics major, is evaluating Hilaria belangeri as a minimum-input desert turfgrass. He has been a graduate research associate at Arizona since July 1986, working with Dr. Charles F. Mancino.

Stahnke, a turfgrass science major working with Dr. Bob Shearman, has been studying the effects of five pre-emergence herbicides on Kentucky bluegrass root growth and overall quality for her doctoral dissertation. She is also working to determine the dissipation and movement of pendimethalin in soil and Kentucky bluegrass thatch.

MITF is dedicated to the memory of H.B. Musser’s “pioneering efforts in turfgrass research and education, and to the continuance of his dedication to the field.”

Musser’s research gave the industry new grasses like Penncross bent, Pennlawn red fescue and Merion Kentucky bluegrass. His support of education fostered the Penn State turfgrass management program, with 900 graduates to date.

Members of the scholarship selection committee were Dr. James Watson, vice president of The Toro Co., Dr. James Beard of Texas A&M and Dr. Joe Duijch of Penn State.

Valle Vista hires Fla. firm to run club

Club Operations & Property Management Co. of Tallahassee, Fla., has been hired to double membership and restore prestige at Valle Vista Country Club in Greenwood, Ind.

“The club needed a shot. It needed to progress,” said Charles Kern, who owns the club along with his father and two brothers.

COPM replaces Charles and Joseph Kern in running the 110-acre golf and social club which includes the 18-hole course, three-story clubhouse, indoor-outdoor swimming pool, four racquetball courts and complete fitness facility.

COPM operates 44 clubs along the East Coast but Valle Vista is its first club in the Midwest.

The Kernses have pledged to use the money raised by increased membership and dues to make capital improvements to the facility.

Indiana course to benefit area

An Indiana businessman plans to develop a 27-hole world class golf course in Greenwood outside Indianapolis.

Joseph Matis, assistant vice president at Merrill Lynch Pierce Fenner & Smith Inc., and an unnamed partner have bought 525 acres east of Interstate 65 to build the course and residential housing development.

Matis, who has set up Hickory Club Inc. to own the golf course, said ground will be broken soon on it.

Since the development will bring sewer service to the area, government officials hope a development explosion will follow in the region now supporting only farmland and scattered housing.
New Jersey, July meeting at Colonia Country Club in Colonia. The host is Christopher Gaynor, 201-381-3317.

Aug. 2—44th annual meeting of the Soil and Water Conservation Society, Edmonton, Alberta, Canada. For information telephone 519-293-2531.

August

7—Mid-Atlantic-Region Association of Nurserymen, 12501 St., N.W., Suite 500, Washington, D.C. For more information contact the American Association of Nurserymen, 12501 St., N.W., Suite 500, Washington, D.C. 20005; 202-979-0001.

15—The United States Golf Course Superintendents Association of America, 92418—The United States Golf Course Superintendents Association, 12501 St., N.W., Suite 500, Washington, D.C. For more information contact Chuck and Karen Shively, 440-424-1711.

17—Clubmakers nationally, will meet in Louisville, Ky. More information and an entry form are available from the American Association of Nurserymen, 12501 St., N.W., Suite 500, Washington, D.C. 20005; 202-979-0001.

September


October

4—The annual Southern California Turfgrass Expo, devoted to the exhibition of equipment, materials and services for installing and maintaining turfgrass and landscape, at the Orange County Fairgrounds in Costa Mesa. More than 230 manufacturers and distributors will display and services. Bluegrass music and a barbeque are included. For more information contact NENA, 24 West Road, Suite 33, Vernon, Vt. 05066.

4—Golf Course Europe, an international exhibition and conference on the design, construction and maintenance of golf courses and on golf club management, at Rhine/Main Halls, Wiesbaden, West Germany. For more information contact Allard J. Hoogland at Expoconsult, P.O. Box 200, 3600 AE Maarsen, Holland; telephone 03465-73777.

25—27—1989 Southwest Turfgrass Conference at the Albuquerque (N.M.) Convention Center will include the SWTG Conference, Turf and Ornamental Insect Management Workshop, and a golf tournament. For more information contact the Southwest Turfgrass Association at New Mexico State University, P.O. Box 3AE, Las Cruces, N.M. 88003.

November

4—Lawn Seed Conference at Crown Center Hotel in Kansas City, Mo. For more information contact the American Seed Trade Association, 1030 15th St., N.W., Suite 964, Washington, D.C. 20005.

4—Western Seedsmen's meeting in Kansas City, Kan. For more information contact the American Seed Trade Association, 1030 15th St., N.W., Suite 964, Washington, D.C. 20005.

TURF TRUNER

THE LIGHTWEIGHT GASOLINE POWERED PRUNING TOOL-
SAFE

Cut hard to reach places from the ground. Patented features eliminate kickback danger. Operator can stay clear of falling branches & debris.

TELESCOPING SPLINED ALUMINUM DRIVE SHAFT

Extends or retracts from 7' to 11' or anything in-between.

USED FOR:

• Parks • Golf Courses
• Campus • Cemeteries
• Orchards • Rental Outlets
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Mole crickets

Continued from page 1

Rehberg said.

In the controlled IFAS study, the nematodes have remained in the soil four years after their release and their effect on mole cricket populations has been detected recently from the original release point.

In this study on bahiagrass pastureland which, Rehberg pointed out, is particularly susceptible to the dreaded root-eating pest, “the mole cricket populations... have decreased by about 95 percent and continue to decline as we continue to monitor. “Grass and trees have recovered from mole cricket damage and mole crickets are not an economic problem in these pastures.”

The nematode and its lethal bacterium are completely harmless to “all other biological systems,” Rehberg said. “All tests indicate so far that it is very specific.”

So now the FTGA, which funded the IFAS research by Dr. Grover and Dr. Rehberg, is “smart with $45,000 in grants, is going to let 20 members pay $8,000 each to test the nematode on their golf course,” Rehberg said. “Undoubtedly we’ll have more than 20 willing to participate,” Rehberg said. “Comparing the alternatives, $8,000 is practically free.”

Mole crickets reportedly caused millions of dollars of damage each year to golf courses in Florida, Georgia, Alabama, Louisiana and South Carolina.

The problems in testing the nematode have included “not having been so much with the organism but with the ‘delivery system.”

The laboratory technique for infecting the mole crickets is difficult, unpleasant and expensive.

Besides, Rehberg said, “the IFAS is not equipped, nor is it in business, to raise large amounts of any biological control agent.”

The technique developed by the FTGA involves luring mole crickets to traps filled with nematode-infested sand and then using the infected mole crickets on the golf course “where they can go infect other mole crickets before they die.” Rehberg said.

“It may take a couple years to get them out there in sufficient numbers to really show you a difference,” he said, “but we think it will happen.”

Participants in the test will be selected in late summer or early fall.

They will be chosen in such a way as to guarantee a variety of soil and climatic conditions. They will attend a seminar in Gainesville, Fla., before getting their nematodes.
Some grass seed cleaned

Olson Fennels Seed of Oregon has managed to have its tall fescue shipment from Argentina cleaned so well that the seed can be sold on the open market. But co-owner Greg Fennels said the company will not sell it in the United States.

"We don't want either the responsibility or the public knowledge that we would be shipping to other parts of the country when we're totally innocent and yet have all the burden of the negative publicity and financial responsibility for everything. It's been a very ugly deal."

Other companies that imported the seed were Seaboard Seed Co. of Bristol, Ill., Nor- mac, Inc. of Dallas, Texas, and Allied Seed Co. of Nampa, Idaho, Gateway Seed Co. of St. Louis, Mo., and Hanceford Seed Co. of Somersett, Ky.

Sauna outlined

The "foul-up" stems from provisions, or absence of them, in the Federal Seed Act and the Federal Noxious Weed Act. In the 1930s the government passed the Federal Seed Act that has regulated the seed industry for 50 years. In 1973 Dr. Joseph Spears of the Animal Plant Health Inspection Service (APHIS) and Dr. Warren Shaw of USDA/ARS wrote the Federal Noxious Weed Act to control importation of undesirable weeds into the country.

But while the Federal Noxious Weed Act, the Plant Protection and Quarantine USDA can take no action."

At that point they issued emergency action notices and stopped the sale of all the seed, some five months after Pennington's seed came into the country.

Discouraging

"The most discouraging part of the whole thing," Pennington said, "is that they changed the regulations and the department's attitude is — and I quote a letter from Secretary of Agriculture Clayton Yeutter in April: 'I sincerely regret any inconvenience to Pennington Enterprises Inc.'"

Pennington, who employs 550 people, said his company "is not trying to introduce this weed seed into agriculture, or golf courses or any other place where it should not be. We relied on the government laws and regulations. It was imported in good faith, it was inspected by the U.S. Department of Agriculture's Plant Protection and Quarantine. It was sold in three-pound bags for lawn seed, not for golf courses, and we never would have imported it if it was subject to the Seed Act."

"You have to remember that with a sampling procedure and even with a zero tolerance (which we have), there's always a chance that X percent of the time you're going to miss a slight infestation."

Weed's been here

Owners of both Pennington Enterprises, Inc. and Olson Fennels Seed say the serrated tussock weed has been entering the United States for years in shipments of Argentine seed.

"Tall fescue has been imported from Argentina for 20 years," Greg Fennels said. "But there's no reward, it probably every year it's been imported. It's just not the public's attention this year and someone noticed it was supposed to be here."

"It's had tussock in it probably every year it's been imported," Bundy said. "Someone noticed it was supposed to be here."

"We do an inspection, a standard, first time the USDA has acknowledged this weed has come into the country. Apparently they feel that if one pound of it is sold it will contaminate the entire country.

"In reality this weed has been coming into the country in shipments of love grass seed for years."

The USDA's Chuck Havens, chief operating officer of the Plant Protection and Quarantine Program, said this is the first time the USDA has acknowledged that the weed had been in the country. "We do an inspection, a standard, worldwide procedure," he said. "Anyone needs to have to go with a sampling procedure and even with a zero tolerance (which we have), there's always a chance that X percent of the time you're going to miss a slight infestation."

For his part, Bundy said, "There is no one person that you can say is responsible. There is no one entity that is responsible for it. It is a series of things that happened.

"You cannot say that either side is completely responsible and doesn't bear some responsibility, including the seed companies."

However, he said, "You have to remember that the U.S. government is immune from suits except for some very limited situations and unless the Congress has seen fit to con- sent to being sued."

"Under Section 12 we are prohibited from compensating and a court is prohibited from giving any damages and we can show that there was no authority to take action.

"If we were the U.S. government, we would not sell it in the United States, the weed was never listed in the United States, the weed was never listed in the United States, the weed was never listed. We do not sell it in the United States, the weed was never listed. We do not sell it in the United States, the weed was never listed. We do not sell it in the United States, the weed was never listed. We do not sell it in the United States, the weed was never listed. We do not sell it in the United States, the weed was never listed. We do not sell it in the United States, the weed was never listed.
GOLF COURSE NEWS

One golf course superintendent may need a mower that performs well on hills and in a wet climate while another superintendent requires a unit that works best on flat terrain in an arid region. One superintendent may maintain short, narrow fairways while another has wide, expansive ones.

This survey will not be all things to all greenkeepers. We have developed it — with advice from superintendents and industry experts — to provide some basic information about models of mowers the manufacturers have chosen to feature in the categories of green, fairway, rough and trim areas.

<table>
<thead>
<tr>
<th>Company</th>
<th>No. of models</th>
<th>Chosen model</th>
<th>Price</th>
<th>Date Introduced</th>
<th>No. of Cut</th>
<th>No. of Cuts</th>
<th>Frequency of Cut</th>
<th>Width of Reels</th>
<th>No. of reels</th>
<th>Acres cut per hour</th>
<th>Height of Cut</th>
<th>Traction Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brouwer/Roughs #210</td>
<td>2</td>
<td>KTM-5S</td>
<td>$21,322</td>
<td>1987</td>
<td>135</td>
<td>135</td>
<td>Variable</td>
<td>3.0</td>
<td>5</td>
<td>4.3-6.5</td>
<td>1/4-3/4</td>
<td>Hydrostatic</td>
</tr>
<tr>
<td>Fairway #211</td>
<td>2</td>
<td>KTM-5F</td>
<td>$22,190</td>
<td>1987</td>
<td>135</td>
<td>135</td>
<td>Variable</td>
<td>3.0</td>
<td>5</td>
<td>4.3-6.5</td>
<td>3/6-3/8</td>
<td>Hydrostatic</td>
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<tr>
<td>Green #212</td>
<td>1</td>
<td>LM22 GE</td>
<td>$3,242</td>
<td>1985</td>
<td>135</td>
<td>135</td>
<td>.253</td>
<td>22</td>
<td>1</td>
<td>N/A</td>
<td>1/8-1/3</td>
<td>Mechanical</td>
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<tr>
<td>Trim #213</td>
<td>1</td>
<td>376A</td>
<td>$6,587</td>
<td>1985</td>
<td>135</td>
<td>135</td>
<td>Variable</td>
<td>3.0</td>
<td>3</td>
<td>3</td>
<td>1/2</td>
<td>Mechanical</td>
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<tr>
<td>Bunton/Fairway #214</td>
<td>1</td>
<td>MBMT-52 FD</td>
<td>1985</td>
<td>20</td>
<td>20</td>
<td>.35/mph</td>
<td>31.5</td>
<td>7</td>
<td>9.4</td>
<td>3/8-3/4</td>
<td>Mechanical</td>
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<tr>
<td>Green #215</td>
<td>3</td>
<td>BG61-180N</td>
<td>1985</td>
<td>20</td>
<td>20</td>
<td>.33/3.5 mph</td>
<td>22</td>
<td>3</td>
<td>2.25</td>
<td>3/32/3/4</td>
<td>Hydrostatic</td>
<td></td>
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<tr>
<td>Roughs #216</td>
<td>1</td>
<td>MBMT-52FD</td>
<td>1985</td>
<td>20</td>
<td>20</td>
<td>.50/mph</td>
<td>31.5</td>
<td>7</td>
<td>9.4</td>
<td>1/2-3/4</td>
<td>Mechanical</td>
<td></td>
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<tr>
<td>Trim #217</td>
<td>1</td>
<td>MB MT-22KD</td>
<td>1985</td>
<td>20</td>
<td>20</td>
<td>.35/mph</td>
<td>31.5</td>
<td>3</td>
<td>4.2</td>
<td>1/2-3/4</td>
<td>Hydrostatic</td>
<td></td>
</tr>
<tr>
<td>Cushman/Roughs #218</td>
<td>2</td>
<td>807</td>
<td>$10,400</td>
<td>1985</td>
<td>78</td>
<td>78+</td>
<td>N/A</td>
<td>60</td>
<td>2</td>
<td>4.0</td>
<td>1-1/2</td>
<td>Hydrostatic</td>
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<tr>
<td>Trim #219</td>
<td>1</td>
<td>804</td>
<td>$8,054</td>
<td>1980</td>
<td>78</td>
<td>78+</td>
<td>N/A</td>
<td>60</td>
<td>2</td>
<td>3.3</td>
<td>1-4.5</td>
<td>Hydrostatic</td>
</tr>
<tr>
<td>Deere/Fairway #220</td>
<td>4</td>
<td>3325 Professional</td>
<td>$36,441</td>
<td>1988</td>
<td>80</td>
<td>80</td>
<td>.36/mph</td>
<td>30</td>
<td>5</td>
<td>8</td>
<td>3/9-3</td>
<td>Hydrostatic</td>
</tr>
<tr>
<td>Green #221</td>
<td>3</td>
<td>22 Walking</td>
<td>$3,315</td>
<td>1987</td>
<td>80</td>
<td>80</td>
<td>.24</td>
<td>22</td>
<td>1</td>
<td>N/A</td>
<td>7/64-3/4</td>
<td>External drum</td>
</tr>
<tr>
<td>Roughs #222</td>
<td>8</td>
<td>E915 Front Mower</td>
<td>$12,570</td>
<td>1986</td>
<td>800</td>
<td>800</td>
<td>N/A</td>
<td>Rotary</td>
<td>Rotary</td>
<td>Rotary</td>
<td>4.8</td>
<td>Hydrostatic</td>
</tr>
<tr>
<td>Trim #223</td>
<td>8</td>
<td>656 Turf Mower</td>
<td>$20,000</td>
<td>1987</td>
<td>80</td>
<td>80</td>
<td>.110-1.68</td>
<td>30</td>
<td>3</td>
<td>4.1</td>
<td>3/8-2/3</td>
<td>Hydrostatic</td>
</tr>
<tr>
<td>Jacobsen/Fairway #224</td>
<td>7</td>
<td>LF-100</td>
<td>$21,195</td>
<td>1988</td>
<td>150</td>
<td>150</td>
<td>.087/mph</td>
<td>22-100</td>
<td>5</td>
<td>5.5</td>
<td>5/16-13/16</td>
<td>Hydrostatic</td>
</tr>
<tr>
<td>Green #225</td>
<td>4</td>
<td>GreensKing 4</td>
<td>$13,866</td>
<td>1984</td>
<td>150</td>
<td>150</td>
<td>.099/mph</td>
<td>22-42</td>
<td>3</td>
<td>2.16</td>
<td>5/64-7/16</td>
<td>Hydraulic</td>
</tr>
<tr>
<td>Roughs #226</td>
<td>5</td>
<td>HR-15</td>
<td>$38,297</td>
<td>1984</td>
<td>150</td>
<td>150</td>
<td>N/A</td>
<td>188</td>
<td>3</td>
<td>9.7</td>
<td>2-6</td>
<td>4-sp manual</td>
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<tr>
<td>Trim #227</td>
<td>12</td>
<td>Tri King 1684</td>
<td>$16,215</td>
<td>1986</td>
<td>150</td>
<td>150</td>
<td>.106/mph</td>
<td>30-84</td>
<td>3</td>
<td>4.0</td>
<td>3/8-2/3</td>
<td>Hydrostatic</td>
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<tr>
<td>Kubota/Roughs #228</td>
<td>2</td>
<td>VK5001 1-gang</td>
<td>$29,000</td>
<td>1989</td>
<td>40</td>
<td>40</td>
<td>.25</td>
<td>30</td>
<td>7</td>
<td>N/A</td>
<td>3-8/3</td>
<td>Full-behind</td>
</tr>
<tr>
<td>Rough #230</td>
<td>2</td>
<td>F2400 Rotary</td>
<td>$10,000</td>
<td>1986</td>
<td>800</td>
<td>800</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>11/24</td>
<td>PTO</td>
</tr>
<tr>
<td>Trim #231</td>
<td>1</td>
<td>W5021-SCC</td>
<td>$799</td>
<td>1988</td>
<td>800</td>
<td>800</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>131/2</td>
<td>Belt drive</td>
</tr>
<tr>
<td>Lesco/Fairway #232</td>
<td>5</td>
<td>500 D</td>
<td>$24,000</td>
<td>1988</td>
<td>40</td>
<td>40</td>
<td>N/A</td>
<td>11.5 ft</td>
<td>5</td>
<td>6.0</td>
<td>3/4-2.5</td>
<td>Mechanical</td>
</tr>
<tr>
<td>Green #233</td>
<td>3</td>
<td>300 Greenmower</td>
<td>1986</td>
<td>*</td>
<td>*</td>
<td>.34</td>
<td>22</td>
<td>5</td>
<td>N/A</td>
<td>1/4-1/3</td>
<td>Mechanical</td>
<td></td>
</tr>
<tr>
<td>Roughs #234</td>
<td>1</td>
<td>400 Trim</td>
<td>1988</td>
<td>*</td>
<td>*</td>
<td>.25</td>
<td>22</td>
<td>3</td>
<td>N/A</td>
<td>1/4-1/3</td>
<td>Mechanical</td>
<td></td>
</tr>
<tr>
<td>National/Fairway #235</td>
<td>3</td>
<td>Power Quint</td>
<td>1986</td>
<td>40</td>
<td>40</td>
<td>N/A</td>
<td>11.5 ft</td>
<td>5</td>
<td>6.0</td>
<td>3/4-2.5</td>
<td>Mechanical</td>
<td></td>
</tr>
<tr>
<td>Roughs #236</td>
<td>5</td>
<td>84 Triplex</td>
<td>1953</td>
<td>40</td>
<td>40</td>
<td>N/A</td>
<td>7 ft</td>
<td>3</td>
<td>5.5</td>
<td>3/4-2.5</td>
<td>Mechanical</td>
<td></td>
</tr>
<tr>
<td>Trim #237</td>
<td>3</td>
<td>68 Triplex</td>
<td>1962</td>
<td>40</td>
<td>40</td>
<td>N/A</td>
<td>5-8</td>
<td>3</td>
<td>2.0</td>
<td>3/4-2.5</td>
<td>Mechanical</td>
<td></td>
</tr>
<tr>
<td>Ransomes/Fairway #238</td>
<td>4</td>
<td>Fairway 5000</td>
<td>1989</td>
<td>35</td>
<td>35</td>
<td>73/yd @ 6 mph</td>
<td>22-3/4</td>
<td>5</td>
<td>N/A</td>
<td>5/16-13/16</td>
<td>Hydraulic</td>
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<tr>
<td>Green #239</td>
<td>3</td>
<td>Greens GT</td>
<td>1988</td>
<td>35</td>
<td>35</td>
<td>.18-3</td>
<td>22-3/4</td>
<td>3</td>
<td>2.5</td>
<td>1/8-3/4</td>
<td>Hydraulic</td>
<td></td>
</tr>
<tr>
<td>Rough #240</td>
<td>4</td>
<td>5/7 Sportcutter</td>
<td>1975</td>
<td>35</td>
<td>35</td>
<td>33-78/yd</td>
<td>N/A</td>
<td>7</td>
<td>N/A</td>
<td>depends on tractor</td>
<td>Split hydrostatic</td>
<td></td>
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<tr>
<td>Trim #241</td>
<td>2</td>
<td>Motor 180TR15B</td>
<td>1988</td>
<td>35</td>
<td>35</td>
<td>75/yd @ 4 mph</td>
<td>26</td>
<td>3</td>
<td>2</td>
<td>1/4-1/4</td>
<td>Belt drive</td>
<td></td>
</tr>
<tr>
<td>Roseman/Fairway #242</td>
<td>4</td>
<td>HGFP-7</td>
<td>$24,000</td>
<td>1978</td>
<td>30</td>
<td>30</td>
<td>.2-2.50/mph</td>
<td>30</td>
<td>7</td>
<td>10</td>
<td>3/8-3</td>
<td>Manual</td>
</tr>
<tr>
<td>Toro/Fairway #243</td>
<td>6</td>
<td>Reelmaster 223-D</td>
<td>$23,000</td>
<td>1989</td>
<td>50</td>
<td>50</td>
<td>.34-1.2</td>
<td>95</td>
<td>5</td>
<td>5</td>
<td>1/4-3/4</td>
<td>Hydrostatic/ transaxle</td>
</tr>
<tr>
<td>Green #244</td>
<td>5</td>
<td>Greensmaster 3000</td>
<td>$12,500</td>
<td>1971</td>
<td>50</td>
<td>50</td>
<td>.17-4</td>
<td>59</td>
<td>3</td>
<td>N/A</td>
<td>3/32/3/4</td>
<td>Hydrostatic</td>
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<tr>
<td>Rough #245</td>
<td>12</td>
<td>Grondsmaster 580-D</td>
<td>$50,000</td>
<td>1988</td>
<td>50</td>
<td>50</td>
<td>N/A</td>
<td>16</td>
<td>N/A</td>
<td>14.5</td>
<td>1-6</td>
<td>Split hydrostatic</td>
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<tr>
<td>Trim #246</td>
<td>4</td>
<td>Reelmaster 216</td>
<td>$13,000</td>
<td>1987</td>
<td>50</td>
<td>50</td>
<td>.45-1.64</td>
<td>72</td>
<td>3</td>
<td>3.5</td>
<td>1/4-2/5</td>
<td>Hydrostatic</td>
</tr>
</tbody>
</table>

*— Lesco pays an hourly labor rate and guarantees overnight parts delivery.
with improved cutting and conditioning units

You have to try it on your course, under your conditions... and look it over, from your standpoint and your mechanic's standpoint. "We want to look at traction — where the wheels are, where the weight is centered, the cost of maintenance and how durable it is, the number of welds and thickness of steel. In different designs, the features are cluttered up with shields."

Ravis suggested that before buying any mower, a superintendent talk with other superintendents who have used that particular equipment. Noting that the parts and service are different for different areas of the country, Ravis added, "The cost is important and the service — technical backup, parts service and proximity to your course — are critical."

Jim Byrnes, advertising manager for the Jacobsen Division of Textron Inc., said mower manufacturing is moving in "one clear direction."

--Continued on page 30--

For further information on any of the mowers listed in this survey, circle the number on the enclosed reader service card that corresponds with the number next to the mower you are interested in.

<table>
<thead>
<tr>
<th>Model Drive</th>
<th>Engine hp, type</th>
<th>2-, 3-, or 4-wheel drive</th>
<th>Ground pressure available</th>
<th>Ground pressure</th>
<th>Transport width</th>
<th>Transport speed</th>
<th>Mowing speed</th>
<th>Frontmower</th>
<th>Can available</th>
<th>No. of attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTO N/A</td>
<td>19.5 diesel</td>
<td>4</td>
<td>N/A</td>
<td>14 psi</td>
<td>94</td>
<td>12 mph</td>
<td>0-11.3 mph</td>
<td>No</td>
<td>No</td>
<td>3</td>
</tr>
<tr>
<td>PTO N/A</td>
<td>19.5 diesel</td>
<td>4</td>
<td>N/A</td>
<td>14 psi</td>
<td>94</td>
<td>12 mph</td>
<td>0-11.3 mph</td>
<td>No</td>
<td>No</td>
<td>3</td>
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<tr>
<td>Mechanical</td>
<td>3.5 hp gas</td>
<td>2</td>
<td>Yes</td>
<td>Yes</td>
<td>N/A</td>
<td>N/A</td>
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<td>Yes</td>
<td>No</td>
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<td>Mechanical</td>
<td>5 hp/4 cycle</td>
<td>2</td>
<td>N/A</td>
<td>No</td>
<td>N/A</td>
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<td>2</td>
<td>N/A</td>
<td>Yes</td>
<td>10 psi</td>
<td>91</td>
<td>22 mph</td>
<td>Yes</td>
<td>Yes</td>
<td>6</td>
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<tr>
<td>Hydraulic</td>
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<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>8 psi</td>
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<td>7.5 mph</td>
<td>Yes</td>
<td>No</td>
<td>None</td>
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<td>52 hp diesel</td>
<td>2</td>
<td>None</td>
<td>Yes</td>
<td>10 psi</td>
<td>91</td>
<td>22 mph</td>
<td>Yes</td>
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<td>Yes</td>
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<td>No</td>
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<td>No</td>
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<td>17 hp</td>
<td>2</td>
<td>None</td>
<td>Yes</td>
<td>72.5</td>
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<td>Yes</td>
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<td>4</td>
<td>Yes</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
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<td>Yes</td>
<td>Yes</td>
<td>N/A</td>
<td>72</td>
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<td>depends</td>
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<td>Yes</td>
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<td>2&amp;3</td>
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<td>18 mph</td>
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<td>86</td>
<td>0-10 mph</td>
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<td>76</td>
<td>0.62 mph</td>
<td>Yes</td>
<td>No</td>
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Amick suggests 18 ways to save on course

Golf course architect William Amick of Daytona Beach, Fla., lists 18 ways to save money building a course.

Amick, a member of the American Society of Golf Course Architects, suggests that a developer:

1) Lease land for a course on a long-term basis from a government agency, which can subdivide and resell it along with a private land owner, or receive the land free from a developer who wants a small stake in the area. With this arrangement, Amick says, "developers should seriously consider giving up enough land to an individual or group to build and operate a course. Governmental bodies to contend with high interest payments and land costs. And if you charge a nickel more for a cup of coffee, the public will be a success."

2) Consider building an executive or nine-hole course to save land, reduce construction costs, and make maintenance dollars go further. "These types of courses can fit the playing abilities of a large portion of golfers," Amick says.

3) Constructing a middle- and high handicap course with costs and revenues that will be a success. "We're seeing more and more-carriers interested in this type of facility... Jones Creek Golf Course, designed by Rees Jones, is a story of success. A large amount of play has been made on the course, and we've been able to keep the property operating successfully."

4) Avoid making the same mistake that golf course developers in the past have made. "If you can offer the public a quality country club-type course, in many places they will pay the greens fee and it can make operations work." And when looking at NGF figures claims the need for a new golf course a day for the next 20 years, Dye said, "I don't know of any industry that can double its volume overnight. We may never reach the point where we've saturated the market with overbuilding, and that's pretty unbelievable."
Northern New England: Surviving in shorter seasons

BY VERN PUTNEY

Northern New England is looked upon by much of the nation as a superb summer vacation spot, and the shoreline, forests and mountains aren't the only attractions. Golf course developers are thriving in Massachussets, New Hampshire and Maine.

New Hampshire lists 20 courses under development or in the planning stage. Maine numbers 14, Massachusetts 13.

Developers' knowledge of area conditions and a not-too-restrictive hand by state agencies are keys to the expansion.

Developers know that courses in these states will be playable for eight months to year-round. They have found that gloves (not golf) may be necessary in late November, and an early snowstorm may sideline even the most hardy; but the season is surprisingly long.

This means steady club revenue in front of green fees and car rentals.

Massachusetts (particularly Cape Cod) can have a near year-round season. Southern Maine can count on an April 15-Nov. 15 season, frequently with a week's bonus on either end. New Hampshire can squeeze in a bit more play.

It's no wonder, then, that New England's bedrock is ground for solid financial footing. Yet, financial success does not hinge on receipts from green fees and car rentals, but on business done before a shovelful of earth has been turned.

That business is coupling real estate with golf courses. It has been a rewarding marriage. Around 90 percent of golf course-related development is linked to real-estate development.

J.J. Cohen, president of a Littleton, Mass., construction and development company, says, "Golf is gold in New Hampshire."

His Blueberry Hill project in New Ipswich, begun in October 1987 and earmarked for opening in the fall of 1990, will realize a profit of $35 million to $40 million over the next 15 years.

That figure won't be strictly golf proceeds, of course. In addition to a championship 18-hole layout, Blueberry Hill will encompass luxury condominiums and such plush recreational facilities as an equestrian center and state-of-the-art health club.

The enticing melding of tournament-type country club course and real estate that attracts well-to-do members is evident at Falmouth (Maine) Country Club, a creation of Massachusetts architects Geoffrey S. Cornish and Brian Silva, which opened last fall.

David Bateman, vice-president of Dickson & Associates which developed Falmouth CC, noted: "We broke even in the construction of the golf course and the clubhouse. The big plus is the real estate around the course."

Since 1972 single-family lots sold for an average of $110,000 — a total of about $13.4 million. Subtract $6 million in land and construction costs and Dickson realized a gross profit of up to $7.4 million.

Blueberry Hill and Falmouth figures must be considered fantastic in conservative country where green fees don't approach the $100 charged at some courses.

Indeed, residential fairway frontage is second only to waterfront offices. Others, forms of recreation, industrial parks, etc., are more integrated into golf courses.

The British viewpoint was "Trade Follows The Flag." The golf industry says, "Industry Follows Recreation."

It is not uncommon for companies to choose a site because of fine golf courses in the area.

More private courses than ever have waiting lists. Some make applicants pay just to be on the list.

Strangely, outside the Sun Belt, the majority who buy fairway lots are non-golfers. Yet they still want a fine golf course.

"When we sold that point with our golf course built adjoining a non-player's property. The homeowner promptly knocked down walls, replaced them with huge glass windows and enjoyed the view."

"It's important to stress that most companies that finance golf do it as a percentage of their overall portfolio. GATX is the only one we could find that has a golf capital division."

— Richard Abel

"Golf courses make financial sense, adds Philip Arnold, vice-president of golf course development for the National Golf Foundation, "when designed and developed properly. When and if they do not, it is almost always faulty management that is to blame as opposed to faulty markets, and management problems are curable."

"Communities will be ever looking for new and better ways to serve older citizens who, coincidentally, tend to vote with much more frequency and regularity than their juniors. Golf courses will not only meet part of that need. They meet the needs of the senior population, but will also potentially produce excess revenues for communities which can be used to fund other senior services."

So the bottom line for those wanting to take the golf course development plunge comes again to financing. Money can come from private sources, individuals, a financial or lending institution or from government financing.

Before seminar developed by the Critenden News Service in the Palm Springs, Calif., area dealt with some of those issues for would-be developers.

Construction industry consultant Richard Abel explained, "We had 28 speakers over two days, all from different companies and perspectives. Exchanged were market studies, what they mean, what size population supports what kind of course — and so forth."

In the process of putting together the conference, Abel discovered some names of companies that have golf in their portfolio.

He said Wells Fargo Bank and credit companies such as Greyhound, Westinghouse and GATX Golf Capital are among names present.

Critenden seminar director Textron also has a division that lends some money for golf course development.

"It's important to stress," Abel adds, "that most companies that finance golf do it as a percentage of their overall portfolio. GATX is the only one we could find that has a golf capital division. Greyhound does — primarilly airline business. Textron does what it calls 'miniperm' financing — short-term permanent financing. Westinghouse has two divisions — commercial and residential. Its residential division does construction loans for housing and, if golf is a part, it likes that. It doesn't do golf alone."

"It seems the people attending (the seminar) were well, divided. One was a residential builders, one-third commercial developers and one-third golf course owner-operators," Abel noted.

Critenden developed the conference because "it seemed to be a topic people wanted to find out more about. A few years ago, it was syndication. Now it's golf course development.

"The National Golf Foundation, whose recent studies have shown that we need to open a course a day from now to the year 2000 to meet demand, is beginning a project that it hopes will help people be successful in developing golf courses."

Philip Arnold, president of golf course development for the NGF, explains, "By helping educate in the areas of finance and so forth, we are doing the most pertinent thing we can do to promote golf. The last thing we need are unsuccessful golf courses. We need golf courses that are constructed and underway and successful.

"(We are) starting to consider golf course development more actively than they would have the past few years. We need success stories to keep the ball rolling."

The NGF will review all courses opened in the 1980s. From that list it will conduct a survey to answer the crucial questions:

• How were courses financed?
• Have the courses been successful?
• If so, why? If not, why not?

The NGF will try to determine what kind of lending institutions were responsible for more open to development than others.

"We get about 8,000 calls a year related to developing a golf course," Arnold says.

"A large number of the calls touch on financing."

Financing a golf course, it seems, has been perceived as different from other kinds of business development. It has been viewed, historically, as riskier. Particularly the 1970s were not good. But we are hoping to demonstrate with our survey that the failure rate there is no higher than with other businesses."

"Golf course development and operations, he points out, have become sophisticated multimillion-dollar propositions. Investments of $2 million to $5 million for new course development, and annual operating revenues in excess of $1 million are the rule, not the exception, in today's economy.

Golf courses make financial sense, adds Dr. Joseph D. Beditz, executive vice-president and chief operating officer of the National Golf Foundation. "With proper capital, instead of gaining business, the course goes downhill," Arnold says. "To my knowledge, nobody has this information on how to do it successfully. I think we have to educate banks and lending institutions on the viability of present-day golf course development. Once we do, it will be easier for golf courses to be financed."
BY MARK LESLIE

Wes Bulen realized a dream in the spring of 1987, and he did it on what most developers would consider a shoestring.

The longtime Minnesota farmer, who had looked over his fields of corn and hay and envisioned a golf course, is already turning a profit on the 18-hole Rum River Hills course that has drawn raves from the golfing public since it opened April 1.

Bulen and his partners, including his brother-in-law Joel Goldstrand, who lives in Experimental Springs, Colo., and Steve Wright, owner of the nearby Rum River Park, spent $2.2 million on the course.

The cornerstones of success for Bulen and his partners are the location of the course and the way golf courses long survived in the face of massive opposition from the landowners who own the property in which the golf course is sited.

"It was the biggest obstacle," Bulen said. "But we worked hard to overcome it."

"It's a matter of being persistent," Goldstrand said. "We were able to get permission from the landowners to build the course on their land."

"We were able to get permission from the landowners to build the course on their land," Bulen said. "We were able to get permission from the landowners to build the course on their land."

The landowners, who include the city of Anoka, the county and the state, were able to make the deal because they were able to sell the land for a profit.

"It was a real win-win situation," Bulen said. "The landowners were able to make a profit on the land, and we were able to build a golf course."
Lost tradition equals lost manners

In the scramble to squeeze in the maximum amount of play from dawn to darkness, and the Devil take the hindmost, some golf course operators may be forgetting what the game once stood for.

Worse, comparative newcomers, with less than a nodding acquaintance of golfing history, may be doing the sport a disservice.

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Laurel Oak names Baugh supervisor

Mack Baugh, golf maintenance supervisor at Longboat Key (Fla.) Club for 14 years, has been named golf course superintendent for Laurel Oak Country Club, a private golf and country club community being built in Sarasota, Fla.

Laurel Oak, on Bee Ridge Road east of Interstate 75, will feature two 18-hole Gary Player signature golf courses. The first is expected to be completed by early 1990.

Baugh will be responsible for supervising construction activities on both courses along with representatives of Gary Player Design Co., as well as all course maintenance once construction is complete.

He will supervise installation and maintenance of all landscaping throughout the country club.

While at Longboat Key Club, Baugh oversaw construction of its 27-hole Harbourside course and was responsible for supervising the maintenance of the entire club grounds.

The 813-acre Laurel Oak Estates residential community is expected to be complete within six years. The $165-million community is being developed by Radnor/Sarasota, Inc.

Regan takes supers job at Karsten

Grounds maintenance at the new Karsten Golf Course at Arizona State University in Phoenix will be supervised by Thomas F. Regan, who has been superintendent at Bethesda (Md.) Country Club since 1981.

Henry DeLozier, president of Resort Management of America, the course's operational management company, said, "We were looking for a superintendent who possessed a specific set of skills to meet the high expectations we have placed on the position. Tom is one of only a handful of superintendents in the United States who met our requirements. "We particularly wanted a proven expert in the area of bentgrass greens; and we wanted a superintendent with a successful track record in hosting major golf championships. Tom is the right person for the job."

Regan, 38, has hosted the Greater Washington Open for the LPGA Tour, the U.S. Open and the U.S. Amateur championships for the United States Golf Association.

Foundation hires fund-raiser

Wendy W. Hoffman has been named vice president of special events for the Chi Chi Rodriguez Youth Foundation in Clearwater, Fla.

The foundation teaches disadvantaged youth academic and life skills, while the youngsters learn discipline through golf.

Hoffman will assist Gary Stiff, vice president of project development, in fund-raising and coordinating special events.

The foundation's grand opening of the Chi Chi Rodriguez Golf Club is due in November, and its full-time middle school before 1991.

Hoffman was previously employed by Western Hemisphere Network's liquidation division. She has been involved in fund-raising for organizations such as the American Cancer Society and All Children's Hospital.

She is a Palm Beach Junior College graduate.

Sally Lee returns to writing

Sally M. Lee, widely known in the green industry and Lesco advertising manager since 1983, resigned that position June 15.

The Ohio State University journalism graduate previously had been advertising manager for more than seven years at O. M. Scott, and editor of its ProTurf and Lawn Care Management magazines.

Lee plans to remain in close touch with the green industry, where she has a wide circle of friends and acquaintances, and hopes added flexibility will permit more time with her son and perhaps more feature article writing and photography within the trade.

She also hopes to make use of copywriting expertise.

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E. Ronald Lindemann

Lindemann moves to club in Bahamas

E. Ronald Lindemann has been named general manager of the Cotton Bay Club, Rock Sound, Eleuthera, Bahamas.

He will coordinate and supervise all operational and marketing activities of the full-service beach and golf course resort, including the par 72 Robert Trent Jones golf course.

Lindemann is a 24-year veteran of the hospitality industry. Cotton Bay Club is a 450-acre beach and golf resort, owned by Eleuthera Properties, Ltd., and operated by Dallas, Texas-based Club Resorts Inc.

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"Test Drive" our new 7-gang video on your VCR and see how you can hook up to 20 H.E. PTO tractor and go-cutting what you want, when you want — at over 16" per pass. Examine, close up, how our PTO driven reels protect your turf. See how you can control reel speed by increasing or decreasing ground speed and make sure damage a thing of the past.

• Watch how this lightweight compaction lighter distributes its weight over 7 rollers and 3 wheels.
• Discover how easily reels engage a disengage from the tractor seat.
• Compare our $1,750 factory-direct price to comparatively sized PTO powered units and judge for yourself.

Jerry Clipper

For free information circle #31

7437 Stillwater Boulevard • Stillwater, MN 55082 • CALL 612/439-4338 FOR YOUR FREE VIDEO TODAY!
Melex expands network of distributors nationwide

Melex USA has extended its distributor network to reach throughout the continental United States and Hawaii. The company has increased the scope of its distributor network 25 percent in the past year. Melex officials feel this growth is due in part to the new Model 412 being in full production.

Ex-super Coffin tabbed as regional manager

Daniel Coffin, who has more than 20 years of golf-related experience, has been appointed regional sales manager for turf products in Jacobsen Division of Textron's middle Western sales territory. Based in Longmont, Colo., Coffin is responsible for working with Jacobsen distributors from Colorado to Canada's western provinces.

Coffin was a golf course superintendent and manager of country club facilities for 15 years. He holds an associate degree in turfgrass management from Hawkeye Institute of Technology in Waterloo, Iowa.

He is a member of the Club Managers Association of America and is a member and past president of the Colorado chapter of the Golf Course Superintendents Association of America.

Jacobsen, union ink pact

Jacobsen Division of Textron announced it has reached a labor agreement with unionized workers at its Racine, Wis., manufacturing plant. The three-year contract covers 486 employees, members of Local 556 of the United Auto Workers Union.

Ransomes appoints Perz, Martin, Large

Bill Perz will be responsible for Ransomes' technical assistance program nationally and product training for distributors and dealers. He also will provide general assistance in the field. He is a past president of Turf Equipment Service Technician's Association in Florida. In a new position, Tim Martin will coordinate and supervise Ransomes' service parts orders. Martin has been with Ransomes' technical service department five years.

Maria Large has been appointed communications coordinator for the professional and institutional series programs. She is a graduate of Alverno College in Milwaukee, Wis. Ransomes manufactures commercial mowing equipment.

FuTech signs to distribute Data-Lynx

FuTech, Inc. of Vero Beach, Fla., and West Wareham, Mass., and Automata, Inc. of Grass Valley, Calif., have reached agreement for FuTech to distribute and service Automata's Data-Lynx in-field remote monitoring and remote control systems.

This computerized telemetry system is a remote weather station, irrigation controller, frost prediction, warning and control system, and pest-monitoring and warning system. Lenny Feuer is handling the job for Automata.

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!!

- No more spilling 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
- Saves on mowing time
- Kit is for all three baskets

B.H. SALES
P.O. BOX 3467
SANTA ROSA, CA 95402-3467
(707) 823-2107

For free information circle #123
Lasco Fittings wall chart details joints

Swing joints offering "everything you need for your major turf irrigation projects" are detailed in a new brochure from Lasco Fittings.

The brochure opens to a 24-by 11-inch wall chart for easy reference.

Called Full-Circle Swing Joints, they are offered in three models, each with three individual 360-degree adjustments to place sprinkler heads exactly where desired. Each model — ready-made to eliminate field assembly, custom-made and assemble-it-yourself — is featured on its own page in the brochure.

Specification data and examples are provided to insure that contractors get the precise lay length, inlets and outlets required for a particular project.

The brochure is available at irrigation supply houses nationally or from Lasco Fittings, Phillips Industries Inc., 3255 East Miraloma Ave., Anaheim, Calif. 92806; 714-993-1220. Circle No 291

A new catalog covering all six models of their new "Grabber" oil skimmer and decanter line is ready for distribution, reports Abanaki Corp.

Included are instructions for a simple test to determine if specific waste problems can be handled effectively with Abanaki equipment.

Grabbers will conserve wash water for re-use by removing waste oils; remove tramp oils from costly lubricants; prevent plugging of pipes, sprays, filters or sewers by removing waste oil, and permit discharge of oil-free water into lakes and streams.

They are particularly suited for coolant tanks, parts washers and filter systems; truck, rail and large equipment washing facilities; machine beds, sumps, draining and settling tanks; pools, basins — or any collector of oily liquids.

Main Abanaki offices are at 15 North Franklin Avenue, P.O. Box 149, Chagrin Falls, Ohio 44022. Circle No 292

Ryan turf-care and equipment catalog is out

The newest catalog of Ryan turf maintenance and lawn care equipment is available from Cushman.

The full-color catalog shows the full line of Ryan aerators, from the riding "adjust-on-the-go" GA30 aerator to the larger, tractor-mounted and towed aerators for covering large turf areas quickly.

Also included are the current models of Ren-O-Thin power rakes/debatchers, the Mawtway overseeder, the new Ryan Split-seeder, sod cutters and the Ryan Rollaire.

For a complimentary copy, write: Sales Department, Cushman, P.O. Box 82409, Lincoln, Neb. 68501. Circle No 293

Introducing any-way-you-need-them full circle swing joints...

Landscaping with Wildflowers

Environmental Seed Producers Inc.'s new publication, "Landscaping with Wildflowers," carries many suggestions on how to use wildflowers to beautify areas while cutting maintenance costs.

The four-page brochure provides detailed site-selection, soil-preparation and planting instructions that will ensure maximum success.

A price list with the brochure covers the 25 wildflower mixtures Environmental Seed Producers offers, including one formulated for every region of the United States.

The booklet is available by contacting Environmental Seed Producers, Inc., P.O. Box 5904, El Monte, Calif. 91734; 818-442-3330. Circle No 297

THIS MOWER CHANGED WALKING GREENSMOWER TECHNOLOGY FOREVER.

If you think advances in greensmower technology have leveled off, prepare to take off. The Bunton triplex is not only new, it's better. We started with fresh ideas and state-of-the-art technology and developed a truly well-engineered machine where every feature produces performance.

STARTING WITH FRESH IDEAS MEANT THE END TO COMPROMISES.

The Bunton triplex is light on its feet, yet heavy-duty in construction. Until now every greensmower ever built was a compromise designed to keep total machine weight down, to reduce turf compaction, at the expense of heavy-duty construction. Rather than striving to reduce total machine weight, our engineers concerned themselves with the pressure actually transferred to the surface. The result is more durable components that improve cutting performance. That means better greens surfaces... and for a longer time.

THE SOLUTION TO TRADITIONAL GREENSMOWER PROBLEMS.

We started by putting weight where it does some good. Our larger reel motors and counterweights sit solidly on the playing surface to eliminate bounce and produce a truer, more consistent cut. The unique traction wheel design allows more tire surface area to meet the green, to keep ground surface pressure low. Interchangeable parts keep inventories low and maintenance simple. Better performance results from a true hydrostatic transmission and dynamic braking, welded steel frame construction, extra oil filters, independent reel operation, standard backlapping, and a powerful 18 hp Onan engine or optional 16.5 hp Kubota diesel.

And if that isn't enough, Bunton offers standard what others have as add-ons. With Bunton, what you demo, is what you get. And at a competitive price.

Call or write today for more information and a demonstration.

BUNTON CO.

P.O. Box 33247
Louisville, KY 40232
Phone: 502-966-4550
Fax: 502-966-0564 • Telex: 204-340

NOW TRIPLEX GREENSMOWERS WILL NEVER BE THE SAME.

For free information circle # 124
Atomizer nozzles an Air Cone trademark

UST Corp. is offering the Air Cone Turf Master self-contained sprayer which features six patented Air Cone Atomizer nozzles that eliminate drift.

UST says safety is improved for the operator as well as those on golf courses in the perimeter of the spray area. Low-volume application rates enhance spray material efficiency and allow longer spraying ranges, increasing productivity.

Electronically controlled application gives the operator more flexibility to change rates and vary ground speed to match conditions. The Turf Master eliminates boom gouging through a 20-foot floating frame design to follow undulating terrain which helps to ensure proper height of spray nozzle.

The full-floating boom has spring-loaded break-aways, allowing the sprayer to be maneuvered easily around trees or signs.

UST Air Cone Turf Master
It can be pulled by any utility vehicle.

Contact UST Corp., Monticello, Ind.; 219-583-6100. Circle No 248

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

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Call Charlie von Brecht, publisher, today for more information and we'll help you come to grips with your sales projections.

August Feature: Seed and Sod August Deadline: July 14

7001 Fourth Street, Suite 311 St. Petersburg, FL 33702 (813) 376-7077

Windfoil stops drift cloud

Windfoil, a spray system said to virtually eliminate drift, has been introduced by Innovative Equipment Inc.

Studying the aerodynamics of simple shrouds in a wind tunnel, Innovative discovered it possible to avoid formation of the low-pressure turbulent zone by adding an airfoil over the sprayer shroud. No updrafts are created, so the drift cloud won't be pulled up into the air.

A drift-stop skirt seals the spray under the shroud for maximum drift control.

Contact Innovative Equipment Inc., 240-103rd Street Saskatoon, Saskatchewan, Canada S7N 1X7; (306) 477-2000. Circle No 267

Verti-Drain adds 10-inch

New model of Verti-Drain, one that reaches 10 inches deep with its patented soil-shattering feature, is on the market.

The new 005.120 is similar to the original 16- and 12-inch deep versions, but costs about 20 percent less. It also offers the added benefit that it attaches to smaller tractors requiring only 17 horsepower at the PTO.

Charles Otto, head of North American sales for Verti-Drain, said demand for deep-tine aeration is growing by superintendents using it to alleviate severely compacted soils.

The model 005.120 offers both solid tines to a maximum depth of 10 inches and hollow coring tines that can be used to a depth of 7 inches. The diameters are 1/2 inch and 3/4 inch.

The new model has a working width of 48 inches.


Martin Wheel making sealant

Martin Wheel is adding tire sealant to its product line to repair punctures up to 3/16 inch in diameter. It is recommended for use in pneumatic wheels on riding mowers, golf cars, industrial equipment, wheel barrows, hand trucks and other equipment.

It is available in 8-ounce tubes and in 5-gallon pails with an optional hand pump.

Contact Martin Wheel, 342 West Ave., Tallmadge, Ohio 44278; 216-633-3303. Circle No 257
Kohler expands Command engine line

Kohler Co. has added two models to its innovative Command line of vertical shaft engines.

Rated at 12.5 and 11 horsepower, the new engines are suited to a variety of applications, including lawn tractors, wide-area walk-behind mowers and commercial maintenance equipment.

Both engines offer overhead valve design, inductive electronic ignition, high torque at low rpm, optional Oil Sentry low oil warning system and the optional Quiet Plus package.

The 12.5-, 11-horsepower vertical shaft engines include hydraulic valve lifters, laminated sheetmetal blower housing, helical gears and a silencing muffler.

These Command engines have computer-designed, balanced shafts which reduce noise by canceling first-order forces while inhibiting engine vibration.

Contact Kohler Co., Kohler, Wis. 53044; 414-457-1271. Circle No 238

Deere adds bunker, field rake

John Deere 1200 Bunker and Field Rake

The three-wheel self-propelled John Deere model 1200 Bunker and Field Rake provides traction and power for a variety of work on the golf course.

The traction and power come from a variable-speed drive system that is new to golf and turf equipment, Deere says.

“Nobody has put together this combination of a wet clutch, torque converter and transaxle,” said marketing representative Bill Chestnut. “It delivers a 164-to-1 gear ratio for enormous pulling and pushing power.”

The 1200 is powered by a 10-horsepower Kawasaki engine and can travel up to 11 mph.

High-Botation tires and a low operating weight of 450ch inside-diameter turning radius, and a 78-inch-wide prong rake is standard equipment.

Contact Bob Tracinski, Deere & Co., John Deere Road, Moline, Ill. 61265; 309-765-4459. Circle No 252

Charles Machine trencher unique in hydraulics

Charles Machine Works, Inc. has introduced the Model 3500 Ditch Witch, an all-hydraulic 35-horsepower trencher that the firm said is the only one in its class featuring advanced-design hydraulics.

The four-wheel-drive, rigid-frame machine "incorporates the latest improvements in hydraulic drive technology," said Scott Pollman, product manager for the 3500.

"An efficient hydraulic drive radial piston motor is the heart of the 3500's digging attachment. Its low speed and high torque allow plenty of power for the roughest digging conditions."

The 3500 also has a large-capacity hydraulic oil cooler, supplemented by a shuttle valve to provide cooler oil in a broad range of ambient temperatures as well as peak power to the digging chain.

A new Deutz F3L1011, three-cylinder, air-cooled diesel engine is also featured, and the Model 3500 can be equipped with a new, optional Ditch Witch A222 front-mounted 5-foot utility backhoe.

Contact The Charles Machine Works, Inc., P.O. Box 66, Perry, Okla. 73077-0066; 1-800-654-6481. Circle No 251

Golfwater AIRE-O₂® solves algae and odor problems in irrigation ponds.

Efficient irrigation pond before Golfwater aeration installed.

Clean ponds enhance golf course appeal

...the AIRE-O₂ Golfwater aeration system can help.

Clean golfcourse ponds mean satisfied club members—and happy superintendents.

At last, algae and odor control that works from coast to coast.

Your next step in solving your course’s algae and odor problems is to call Golfwater at Aeration Industries. Use our toll free number: 1-800-543-4475.

Golfwater AIRE-O₂ aerators promote the breakdown of odor causing organic materials in pond water, and inhibit algae growth.

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Golfwater AIRE-O₂, aeration and circulation remove odors, algae.

We take the hazard out of water.

For free information circle #126

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Golfwater aeration and circulation remove odors, algae.
Kubota's new trencher fits five tractors

Kubota Tractor Corp.'s new trencher, the B5520, offers both ease of operation and a powerful performance, fitting the B9200, B8200, B9150, B7150 and B1550 hydrostatic-drive tractors which range from 17 to 24 horsepower.

The trencher's quick attach/detach system is easy to handle, while its torque-limiting clutch protects the tractor and trencher drive train from severe overload and is easily re-set in seconds.

Kubota also says the quick couple hydraulic fittings are simple and easy to use and equipped with a "dry" connect/disconnect system. The hydraulic integral valve provides two safety features: The boom will not lower when in a transport position with engine shut off and no boom up-drift will be experienced when in operation.

The B5520 trencher digs to depths from 2 to 4 feet and in widths from 3 to 12 inches, with an optional crumber adjustable from 6 inches.

A front loader or front blade is required as a counter weight.

Contact Kubota Tractor Corp., 550 West Artesia Blvd., Compton, Calif. 90220. Circle No 255

Fel-Pro offers reel-sharpening compound

Fel-Pro Clover is producing an aerosol reel sharpening compound especially formulated for sharpening reels on frequently used greens and tee mowers.

It's also convenient for honing fairway and hydraulically powered mowers. There is no brush to come in contact with the blades.

The stream reaches into awkward locations with point-and-shoot convenience. The compound clings and won't splay off the faster-moving hydraulic mowers.

Garden hose knocks it off. There's no need for a pressure washer. Its foaming action puts more of the abrasive at the cutting edge.

Contact Fel-Pro Inc., Chemical Products Division, 7450 North McCormick Blvd., P.O. Box 1205, Skokie, Ill., 60076-1205; (312) 761-4500. Circle No 243

Lesco opens line of sprayers

Lesco Inc. has introduced a new line of fiberglass turf and tree sprayers.

Available in 100-, 200-, 300- and 500-gallon sizes, the sprayers feature leakproof, seamless, five-layer construction for strength and durability.

They use either 5-horsepower Briggs & Stratton engines teamed with 10.5 GPM at 550 PSI, three-piston diaphragm pumps, or 8-horsepower Kohler engines teamed with 15 GPM at 550 PSI, three-piston diaphragm pumps.

The 500-gallon sprayer features an 8-horsepower engine. Turf can be sprayed with a gun or boom, and trees can be sprayed to a height of 50 feet.

Contact Lesco at 20005 Lake Road, P.O. Box 18915, Rocky River, Ohio 44116; 216-333-5250. Circle No 245

Introducing the fine art of broadleaf weed control.

New Gallery™

Look closely. This may be the last time you'll see these broadleaves on display.

Elanco introduces the unique preemergence broadleaf weed control for golf courses. New Gallery 75DF. An original work of art. And science. With a new chemistry so advanced, it outdates postemergents, saving you time and labor costs.

The Gallery collection includes 44 of your toughest broadleaves such
accessories and related products

**Kromer sprayer self-propelled**

Kromer Co. has developed a self-propelled sprayer.

Lightweight to minimize compaction, the sprayer has an 8-horsepower Kohler engine and hydrostatic transmission, giving forward and reverse with a single foot-pedal control.

The sprayer has a standard 30-gallon poly tank, and an optional 50-gallon tank.

Its 15-foot spray boom also has an optional 15-foot hose and gun, so it can be used for greens, tees and fairway spraying.

It can be used to pull a small trailer, three-gang reel mower, spiker, aerifer or verti-cut mower.

Contact Kromer Co., 3455 Co. Road 44, Mound, Minn. 55366; 612-472-4167. Circle No 253

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**Super Steiner tractor tough and versatile**

The new Super Steiner Model 425's steady hydrostatic four-wheel-drive tractor with articulated frame surmounts the toughest going, say operators.

Power steering combined with a low center of gravity and high flotation tires provide exceptional maneuverability.

Front-mounted attachments offer a wide range of working tools. All attach to the exclusive "Quick Hitch." Attachments may be changed in less than two minutes.

Contact Steiner Turf Equipment, Inc., 930 Penn Ave., PO. Box 85, Orrville, Ohio 44667; (216) 683-0055. Circle No 260

---

**Yeager-Twose Turf Conditioner**

**Conditioner’s blades special**

Yeager-Twose has developed a Turf Conditioner that uses high-frequency hydraulic vibrating blades with "bullets" that shatter from the bottom upwards.

The unit contains colter discs that prevent turf surface tearing. It has adjustable press wheel rollers that firm the edges of the slit so the turf is ready for play immediately.

The Turf Conditioner now has longer blades available in addition to the standard 1- to 8-inch blades.

Contact F.W. Yeager, Yeager-Twose Equipment Division, 601 Baseline, Cornelius, Ore. 97123; 503-357-1003. Circle No 249

---

**Basket-release kit quick, easy**

B.H. Sales has introduced a product for superintendents who own Jacobsen Triplex Greensmowers. Using the Jacobsen Basket Quick-Release Kit, the mower operator can remove the baskets with a flick of a lever, without shutting off and lowering all the cutting units.

The kit is guaranteed for the life of the mower. B.H. Sales said it will prolong the durability of the grass catchers, stop the spillage of grass when removing the basket, help prevent the possibility of back injury, and save on labor costs with the quickness of removing the baskets.

Contact B.H. Sales P.O. Box 3457, Santa Rosa, Calif. 95402. Circle No 256

---

**New Gallery herbicide**

as spurge, chickweed and white clover. With no reproductions allowed.

All you'll see is masterpiece turf. Free from broadleaves. And free from injury. New Gallery is actually more tolerant to all major species of cool and warm season turf, including bentgrass, than other herbicides. And there's no risk of oselite damage to nearby ornamentals.

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A Division of E.L. Lilly and Company
Dept. EM-455, Indianapolis, IN 46285, U.S.A.

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For free information circle #190

For free information circle #186

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... In Divot Seed & Soil tee buckets next to the tee markers. Available in Cedar or Redwood slats and with companion Trash'n dibris buckets.

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For free information circle #187

Need to advertise your EMPLOYMENT OPPORTUNITY, BUSINESS OPPORTUNITY or PRODUCTS FOR SALE?

Run a classified ad in Golf Course Marketplace. That's right! Line ads are now available... Call Simone Lewis at (813) 576-7077 to place your ad in our August issue. Deadline: July 10th.

For free information circle #188

Mowers
Continued from page 17

getting more specialized equipment, dealing with the trend of smaller fairways. "Superintendents are maintaining fairways almost to the level of the greens," he said.

The greens conditioner has been the major innovation of the late 1980s and, since Jacobsen introduced the first model two years ago, others in the industry have followed suit with their own versions.

Byrnes added that crucial factors today are quality of cut and a machine's weight and durability.

But he pointed out that "what's exciting one place is not another. In the South you have sandy soil, Bermuda grass, and they're not concerned about weight. But high-rainfall areas would be concerned about weight. "Also, the public course as opposed to the private might call for different equipment, such as a private using a three- or five-gang to cut one-half inch or less and for striping."

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for longer-lasting, broad-spectrum weed control, excel with XL.

With just one application, you can keep your ornamental and landscaped areas free from many grass and broadleaf weeds for six to eight months. And because XL contains Surflan®, your control's also stronger than Ronstar® against crabgrass. And just as strong or stronger against many other weeds. At less cost, too. For details, call toll-free: 1-800-352-6776.

Sonar® weed control...

Sonar clearly tells its own story. With season-long aquatic weed control that other aquatic herbicides cannot deliver. Sonar targets specific plants like water lily, hydrilla, duckweed and many other weed problems. And controls them all season long whether you apply before they come up or after. Unlike other aquatic herbicides, the Sonar label doesn't restrict swimming, fishing or drinking. So restrict your aquatic weeds, not your aquatic use. Try Sonar. And weed out your water without the worry. For details, call toll-free: 1-800-352-6776.

With Team on your turf, weeds won't check in for 20 weeks.

Surflan, Roundup. Mix them together, and you've got control that knocks weeds down and keeps them down. Three times longer, in fact, than Roundup alone. That's what landscapers all across the country are now finding. They're getting better weed control and more satisfied customers. And they're saving time and labor costs because they're applying just once. With a Surflan/Roundup tank-mix, you get complete control of over 50 different weeds — including such tough species as crabgrass, barnyardgrass, chickweed, spurge, johnsongrass and foxtail. And Surflan won't harm your nearby landscaped areas, either. It works with little or no lateral movement. For details, see your Elanco distributor. Or call toll-free: 1-800-352-6776.

Surflan® — (oryzalin, Elanco)
XL™ — (benefin + oryzalin, Elanco)
Team™ — (benefin + trifluralin, Elanco)
(Refer to the XL and Team labels for complete use directions.)
Sonar®—(fluridone, Elanco)
Ronstar® is a registered trademark of Rhone-Poulenc.
Roundup®—(glyphosate, Monsanto)

I can control weeds three times longer just by adding Surflan® to my Roundup.

Take your weed control where you never thought possible.

Sorption clearly tells its own story. With season-long aquatic weed control that other aquatic herbicides cannot deliver. Sonar targets specific plants like water lily, hydrilla, duckweed and many other weed problems. And controls them all season long whether you apply before they come up or after. Unlike other aquatic herbicides, the Sonar label doesn't restrict swimming, fishing or drinking. So restrict your aquatic weeds, not your aquatic use. Try Sonar. And weed out your water without the worry. For details, call toll-free: 1-800-352-6776.

Surflan, Roundup. Mix them together, and you've got control that knocks weeds down and keeps them down. Three times longer, in fact, than Roundup alone. That's what landscapers all across the country are now finding. They're getting better weed control and more satisfied customers. And they're saving time and labor costs because they're applying just once. With a Surflan/Roundup tank-mix, you get complete control of over 50 different weeds — including such tough species as crabgrass, barnyardgrass, chickweed, spurge, johnsongrass and foxtail. And Surflan won't harm your nearby landscaped areas, either. It works with little or no lateral movement. For details, see your Elanco distributor. Or call toll-free: 1-800-352-6776.
Up front and pulling away with 4-WD power.

New on-demand 4-WD model makes the extraordinary 5-gang LF-100 an even more productive lightweight fairway mower.

Shift from 2-wheel drive to 4-wheel drive "on-the-go." The added traction helps deliver a flawless cut on those hillsides that other units can't reach.

Up-front wing mowers give superior visibility and productivity.

The operator holds a closer line to take full advantage of the 100" cutting width. This unique, up-front configuration also gives better access to all mowing units.

Heavy-duty reels deliver a greens-like cut.

The fully floating, 22-inch steerable 7-blade reels are heavier, to follow ground contours closely, for that smooth, consistent Jacobsen cut that's the envy of the industry.

True lightweight mowing.

Extra-wide low-profile turf tires produce the lightest ground pressure, and the rear wheels roll on a different track than the front, so your turf thrives with less compaction.

Built to last.

A proven, rugged chassis, durable and simple hydraulic system and liquid-cooled diesel engine provide longer, trouble-free life on your fairways.

And the LF-100 is backed by your Jacobsen distributor for dependable parts and service support.

Ask your Jacobsen distributor for a free demonstration. Attractive lease and finance plans available. Or contact: Jacobsen, 1721 Packard Ave., Racine, WI 53403.

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