US-UK study: It is greener on the other side of pond

By ANDREW OVERBECK

SANTA ROSA, Calif.—The top American golf courses earn twice as much and spend twice as much on maintenance as their U.K. counterparts, according to a survey by novice architect Bettina Schrickel.

Following a year comparing the maintenance practices of 25 of the top golf courses in both the United States and the United Kingdom for her graduate thesis in golf course architecture at Merrist Wood College in Surrey, England, Schrickel has published the findings of her study.

"Some of the numbers really surprised me," said Schrickel. "For example, the large gap between the financial income of the clubs, the maintenance budgets and the number of greenkeepers."

Of the American courses that she visited, the average income was $2 million, the maintenance budget was $970,000 and the number of greenkeepers was 18. Comparably, U.K. courses had an average income of $800,000, a maintenance budget of $340,000 and an average of eight greenkeepers. Further, annual member income was $800,000, the maintenance budget was $340,000 and an average of eight greenkeepers.

Continued on page 42

Certification the goal of CMAA env'l audit

By PETER BLAIS

ALEXANDRIA, Va.—Audubon International (AI) hopes to develop a certification program within the next 12 months for clubs, club managers and superintendents, using the recently developed Club Managers Association of America (CMAA) Full Facility Environmental Audit for Clubs (see March issue).

"Audubon and CMAA are discussing what to do next with this information," said AI Executive Director Ron Dodson, referring to the self-audit that CMAA began mailing to its members in late March. "What we are starting to take notice. Also inside, a report on two ground-breaking research projects that use burrowing owls and wasps to fight pests on courses.

Continued on page 38

SubAir & Soil Air do patent combat in court

By MARK LESLIE

SYRACUSE, N.Y.—A battle about patents—spiced with added allegations of fraud, misappropriations and false advertising—will begin to be played out in U.S. District Court here in June between SubAir Inc. of Munnsville and Soil Air Technology of Middlefield, Conn.

The skirmish revolves around technology developed by Ferris Industries and its subsidiary, SubAir Inc., starting in 1994 that uses subsurface piping to add air or remove water from the root zone of golf course greens to enhance root health; and a method developed by Soil Air Technology to measure pressure differentials and soil-gas concentrations to optimize soil growth.

But it gets much more personal than

Continued on page 30
Penn A-4 at Tiffany Greens

Mark Pierce, Superintendent
Tiffany Greens GC
Kansas City, MO
John Q. Hammons Development

“If a new course hopes to host a major tournament, it’ll have to plant one of the great new bents. Penn A-4 is the right choice for Tiffany Greens and our changeable Kansas City climate.”

Tiffany Greens was destined to be first class all the way—from its perfect location and Robert Trent Jones II design to the choice of Penn A-4 creeping bentgrass for greens.

Now that word is out we have the truest, most consistent greens in the area, golfers flock to this semi-private course. We mowed the greens 10 days after seeding, and took the height down to 0.125” in a matter of weeks. Penn A-4 established quickly, and maintains deep roots year-round. Since we opened the course in April 1999, green speed is a consistent 9.5 with no stress during high heat index days.

Penn A-4 doesn’t require any extraordinary maintenance procedures. Anyone who wants smooth, fast greens has to do the same amount of maintenance. I verticuit and top-dress twice a month and spoon-feed fertilizer.

My uncle Junior was a superintendent, so I grew up on a golf course. I worked for him 8 years, and have been a superintendent myself for another 19 years. He taught me that greens were like the motor of a car—the most important part—and when the motor was good the car was good. The motor’s great here at Tiffany Greens. To host a PGA Senior Tour event in our first year is an honor, a privilege, and a compliment.

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TEXAS GOLF BITES WATER BULLET — OR BITES DUST

By Frances G. Trimble

Between April 1 and 3, rain fell in varying amounts across Texas, but even the 2-plus inches in the Houston area was "just noise," a drop in the bucket, according to a National Weather Service representative. The drought statewide was borderline desperate until a few light rains fell in mid-April. At that time, U.S. Golf Association Green Section agronomist Brian Maloy, based in Dallas, called the recent rainfall "significant."

"In 1999, we were 11 inches under our average precipitation total of 32-36 inches," he said. "Though we have not totally recovered that 11 inches, and while aquifers are still not recharged, we are closer to normal than forecasters predicted." Maloy noted that several clubs in his area are incorporating larger irrigation ponds in their long-range plans. Some older courses are remodeling on-site ponds and irrigation systems, while others are dredging to remove silt.

"We are still dependent on what (water) we capture," he said. "And even with the rain, there could still be a point this season when superintendents are forced to scale back their water use on the golf course."

However, while turfgrass can eventually recover from a prolonged drought, the dry conditions in Texas are "devastating for trees," according to said Jack Swayze, a forestry expert with Davey Golf Services of Kent, Ohio, who works out of Houston. "Though we have had some recent rain, the damage is far-reaching and will be with us for years," said Swayze. "Damage caused by such a drought can have a four- to six-year effect, with trees developing secondary diseases brought on by drought stress."

Swayze said trees compete with turfgrass "because they can

Continued on page 9
**Small is smart in planning, Weed says**

CHICAGO — Architect Bobby Weed warned participants at Remodeling University here about "having too many cooks in the kitchen."

Speaking at the program sponsored by the American Society of Golf Course Architects (ASGCA), Weed said a small leadership group is most effective in planning and implementing a successful course remodeling project. He surprised the more than 125 attendees at suburban North Shore Country Club by saying that three steering committee members is ideal.

"Often," Weed said, "a small group of energetic members drives the initial push toward renovation, comes in with information from 'experts' and paints an overly rosy picture about the scope of the project and the enthusiasm of the membership/players."

The Florida-based architect agreed that all groups should be represented in the process, including the board of directors, greens committee, long-range planning committee and past presidents in a private club.

"However," Weed said, "the desire to see all facts represented can lead to a large group that finds it hard to make decisions. Also, turnover of various positions can create continuity problems. The ideal team is small, represents a cross-section of the membership, has authority and the right personalities to work well together."

"One of the hardest lessons for a remodeling team to learn," he said, "is to trust the professionals who have been retained. They have been hired for a reason. Take advantage of their expertise and the value that they bring to the project."

He explained that the professionals all have specific and important roles to play if the remodeling project is to be successful.

In budgeting, Weed suggested that the committee set parameters up front but remain flexible during the planning process.

"Don't piggyback a golf course renovation on a larger project, such as a clubhouse expansion," he warned. "More often than not, the golf course project suffers when cost overruns occur. Remember that the golf course generates revenue, while other amenities are lucky to break even at the end of the year."

All the speakers at Remodeling University stressed the importance of communications throughout the project.

Weed also offered seven tips that will help remodeling committees "weather the storm:" Be realistic, accept criticism, maintain a united front, keep players informed but not involved, insulate the professionals on the remodeling team, keep the "big picture" in mind and expect criticism from friends.

The Chicago-based American Society of Golf Course Architects also sponsored sessions of Remodeling University in Atlanta, New York and Los Angeles. Information on remodeling may be obtained by writing the ASGCA at 221 N. LaSalle St., Chicago, Ill. 60601. Or, call 312/372-7090. Complete information is also on the Internet at www.golfdesign.org.

**KEMPER LAKES EARN AUDBON CERTIFICATION**

NORTHBROOK, Ill. — KemperSports-managed Kemper Lakes Golf Course in Long Grove has achieved designation as a Certified Audubon Cooperative Sanctuary. "Kemper Lakes has shown a strong commitment to its environmental program," said Audubon staff ecologist Joellen Zeh. "They are to be commended for their efforts of providing a sanctuary for wildlife on their property."

Kemper Lakes joined the Audubon Cooperative Sanctuary Program (ACSP), the educational division of Audubon International, in 1998. It becomes the 17th course in Illinois and the 217th in the world to be certified.

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GCSAA's Mona to serve on golf steering committee

ST. AUGUSTINE, Fla. — Golf Course Superintendents Association of America (GCSAA) Chief Executive Officer Steve Mona has been selected to serve on the Golf 20/20 steering committee executive board with golf association executives Jim Awtrey (PGA of America), Joe Beditz (National Golf Foundation), David Fay (USGA), Tim Finchem (PGA Tour), Mike Hughes (National Golf Course Owners Association) and Ty Votaw (LPGA).

The World Golf Foundation and the National Golf Foundation are hosting the first Golf 20/20 conference, Nov. 17-19 at the World Golf Hall of Fame here. The fundamental principle behind the event is that golf is good for society, and accelerating the growth of the game will not only improve business, but also the quality of life for those who are introduced to its positive values. The mission is to bring the golf industry together to address the future of the game in a strategic manner, with an emphasis on growth in the next 20 years and creating new avenues of access.

Also on the 35-person steering committee are GCSAA members Ken Edwards (business manager of Deere and Company), Michael Hoffman (vice-president and general manager of The Toro Co.), Michael Hurdzan (golf course architect) and Phil Trailes (president of Textron Turf Care And Specialty Products).

Mona was also recently elected to a two-year term to the NGF board of directors, while Hoffman was elected NGF secretary/treasurer.

"The selection of the GCSAA CEO and other executives within the golf course management industry to key leadership positions in the sport is significant," said GCSAA President Scott Woodhead. "Our figures indicate golf course maintenance, construction and design expenditures approach $8 billion on an annual basis. This sector of the golf industry has a vested interest and can offer valuable input for sustained growth of the game. I believe it also says something about the respect the industry has for Steve Mona and his leadership abilities."

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<th>Untreated Control</th>
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N.H. course ready to take wing

SOMERSWORTH, N.H. — The city has finalized arrangements to build an 18-hole, daily-fee course on 275 acres of land owned by the city.

The City Council passed a series of resolutions that paved the way for the project and for the development to be financed through the issuance of tax-exempt revenue bonds.

The course, to be named Lily Pond Golf Course, was designed by Booth Golf Design of Ogunquit, Maine, as a full-scale championship layout.

The property is located on Route 108 just a few miles from the Spaulding Turnpike. Originally planned for a mobile home park in 1994, the developers lost the land to a bank foreclosure. The developers had also fallen far behind in their real-estate taxes, and the city eventually obtained title by waiving the back taxes in exchange for a deed to the property.

At the city level, the project has been spearheaded by Dan DeSantis, the city’s director of development services.

The land will be leased to a non-profit corporation controlled by city-appointed directors, and that corporation will contract with a private management company to build and manage the facility. The management company is owned by Somersworth businessmen Pat Brady and Michael Davis, both of whom own large local businesses and are active in civic matters. Their company will guarantee that the project does not exceed a certain cost (estimated at $6 million), and will operate the completed facility on a “for-profit basis” in exchange for a fixed annual management fee and various incentive fees.

Casper returns to Va. layout

VIENNA, Va. — KSI has selected Billy Casper Golf Management (BCGM) to provide turnkey management services to Goose Creek Golf Club, which KSI recently acquired. Goose Creek is located in Leesburg, just 35 minutes outside Washington, DC.

BCGM will direct Goose Creek’s daily clubhouse operations; marketing, sales and public relations; turf management; personnel staffing and training; food and beverage; golf tournament and special events programming; merchandising; and financial management programs.

The hiring of BCGM to manage Goose Creek represents a reunion of sorts. From 1992 to 1995, BCGM operated Goose Creek for then-owner Metro Golf Inc. Family Golf Centers owned Goose Creek until recently when KSI purchased the property.

Ben Hogan’s record-setting round of 59 at Goose Creek helped the club reach prominence from the 1940s to the 1970s when it enjoyed status as one of the most exclusive private country clubs outside Washington. The course opened to the public in the 1980s.

KSI is one of the Washington metropolitan area’s leading development and building companies.

Fort Worth twister leaves Colonial CC unscathed

FORT WORTH, Texas — The tornado that turned parts of downtown Fort Worth into a pile of rubble left Colonial Country Club wet but undamaged.

Assistant Professional Donovan Solis was on site the afternoon of March 28, when the weather moved in. “It actually came down north of us,” he said. “We had no tree damage or loss. We did get a lot of rain — about 3/4 inch — but no hail.”

FRANCES G. TRIMBLE
Texas drought
Continued from page 3
and do require more water."

The competition, however,
go largely unrecognized. Since
trees receive no water supple-
mentation during periods of
drought and/or construction, they
are left to cope with stress or die.

"There are courses in the
Houston area that have lost hun-
dreds of trees. One solution,"
said Swayze, "is to plant specific
drought-resistant trees. But even
native pine trees, which are good
because they aren't messy and
because they have smaller leaf
surface areas (which determines
water consumption), are not re-
ally that drought-tolerant."

One report from a new layout
in the Humble east of Houston
area reported 300 dead trees
were removed during the past
winter alone and a cursory vi-
sual inspection of layouts in
northwest Harris County con-
ﬁrms Swayze. Pine trees on
newly constructed tracts as well
as pines and oaks found in non-
golf areas on established courses
appear equally affected.

"The evapotranspiration issues
in golf are now being looked at," Swayze said. "The public is wak-
ing up and the industry has come
a long way. But one problem in
Texas is that, in one county you
have an agency monitoring how
much ground water is used and in
the next county there is little or no
regulation whatsoever."

Dr. Wayne R. Jordan of Texas
Water Resources Institute said:
"Harris and Fort Bend counties
are in Subsidence Districts. The
legislative act that formed these
districts also sets their powers
to restrict ground-water with-
drawals which lead to subsid-
ence (abatement)."

These districts were created
to slow the rate at which land
areas around Houston are sink-
ing due to loss of underground
water as opposed to water con-
servation. However, a subsid-
ence district does not control
water use by Harris County's
neighbor to the north, Montgom-
ery County.

Jordan sees the golf's position
in the scheme of this way:
"Management of golf courses is
such that esthetic values pre-
dominate over conservation —
so water is used luxuriously."

Jordan noted that "statewide
planning and regulatory agencies
have been preoccupied with wa-
ter development. However, the
future water-supply planning ef-
fort will take a serious look at
conservation as a means to achieve
dependable water supplies."

Which, in turn, will determine
the survival of a game and an in-
dustry in Texas and other states.

According to Dr. Richard Duble
of Texas A&M University's Crop
Science Department, "Texas golf
courses use 80 to 100 million gal-
lons of water [apiece] each year.
The national average is about the
same for a typical 18-hole course.

One reason we use more water
than you would calculate is neces-
sary, is because most irrigation
systems are only 50- to 60-percent
efficient," Duble said. "If the sys-
tems were designed and func-
tioned perfectly, this would not be
the case. We generally overwater
half the course trying to get ad-
equate water to all areas."

Duble said that a big improve-
ment — in agriculture as a whole
and golf in particular — are new,
effective irrigation systems and com-
ponents, including "low-trajectory
sprinkler heads that concentrate
water spray closer to ground level."

Duble noted that drought-tol-
erant turfgrasses and ways to re-
capture rain and irrigation water
are also being researched.

Universities and for-proﬁt
companies are working toward
the day when drought tolerance
and playability will meet in a
grass strain that can successfully
replace hybrid Bermudagrasses.

Duble pointed out that
buffalograss, for instance, will
survive on 10-15 inches of rain-
fall a year and is good for rough
areas, "but, as a playing surface,
Bermudagrass is preferred be-
cause buffalograss is not as
dense nor as wear-tolerant."

He also said a commercially
available Texas bluegrass on the
market — a hybrid combination
of native Texas bluegrass and
Kentucky bluegrass called Rev-
elle — works well in northern
and the blackland areas of Texas
and can be used on fairways."

King of the hill.
(As well as the side-hill, the bunker edge, and of course, the monster mogul)

You don't stay on top by standing
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2653A Utility Mower, often cited
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through a number of improve-
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motors have improved load plates,
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for better oil ﬂow within the
motor. Which improves cutting
operations, especially when scal-
ing or verti-cutting. A new reel
pump on the 2653A makes for a
more responsive hydraulic system.
A new backlap valve eliminates
the need for an auxillary shut-off
valve and time delay unit. And a
new remote air restriction indica-
tor has a sight glass to show if
servicing is needed. It all adds
up to a machine with enhanced
performance and durability. To
see how the best got even better,
call your local John Deere
distributor for a demonstration
or 1-800-537-8233.
To serve or not to serve...

It's a service industry — golf. The faster everyone learns that, the faster everyone will get healthy. Sobering statistics from the National Golf Foundation (NGF) followed quick on the heels of announcement that the United States opened more than 500 new courses or expansions in 1999. The number of players and how often they play remains flat-lined, the NGF revealed.

Time to apply the defibrillator.

America has turned from a manufacturing country into a service country. Instead of steel mills we have Kinko copiers. Instead of shoes we have Burger Kings. Maybe golf can learn from these other service industries, which appear to be doing very well, thank you.

First, we need to realize golf is in a battle for the disposable income of America — fighting to get people to the first hole instead of the cinema; to the clubhouse restaurant instead of the Wendy's; to the pro shop instead of the local K-Mart. Where's the beef? There had better be, because Americans are willing, and able, to go elsewhere with their money.

I get around the country, see a variety of golf facilities and notice some big differences in how the golfers (shoppers/clients) are treated. Money Hill outside New Orleans? They were there to help with the clubs, friendly at the pro shop, quick at the restaurant. Kemper Lakes in Chicago? The same: courteous, helpful. Pinehurst? Wow!

Yes, upper-class clubs, and what we are calling "high-end daily fee" are, for the most part, doing it right. Treat your customers well. Greet them with a smile; even Wal-Mart does that.

But, in my experience, it seems that the lower-end and middle-of-the-road daily-fee clubs — those where beginning golfers decide to stick to the game and where most of America can afford to play — should learn a thing or two from the high-enders. Heck, I know two nine-hole courses where the owner/operators appear nonchallant, or even disgruntled, by new arrivals. What would a smile and a "good-day" cost?

One figure from the NGF is particularly disturbing. That is, although about 3 million people take up golf each year, the same number drop out. Retention, where art thou?

Golf course managers must find ways to attract golfers back for a second or third round, for annual membership, for a lifetime.

Continued on next page

We need your help

Now's the time of year again. We are compiling our annual list of golf course management companies and the courses they operate. We plan to publish the list with our June issue.

We started doing this several years ago, calling the management firms we knew about and asking them to provide us a listing of their owned, leased and managed facilities. We were amazed at the response. The people who received that particular issue called to thank us and ask where they might get further information. Many others who hadn't received the issue apparently heard through the grapevine that we had published it and called to get copies, which we were glad to provide.

Inevitably we'd hear from a couple management firms that felt slighted; their courses weren't listed. Those omissions were never a conscious effort on our part. Rather we usually just didn't know the company existed.

So, we're asking for your help.

If you operate a golf course management company, and your firm's holdings have not been included in our past management company lists, please contact us.

You can forward the information via e-mail to pblais@golfcoursenews.com; or fax to Peter Blais at 207-846-0657; or by mail to Peter Blais, Golf Course News, 106 Lafayette St., Yarmouth, ME 04096.

Thanks for your assistance.

Continued on next page

Golfer's Creed

Golf has been good to me.

As a golfer, I will respect and be good to the game of golf.

Responsibility — I will follow the rules of the golf course and take responsibility for all of my actions on the course, including the safe operation of a golf cart and the responsible consumption of alcoholic beverages.

Etiquette — I will abide by the rules of etiquette, awaiting the proper time to hit, refraining from foul language and boisterous behavior and generally conducting myself as a lady or gentleman on the course.

Sensitivity — I will be sensitive to the environment and the course where I play and to those who maintain and manage it.

pace — I will keep up with the group ahead and maintain an appropriate pace of play.

Educate — I will do my best to educate other golfers on the principles of this creed, by sharing it and living up to it at every opportunity.

Conditions — I will strive to leave the course in better condition than I find it, by fixing my ball marks (and those of others), replacing my divots, raking bunkers, and properly disposing of trash.

Traditions — I will embrace the rules and traditions of this ancient and honorable game and respect my fellow golfers and the courses we are privileged to play.
First Tee founders jump.

There are a lot of great marketing ideas in the world of golf, but not enough courses are using them. Golf Course News offered a monthly series of ideas for years. I hope many people instituted them, but, hey, the golf participation numbers are flat-lined, are they not?

The NGF says 41 million Americans said in a recent survey that they want to play golf or to play it more often.

Those new golfers everyone needs are out there... waiting to be lured... waiting for a reason not to dump their extra cash into a night out at another bad movie... waiting for your golf course to serve them. • • •

As part of Golf Course News' effort to encourage and improve education in the golf course industry worldwide, our international edition will serve as the official publication for the Golf Course International 2000 Show in Frankfurt, Germany, in December. • • •

Jim Engh, joking about playing his new creation, Hawktree Golf Club, with a group of his old school pals:

"You know intimate things about the course, so you can really mess with them. You can point them in the wrong direction, start reading the putts for them. Then they don't know whether they should believe you or not believe you. At that point they're yours."

Seriously, he added: "Playing with them gave me a great deal of satisfaction. They were all giving me a hard time about my job. Those are your true friends who make you feel your worst, but at the end of the day they're happy for you." • • •

"I believe we are on an irreversible trend toward more freedom and democracy — but that could change." — Vice President Al Gore on May 22, 1998.
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How's that for application guidelines?

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Your players dream of leaving their mark on a hole, but we've made the hole impossible to mark.

Is this brilliant, or just plain mean?

We choose brilliant. As in our new brilliant white Ever-White™ cup. The outside is aluminum, the inside wall holds a plastic sleeve – which means no more painting for you, because there’s no paint to chip. The sleeve stays tight in the cup during play (but is easy to replace when needed) and the cup itself makes the classic aluminum sound when the ball hits the bottom of it. And as far as your players are concerned? Well, they may never leave their mark on your course, but we’re quite sure you’ll be seeing their stamp of approval.

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Cup will stay bright white
Sleeve is easy to install and remove, but will stay tight in cup during play
Patent pending

**ROPE STAKES (RECYCLED PLASTIC)**

Natural companion to hazard and OB markers – and made of same material
Maintenance-free, never need painting
Available in Hunter Green and White
Sizes - 12", 18" and 24" (measurements do not include spike)
Easy to use slot for stringing rope through - open slot allows for stakes to be added or removed without taking all stakes off rope
Stout 5/16" thick stainless steel spike

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MAINTENANCE

BRIEFS

O’NEILL, MAIBUSCH ON GCSAA BOARD

LAWRENCE, Kansas—Golf Course Superintendents Association of America President Scott Woodhead has named two new members to the GCSAA board of directors. Mike Wallace’s election as GCSAA secretary/treasurer and the resignation of director Samuel R. Snyder VII of Hercules Country Club in Wilmington, Del., left two director positions, each of one-year service, to be filled. Woodhead filled the first position by appointing O’Neill of The Country Club of Darien in Darien, Conn. and the final director spot with Bob Maibusch of Hinsdale Golf Club in Clarendon Hills, Ill.

OTF DONATES $137,000 TO OSU

COLUMBUS, Ohio — The Ohio Turfgrass Foundation (OTF) has presented a $157,000 check to Ohio State University (OSU), including $137,000 in research grants to 10 technical advisors from OSU and $20,000 in scholarships to turfgrass majors at OSU and Agricultural Technical Institute. The OTF has donated more than $3.3 million in research grants and more than $300,000 in scholarships in 40 years of support to the industry.

MILLIKEN BENEFITS GCSAA FOUNDATION

LAWRENCE, Kan. — Milliken Chemical Co. has pledged a commitment that could exceed $250,000 to support programs of The Golf Course Superintendents Association of America (GCSAA) Foundation. The pledge places Milliken in The Foundation’s Old Tom Morris Society, the highest giving level in the “Investing in the Beauty of Golf” campaign created to fund applied research and advanced education. Funding for the commitment comes from a percentage of sales from Milliken Chemical’s foliars product line.

TAYLOR SIGNS ENVIRONMENTAL GOLF

TAYLOR, Calif. — The city of Taylor has selected Environmental Golf to provide maintenance at both Taylor Meadows and Lakes of Taylor golf courses. After five years of maintenance practices being implemented by Environmental Golf at The Lakes of Taylor site, it was the desire of the city to bring both courses under one qualified maintenance company.

Pebble Beach ready for Open

By DOUG SAUNDERS

PEBBLE BEACH, Calif. — A smorgasbord of major and minor changes have altered the face of Pebble Beach Golf Links recently, but a new head superintendent and his veteran staff intend to have the course in shape to be “the fairest possible test” for the U.S. Open, June 15-18.

“This is a very professional staff here at Pebble Beach,” said new head superintendent Eric Greystock. “Their experience of preparing for last year’s U.S. Amateur was invaluable in getting Pebble ready for this June. They understand what the USGA [USGolf Association] expects and how to meet those expectations.

“They know the program and I can rely on them to assist me as I work into my new position. They mean every hing to me.”

This will be the fourth Open and the 10th USGA Championship held at the venerable Pebble Beach. It is fitting that this Open, the 100th contested, should return to the venue that has been the site of some of the greatest dramas in Open history.

Continued on page 20

Kleinpeter: At Sandestin since the start

By PETER BLAIS

SNDESTIN, Fla. — George Kleinpeter has seen Sandestin Golf and Beach Resort through the construction of four courses and a half-dozen owners in his 27 years at the northwest Florida resort.

“My first job was running a tree spade and transplanting trees all over the property,” remembered Kleinpeter, who first joined Sandestin in October, 1973, as an equipment operator and landscape installer during construction of the resort’s first layout, Tom Jackson-designed Links Golf Course.

It didn’t take Kleinpeter long to advance through the ranks. He became assistant superintendent of the Links in 1975 and head superintendent in 1977. Kleinpeter led his head superintendent’s job (although he remained on the Sandestin payroll) in 1981 to caddie on the PGA Tour. But two years later he returned to Sandestin as full-time Links superintendent.


Continued on page 14

Intrawest opens the Raven GC at Sandestin

By PETER BLAIS

DESTIN, Fla. — The new Raven Golf Club at Sandestin marks a couple firsts for course designer Robert Trent “Bobby” Jones Jr.

The 18-hole, 6,900-yard layout is the first Jones Jr. design in northwest Florida. It is also the first time he and brother Rees have built courses side by side at the same facility.

While the Jones brothers admit their relationship isn’t particularly close, their two courses at Intrawest-owned Sandestin couldn’t be closer. In fact, the 11th hole on Bobby’s new Raven layout and the 18th on Rees’ Burnt Pine Golf Club are separated by only a few mounds and a handful of trees.

“Rees and I are very competitive,” Bobby conceded during a recent media outing at the family resort located between Pensacola and Panama City, eight miles east of Destin. “But there are some

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May 2000

13
Kleinpeter

Continued from page 13

Since then he has supervised construction of Rees Jones-designed Burnt Pines, which opened in November 1994, and Sandestin's newest layout, Robert Trent Jones Jr.-designed Raven Golf Club, which opened in early March.

Kleinpeter considers himself fortunate to have worked for three distinguished architects in Jackson and the Jones brothers. He had the following to say about the three:

• "Tom [Jackson] is very hands-on. He'll jump on a dozer in a second to try to get the shape or look that he wants. He gives good direction, but once he gets out in the field, he loves to sketch something out on a piece of paper, then hand it to the dozer operator or superintendent. He taught me how to look at the appearance of a golf hole, not only for its playability, but what it looks like. He's like Robert Trent Jones Jr. in that he notices the subtle things. As a golfer, you may not know why you appreciate the look of a golf hole, but something's there. Tom knows what that is. The surrounding lines are important to him. He wants to utilize what's around him.

• "Rees [Jones] is a little more technical. He and his project architect, Greg Muirhead, had their own shaping crew here. They did their own greens building and finish shaping along with Wadsworth Golf Construction. Rees and I got along great. He allowed me a lot of input. There were some areas where we disagreed, but I understood what he was looking for. With all the real estate surrounding the course, he had to try to create a feeling of golf out there. We wanted a player-friendly golf course to keep the ball in play. He was able to do that with mounding.

• "We were able to let Bobby [Jones] go [creatively at The Raven] because we had more land that was not bordering real estate. He brought in long, subtle lines without the many peaks and valleys needed for peak-a-boos from the real estate. We wanted the bunkering to be different, so we were able to do more Tillinghast-like bunkers, where you see the grass rather than the big flashed-up white sand. Bobby talked to me more about what the golf hole looked like than the [playability of] the golf hole itself. He knew about it [playability], but that just sort of happened. He was looking for something else. His project architect was Bruce Charlton, who worked with [Vice President of Development] Steve Adelson. Bobby pretty much let Bruce go on this project. But when Bobby was here he added subtleties to it."

Kleinpeter has seen Sandestin through several different owners. The original developer was Evans & Mitchell Corp. in the early 1970s. The 1974 Arab Oil embargo forced Sandestin into bankruptcy, Kleinpeter said, and Chase Manhattan Bank took over the property. A Dutchman named Von Bohmein purchased Sandestin in 1979 and hired Florida businessman Peter Bos to operate it. Bohmein sold Sandestin to Bos in 1981. Bos owned the property a dozen years, selling it to Sime Barby, a Malaysian multi-national company, in 1992. Wanting to take advantage of opportunities in Hong Kong, Sime Barby sold Sandestin to Intrawest in 1998.

Intrawest is a major developer and operator of village-centered resorts, mostly in ski areas, across North America. Sandestin was its first Southern resort. Kleinpeter is excited about Intrawest's involvement. Besides being a multi-course operator (19 courses) with extensive resources, the Vancouver-based firm has a well-defined management structure and review process.

"Yearly reviews are not done just by my superior," Kleinpeter explained. "Eight people review my work, including people on my same level, people who work for me, and people in the corporate office. Those reviews are combined to let me know where I stand. The review stresses the values, teamwork and customer service of the company more than how you do your paperwork.

"Intrawest also wants to promote from within. There is a suc
Sandestin opens Raven Golf Club

Continued from page 13

great holes on Rees' course."

The same can be said of Bobby's latest Raven layout. "Raven" is a designation Intrawest—which owns and/or operates 19 courses throughout North America—attaches to only its premier layouts. Only Raven Golf Club at Three Peaks (Silverthorne, Colo.). The $11.8-million Raven at Sandestin is the recreational centerpiece of the 2,400-acre, village-centered resort, which includes three other courses—Burnt Pine and Tom Jackson-designed Links Golf Course and Baytowne Golf Club—a state-of-the-art golf learning center, 18-hole putting course, two waterfront restaurants, 730 rental units, 14 tennis courts, a 98-slip marina, four public swimming pools, 7.5 miles of beach and bay-front properties, and 33,000 square feet of meeting space. An ambitious $400-million expansion plan calls for another 2,200 housing units and pedestrian village with shops, restaurants and other amenities.

The Raven Golf Club at Sandestin is actually a 19-hole course with two alternate par-3 16th holes—one measuring 228 yards and the other 172 yards—that will be used on alternating days. The two hole 16s were designed to accommodate housing along that area of the course, according to Jones'.

The Raven Golf Club at Sandestin is the third and will be joined late this summer by Hurdzan/Fry-designed Raven Golf Club at Three Peaks (Silverthorne, Colo.). The island green is just that, with a foot bridge spanning the pond surrounding the putting surface. Reclaimed water from the county wastewater treatment facility fills the ponds and provides the Raven's irrigation water.

More than 600 new tree plantings, along with native grasses, provide striking color changes throughout the course. Many bunkers are patterned after A.W. Tillinghast and Alister Mackenzie designs.

Kleinpeter

Continued from page 13

cessation ladder which requires everyone in the company to say what positions they hope to hold in the future. The ladder covers five months, five years and 10 years down the road. That way (upper management) can tell employees what they can expect, what education they need, and what can be done to help them get to those places."

As for Kleinpeter, he hopes to become increasingly involved in course construction as Intrawest continues to build its portfolio. "I want to look at it from the aspect of the player, what Intrawest hopes to bring to a project and helping bridge the gap between the architect we've hired and what the company wants. I'd like to help Steve Adelson if we get busy enough...I'm ready to move around. If we were to get more courses in this part of the country, maybe I could become a regional agronomist."

The growth of companies, like Intrawest, is a good example of the consolidation taking place in the golf industry. While the trend has advantages in terms of resources and career opportunities, Kleinpeter hopes the cooperative atmosphere superintendents at neighboring courses have traditionally enjoyed doesn't disappear due to corporate competition.

"I haven't experienced it, yet," he said, "but I'm concerned that it could happen because of the [nature of the] corporate world. We don't get to see or talk to each other like we used to. The corporate world keeps us so busy doing reports that we [superintendents] have lost some of that contact with each other. I'll continue to try to keep in touch with the local guys. But I've been pulled away from that the last two years. It's real easy to do because you are so involved with your own company that you don't feel you have time to talk to the guys down the road. That bothers me a whole lot."
Winter work cold but fruitful in N.H.

CLAREMONT, N.H. — At Claremont Country Club here, superintendent Danny Whitcomb let his members know the extent of work his crew does in the winter months with this Letter to Golfers:

The snow is falling, the wind is blowing, and you're sitting in front of your fireplace reading about the golf course you would love to play sometime in your life. Then you doze off to dream about the best round of golf you have ever had and you hope it repeats itself this coming summer. The next day you're driving past your local course and you see the gates open to the maintenance shop and all the lights on, and you think to yourself, "What could they possibly be doing there this time of year?"

As golf course superintendents, our dreams are also reality in the winter. Maintenance is a very high portion of golf course maintenance. We have equipment that runs seven days a week all summer, some that run three days a week, some that run twice a week. You add all those hours up and most homeowners don't put that many hours on their own mowers in 10 years.

The average run time per mower on our course is between 250 and 300 hours per season. That's why it is so important for winter maintenance. Parts wear out, bearings and seals need replacing, wiring needs checking and replacing, motors need tuning up and rebuilding, reels need grinding — and the list goes on.

It is so important to maintain equipment for two reasons. The first is dependability throughout the summer. (Golfers really don't want to hear "The greens are not mowed because I'm waiting for parts.") I'm not saying things don't break in the summer, but we do try to prevent that from happening, and if it does, most of the time we have the parts to fix it.

Superintendents will also stay some nights as late as necessary to get equipment running for the next day. The second thing is trade-in value. If equipment is maintained very well, the more money we can get on a trade. I've always thought well-maintained equipment is happy equipment, and when equipment runs like it should, the help running it is happy, too.

In the summer maintenance doesn't stop. Reels get sharpened once a week, mowers get greased once a week (some mowers have 50 to 72 grease fittings), oils get changed every 40 to 50 hours of run time, and, on our golf course, the maintenance averages between 15 and 30 hours per week. Equipment gets washed off after every use. The equipment also gets waxed three or four times per summer.

We do all this to protect our investment. After all, equipment is very expensive so keeping it in excellent shape is a wise investment.

Superintendents also try to resolve problems that may occur on the golf course: more drainage, irrigation, fewer chemicals. A superintendent once told me, you have to "think outside the box." You are pretty much stuck in your box because your brain is conditioned by your experiences. The way to accomplish this is by associating with others who are thinking and solving problems based on their own experiences.

Golf course superintendents are blessed with a working environment that attracts people. The outdoors is an attraction and so is the pleasure of growing things.

So, the next time you're kicked back in your chair in front of your fireplace dreaming about the best round of golf you've ever had, your golf course superintendent is working very hard throughout the winter to make your dreams come true.

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C LAREMONT, N.H. — Danny Whitcomb and his chocolate lab Hershey start the morning rounds every day at nine-hole, semiprivate Claremont Country Club here — a course that has been played by the likes of Presidents Woodrow Wilson and Calvin Coolidge. It has been a routine for the pair since 1992 when Whitcomb left John H. Cain Golf Course in Newport, where he had grown in the new 18 holes. Before the 43-year-old Whitcomb discovered greenskeeping, he was a globetrotting equipment operator, building flood-control dams in South Africa, China and South America.

Then came turfgrass studies at the University of New Hampshire and then at University of Massachusetts' Stockbridge School, where he earned a winter school degree in 1987 and continuing education units in the winter of 1990.

Whitcomb worked at the private 18-hole Keene (N.H.) Country Club from 1988-90 before growing in John H. Cain. A member of the board of directors for the Golf Course Superintendents Association of New Hampshire, he was a speaker at this winter’s International Golf Course Conference and Show.

**Green Mowers:** 2 Toro 1000

**Fairway Mowers:** 1 John Deere 3235

**Rough Mowers:** 1 Belco 12-foot rotary

**Tee Mowers:** 3 Toro 500

**Riding Bunker Rake:** 1 Toro Sand Pro

**Topdressers:** 1 Cushman Model 1500

**Aerifiers:** 1 GreenAir 24, 1 Airway 6-foot fairway aerifier

**Grooming Reels:** N/A

**Reel Grinder:** 1 Foley Model R00961

**Bedknife Grinder:** 1 Foley Model R00961

**Topdressers:** 1 Cushman Model 1500

**Grooming Reels:** N/A

**Verti-Cut Reels:** 1 Lesco

**Aerifiers:** 1 GreenAir 24, 1 Airway 6-foot fairway aerifier

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U.S.-UK study reveals differences in chemical, water use

Continued from page 1

ship fees in the United States averaged $4,300 versus $1,300 in the U.K. Schrickel also found that American courses consume more fertilizer, herbicide, fungicide, insecticide and water than their British counterparts.

"I found that the financial income of golf clubs in the U.S. is three times higher, even though they have fewer members," said Schrickel. "U.S. members pay more because they can experience more — there are usually country club facilities whereas on British courses there is only golf." Schrickel said private golf

members in the United States also expect "carpet-like" turf conditions.

"This is influenced by the fact famous British courses are older and they are preserved for their historic character," she said. "For example, Sunningdale in England will never be as green as East Lake Golf Club in Atlanta. The course is in absolutely great shape, but the natural character of the old heathland determines the appearance."

Another factor that drove up the cost of maintenance at U.S. facilities was irrigation. Schrickel found that only 4 percent of courses in the U.K. irrigated entirely, whereas 60 percent of the courses in the U.S. are.

"The courses that are in desert climates are the most expensive to maintain," said Schrickel. "Water certainly pushes up the costs. For example, Troon Golf and Country Club in Scottsdale they only irrigate the playing areas and they have turf islands in the desert. This means that all the edges of fairways have to be cut regularly to control the speed of growth. Sure, a perfect irrigation system is a large investment, but the course also demands high maintenance."

Schrickel noted that some courses in the U.K. are emulating the U.S. style of maintenance.

"Courses that are designed by American architects are maintained in the American style because that is what the developer wanted. London Golf Club, which was designed by Jack Nicklaus, is in comparable condition to those in America," she said.

Environmental activities also differed greatly between the two countries. While 60 percent of the U.S. courses are members of an environmental accreditation scheme, only 8 percent of U.K. courses are involved.

"In America the courses are greener, but the out-of-play areas are more natural than in the U.K.," said Schrickel. "In the U.K. they feel that they already protect the environment and that their money would be better spent on turfgrass management than on bird houses."

How has all this information affected Schrickel's perspective on golf course architecture?

"The whole study made me analyze again what I should really consider in order to create easily maintainable golf courses," she said. "This was a learning process. I may have already known all of this, but I have become more aware of the importance of certain design principles."

Schrickel's design principles for an easily maintained golf course include:

• Generous surface sizing of greensites to moderate wear and tear.
• Spacious tees to allow for turfgrass regeneration.
• Consistently wide walk-ons and walk-offs.
• Limited bunker placing to moderate maintenance costs.
• Simplified irrigation systems.

But what if the developer wants flashy, deep, steep-faced bunkers?

"This is the ideal. Architects should consider all of these principles when building a golf course," she said. "But if a developer wants flashy, deep, steep-faced bunkers?

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— Bettina Schrickel

U.S. versus UK study

Continued from previous page

developer wants steep-faced bunkers I would work with them. They would have to serve playing and aesthetic purposes. We would have to work within the land, area, weather, budget and appearance of the surrounding landscape. Maybe we can do steep-faced bunkers, but they might have to have grass faces instead of sand."

Schrickel is also concerned about meeting market conditions when developing new golf courses.

"We would need to talk about who the target group is, who would come and play. I think that many developers continue to work on a project."

For a pay-and-play course it is much easier to break even on a par-70 course. It is the encouragement of the golfer and repeat play that we should work towards."

Schrickel is now working on putting her design ideals into practice. She is now a design associate with Golfplan/Continued from previous page

Fream and Dale and is working on courses in Poland and England and will be heading to Texas in the near future to work on a project.

Comparison of courses in the U.S. and British Isles

<table>
<thead>
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<td>105 hrs - used on 92% of courses</td>
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<td>28% whole golf course excluding rough</td>
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<td>60 Itrs. - used only on 92% of courses</td>
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<td>Countryside Stewardship Scheme</td>
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<td>Safe the Wildlife</td>
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Pebble Beach
Continued from page 13


The 85-year-old course will offer some changes from previous years — most strikingly the new par-3 5th hole that was added in 1996, and the decision to play the second hole as a long par 4, leaving the course to play to a par of 71 for the championship. These changes will be obvious to the casual observer. Not so readily evident is the seven years of diligent work to improve the infrastructure at the grand old course.

“We have been involved in a series of major projects to improve drainage and control erosion, and refurbish bunkers over the past years,” said Director of Golf Ted Horton. “The new seawall at 18 and drain work are dramatic projects that will help the course withstand the ravages of nature for future generations.”

The loss of the tall pine tree that protected the green on the left side of number 2 last winter necessitated changing the straight-away hole from a par 5 to a par 4. The USGA enjoys toying with such holes, but number 2 has always been a birdie hole, so it should not bring howls of complaints from players.

While course preparations have been running smoothly for the past two years, a transition in command has pushed Greytok into the spotlight. The 27-year-old graduate of Penn State has been on board as assistant superintendent since last November, but was promoted to the top spot in February when former head superintendent Mark Michaud left to take to top spot at 2004 Open host Shinnecock Hills in Long Island.

“It was a bit unexpected for Mark to leave so soon,” Greytok said. “He had worked hard to develop a great plan to make Pebble Beach the fairest possible test for the championship. Though he planned to be here through the Open, everyone understood that he had to move on when he did. I worked very closely with Mark for the months that we were together so that really I just need to keep that plan on track.”

Greytok comes to Pebble Beach with strong credentials, having worked as an assistant at Merion Country Club out of college and then under Paul Latshaw at Riviera Country Club in 1997 and most recently at Congonual Country Club in Mari-land. The transition to the head superintendent has been smooth and Greytok has learned to appreciate the crew he inherited.

The Pebble Beach staff has completed clean-up after the AT&T National Pro Am in February and is concentrating its efforts on just the final cosmetic touches in preparation for the tournament. The course still has to be prepared each day for the 175 daily players at this public course. Efforts then can be put into dealing with minor trouble spots.

“For the next month we are working any areas that will help create a uniform condition throughout,” Greytok said. “We have been aerifying some dry spots on the fairways, and working on some contours around the rebuilt bunkers. We have had excellent weather this winter and that will allow to have the course in dry, solid condition come June.”

With daily play continuing until just a few days before Open week, the Pebble Beach staff won’t begin to grow in rough until the first of May.

“That is our prime growing season and we can get the ryegrass up to 3/8 inch very quickly. We will start to mow the greens shorter around the first of June, but not take them all the way to tournament specs until Open week,” Greytok said.

The weather is the only factor out of his control! The final round of 1992 saw a fierce wind and hot sun turn the greens baked and fast, leading to one of the most brutal final rounds in Open history. Everyone hopes the normal overcast and cool June weather on the coast will prevail.

“We are riding a fine line when you get your course up to tournament standards,” Greytok said. “It is during the event that our work really begins, but this staff is ready for the challenge. We just want Pebble Beach to be the fairest test possible. I’m looking forward to see the best players take this great golf course.”

GOLF COURSE NEWS
While biological control products have gained a significant foothold in the U.S. turfgrass market, the young industry continues to redefine itself with new products, technologies and techniques almost daily.

"When you are talking biologically you are talking about the soil ecosystem which is a new frontier that we are learning more about every day," said Rick Geise, brand manager for Nature Safe. "We are just scratching the surface right now."

Universities and companies are conducting research to determine methods to improve microbial efficacy, sustain microbial populations, identify specific beneficial micro-organisms, lengthen the shelf-life of products and combine products with traditional chemical applications.

**BIOSTIMULANTS**

Through a variety of delivery mechanisms, activities and organisms, biostimulants, generally, encourage healthy turf growth, increased root mass and improve soil quality to help turf survive weather- and disease-related stress.

**Bio-control research surges, new products abound**

By ANDREW OVERBECK

However, new research and products are showing that some biostimulants have disease-suppressive qualities as well.

**New Products**

For instance, Sybron Biochemical's TurfVigor microbial product line concentrates on feeding beneficial microbes in the soil to enable turf to fight disease more effectively by increasing the plant's ability to absorb nutrients and develop a larger root mass.

"It allows the plant to turn on 'defense' genes. By inputting precursors to certain phytohormones, we can allow the plant to choose to turn on the genes to protect itself," said Dr. Dave Drahos, research and development group leader at Sybron. "At an application rate of every two weeks, they will have a benefit at helping the plant at certain growing points in the season that allow the plant to do much better at laying down a more branched root system that will take heat stress more efficiently and be more resistant to diseases like dollar spot."

Also new to the market is Plant Health Care's Colonize biostimulant that contains mycorrhizal fungi to stimulate the rapid colonization of turfgrass roots.

"Colonize stimulates what is already there," said President Wayne Wall. "There is often some mycorrhizal fungi on greens, but not enough to provide a benefit because it is constantly being suppressed."

According to Wall, research has shown that greens with an abundance of the fungi are much healthier, produce more chlorophyll, absorb nutrients and are more resistant to drought.

Floratine Products Group's Floradox system includes various soil, biological and turf-related products that work together to enhance the activity of pathogens.

**Supers use biologicals with cautious optimism**

By ANDREW OVERBECK

As regulations and local legislation concerning the use of chemicals and environmental pressures continue to haunt golf course superintendents, many are incorporating biological products into their maintenance regimes.

"In this business, you don't want to wait until you are forced to do anything," said Paul Reising, superintendent at Try Club in Highland, Mich., "because then there is no room to cause then there is no room to try a product that you are not familiar with."

Reising has been using Eco Soil's Biojet system on fairways and tees and Floratine's Floradox system on greens and has met, so far, with success.

Reising used two-thirds less fungicide on tees and fairways last year and only applied fungicide once on 14 of his 18 greens.

"I am convinced that it works, and we will be going full tilt this year," he said. "But it has only been one year so I am still going to run some tests this year. It would take me a couple years to be fully convinced."

When it comes to biologicals, cautious optimism is the rule of the day. Unfortunately, superintendent at North Shore Country Club in Glenview, Ill. "You want to be comfortable with what the options are if you have to omit certain plant-protection products."

**These wasps don't sting, they paralyze ... grubs that is**

By ANDREW OVERBECK

LEXINGTON, Ky. — If Dr. Dan Potter gets his way, greens committee chairmen may soon find themselves approving the purchase of wasps to fight pests on their golf courses. While this may raise safety concerns among golfers, the Tiphia wasp is not concerned with human prey, but instead hones in on masked chafers and grubs. No one would notice these parasitic wasps. No one would notice these parasitic wasps. No one would notice these parasitic wasps.

"Colonize stimulates what is already there," said President Wayne Wall. "There is often some mycorrhizal fungi on greens, but not enough to provide a benefit because it is constantly being suppressed."

According to Wall, research has shown that greens with an abundance of the fungi are much healthier, produce more chlorophyll, absorb nutrients and are more resistant to drought.

Floratine Products Group's Floradox system includes various soil, biological and turf-related products that work together to enhance the activity of pathogens.
Owls and golf courses may be mutually beneficial

By MATTHEW D. SMITH and
Dr. COURTNEY J. CONWAY

RICHLAND, Wash. — In an effort to reverse population declines of burrowing owls, Washington State University Professor Courtney J. Conway is collaborating with the United States Golf Association (USGA) and five golf courses in southeastern Washington to determine if the courses can provide suitable nesting locations for the owls. If successful, the project could prove to be beneficial to owls and golf courses throughout North America.

Burrowing owls inhabit short-grass, open country such as prairies, deserts and grasslands. Owls typically nest in abandoned burrows of fossorial mammals such as badgers, prairie dogs and ground squirrels. Burrowing owl populations are declining throughout North America and reduction in the number of suitable nest burrows is one factor commonly thought to limit owl populations. Thus, burrowing owls are considered a species of special concern throughout the United States and are endangered in Canada and several Western states. This designation has attracted the attention of wildlife agencies, conservation groups and the USGA.

Attracting nesting burrowing owls has potential benefits for golf courses. Their diet includes small rodents such as voles, mice and pocket gophers, as well as insects such as locusts, beetles and crickets. Hence, burrowing owls may help to control populations of species typically considered pests by golf courses.

Golf courses have the potential to contribute significantly to burrowing owl conservation and recovery efforts because they have the open, short-grass conditions that owls typically prefer. However, golf courses lack one critical component: nesting burrows.

Conway approached the USGA to fund a project to test whether artificial burrows would attract owls to nest on golf courses. The project is funded by a three-year $75,000 grant through the USGA's Wildlife Links program and receives additional support from Washington State University, Washington Department of Fish and Wildlife, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service and the Lower Columbia Basin Audubon Society.

Conway and his field assistants, along with golf course grounds crews and local volunteers, are installing 150 artificial nest burrows on Canyon Lakes, Columbia Point, Horn Rapids, Meadow Springs and Sun Willows golf courses.

Artificial burrows are constructed by attaching 10 feet of irrigation tubing to an upside-down five-gallon bucket, and then burying the structure three feet underground. The last three feet rise quickly to the surface and the small, exposed opening serves as the entrance. The area left exposed is less than one square foot and does not interfere with typical golfer or maintenance activity. If owls really are limited by the availability of suitable nests, these structures may allow the local population to expand. The data gathered from the study will identify situations that nesting owls will and will not accept. Of particular interest is understanding what level of golfer activity the birds will tolerate.

Conway and his team have installed 30 artificial burrows since the project began in February and 150 burrows are planned to be installed by August. Once installed, the new burrows are checked each week to determine whether owls are using the artificial structures. Occupancy is obvious because resident owls leave tell-tale signs which include small regurgitated pellets and a few feathers at the entrance. Conway is simultaneously monitoring the occupancy of any other 150 artificial burrows in the area (ones not on golf courses) and 150 natural burrows. This data will allow him to compare burrow occupancy and reproductive success of the golf course burrows with both natural and artificial burrows in more natural settings.

Burrowing owls are unique in that they are active and visible throughout the daylight hours. Two of the partner courses already have natural burrows with resident owls in each.

"Many of our golfers look for the owls when they play, and, in fact, if they don't see them, people will come and ask why they weren't there," said Nick Rodriguez, superintendent at Horn Rapids Golf Course.

The end product of this study will be to publish and distribute a pamphlet to superintendents throughout the breeding range of the burrowing owl. The information will describe how and where to install burrows and the benefits associated with the project. Ultimately, the aggregation of golf courses can significantly contribute to the conservation of this species.

Matthew D. Smith, project coordinator for the burrowing owl study, graduated from Earlham College in 1997 with a bachelor's degree in biology. Dr. Courtney J. Conway is a wildlife ecologist in the Department of Natural Resources Sciences at Washington State University. He has a bachelor's degree in wildlife biology from Colorado State University, a master's in ecology from the University of Wyoming, and a Ph.D. in ecology from the University of Montana. He has published more than 20 manuscripts and book chapters summarizing his research on the effects of environmental and land-use changes on populations of rare animals.

Wasps as grub control

Continued from page 21

Paralyze them, roll them into a ball and lay an egg on their backs. Then the wasp grub slowly devours the white grub. In areas that have strong natural wasp populations Potter has found patches where three-quarters of the white grubs were parasitized.

"These wasps can be a pretty significant mortality agent against masked chafers grubs," said Potter. "But right now we know little about them."

Along with a two-year $42,950 grant from the United States Golf Association, Potter and entomology graduate student Michael Rogers are studying how the wasps locate white grubs, how they are attracted to golf courses and how maintenance practices can be adjusted to encourage healthy wasp populations.

Preliminary studies indicate that at close range the wasps locate white grubs by sensing vibrations in the ground.

"At long range, we speculate that wasps are homing in on plant odors that are produced by damaged turfgrass," said Potter. "Root feeding would create an odor bouquet that is different and the wasps home in on the damaged plant to find the grubs."

In order to build up natural populations on golf courses, Potter is looking at which wildflowers attract the wasps.

"Wasps use flowering plants as a source for nectar and carbohydrates, so we are going to determine which of these plants the wasps like to visit and perhaps we can augment their populations by including these plants in landscape plans," he said.

Potter has also experimented with a more rudimentary method of attraction — spraying turf with a diluted sugar solution. "We were able to attract dozens of wasps to the site, which we assume would then parasitize the grubs, but we haven't verified that yet," said Potter.

Altering turf management regimes can also help to build and sustain wasp populations. Potter has worked with Mach 2 and Merit insecticides and determined that both are compatible with the preservation of beneficial insects.

"However, we have to work with them and not knock them out," he said. "The wasps are the most active in late August to mid-September and if you don't spray them then you won't kill them."

Instead Potter recommends spraying preventative early in the season and working around the life cycle of the wasps to encourage healthy grub-fighting populations.

"This study is part of an overall effort to understand why insect outbreaks occur on courses and to learn how to work with the golf course environment to encourage as much natural pest control as we can get," said Potter.

The wasp study will be taking place over the next two summers and Potter expects final results to be available in the winter of 2001.

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GOLF COURSE NEWS
Education, research key to maintaining growth

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try concerned. "The fact that there is not a regulatory body that has an independent voice to lends itself to claims being made by companies and products that really don't do what they say they are going to do," said Max Gelwix, president and chief operating officer of Eco Soil. "Unfortunately, a failure by one company translates to us and we get colored by that failure. However, no one wants an over-regulated industry, either."

Many point to self-regulation as the way to weed out the dishonest companies.

"There are always good products and bad products," said Clare Reinbergen, president of Growth Products. "My experience is that the products that can't stand up to it fall by the wayside. When a customer expects something and they don't get it, they aren't going to go back and buy more."

Reinbergen also insists that EPA registration and the necessary university testing functions as a form of regulation.

"To get full registration by the EPA and get the test data to back up product claims costs thousands of dollars. A lot of companies are not willing to spend the money," she said.

Therefore, companies stress the importance of publishing independent university research data and using it to educate superintendents.

"Education is the single biggest guard against deceptive marketing," said Rick Geise, brand manager for Nature Safe. Indeed, without data and university studies to back them up, many superintendents won't even consider using the products.

"We went out to the Links at Spanish Bay to talk to the superintendent there," said Reinbergen, "and the first thing he said was 'If you don't have test data I won't talk to you about a biological.'"

As a result, companies have been holding regular seminars for distributors and superintendents to educate them on biological controls.

Plant Health Care holds six seminars a year on below-ground ecology at its training facility in Beaufort, S.C.

"We take a step back and understand physiology and biology and chemistry of the soil," said Wayne Wall, president of Plant Health Care.

Dr. Dave Drahos
Dr. Dave Drahos of Sybron Biochemical. "But we can also show the superintendent that these microbes have been isolated back off a root system and because of the power of DNA fingerprinting we know that they are the right strains."

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Dr. Dave Drahos
Dr. Dave Drahos of Sybron Biochemical.

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May 2000
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New Bio-control research and products abound

Continued from page 21

genesis related proteins that help the plants stop and recovery from disease attacks.

"Everything we do is geared towards the plant's immune system," said company President William Byrnes. "That is the basis of good health. Control is an adjunct. We want to help the plant win the war itself through

"That is the basis of good health. Control is an adjunct. We want to help the plant win the war itself through

good soil and plant management. Depending upon the golf course, any list of products can go into that."

Being added to the Floradox line this year is Protexyn, a liquid organic complex that conserves plant energy and directly improves its photosynthetic efficiency by providing complete amino acids, proteins and carbohydrates which are needed by turfgrass that is under stress and intensive use. Photosyn, a compost tea formulation, works in concert with Protexyn to improve the health of stressed soils.

"There have been good results in California and Florida against nematodes, fairy ring in Texas and take-all patch in Scotland," said Byrnes. "We don't pretend that it is a fail-safe device, but along with good fertilization, water and air management and cultural practices, it is an effective tool to move down the line towards reduced reliance on chemicals."

According to Geise, Nature Safe products have also demonstrated the ability to manage disease and pest outbreaks.

"We don't claim that it is a disease suppressant, but we claim that it can aid in disease management," he said. "We have done studies with dollar spot where the efficacy was increased and less fungicide was used."

Nature Safe also is doing an ongoing study on nematode suppressive conditions.

University Research

While the disease- and pest-fighting qualities of composts and biostimulants are apparent, work is being done to identify which specific microorganisms in composts are leading the way.

For the past five years, Dr. Eric Nelson at Cornell University has been screening organisms in composts that had suppressive qualities to identify which organisms were responsible.

"We have plots of fescue and we have been applying compost on them and some have been suppressive, some have not and some were suppressive but aren't anymore," said Nelson.

By inoculating the plots with Pythium and then monitoring which plots fight the disease, Nelson hopes to identify the suppressive activity and the microorganisms.

However, this has proved difficult. "It is like finding a needle in a haystack," he said. "We can only isolate and study less than one-tenth of one percent of the micro-organisms that you can see in the soil."

Using new molecular methods to study the organisms may assist Nelson and he hopes eventually to be able to create more predictably suppressive materials.

In the meantime, he is looking at the influence of cultivars on the activity of micro-organisms. "We are going to look at what the differences are when you put them out on A-4 versus Penncross bentgrass," he said. "In agricultural crops this has made a huge difference in efficacy."

Efficacy, however, can be improved immediately by sticking to some rather simple application rules, said Nelson and Michigan State University's Dr. Joe Vargas.

"You must apply them properly," said Nelson. "You can't use the fungicide paradigm and apply them every two weeks and expect to have activity. You have to apply them frequently to maintain population levels."

According to Vargas, applying micro-organisms after dark will improve efficacy. "The organisms are damaged by ultraviolet light and desiccation."

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15-2-8 (with Meth-Ex 40®) have been added, providing unparalleled options for turf managers. Find out why superintendents around the country are making Nature Safe their natural choice for optimum soil and plant nutrition.

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Continued on next page
Bio-controls
Continued from previous page
he said. "By applying it as close to dark as possible, you eliminate those problems."

BIOFUNGICIDES AND BIOINSECTICIDES
Biofungicides and insecticides are also continually applied to provide a constant supply of microbes to the turf. Since live microbe populations must be maintained, product development has focused on delivery methods and product stability.

"The challenges are having it produced at the right times, in the right quantities, the right temperatures and conditions," said Max Gelwix, president and chief operating officer of Eco Soil.

Eco Soil's Bioject system, which is being used on 384 courses nationwide, provides on-demand readiness for the production of biologicals that improve soil and turf health and provide preventative disease and pest control. Last year it introduced the Fresh Pack system, a concentrated mixture of biologicals that is shipped to courses overnight to be used within 48 hours, thus eliminating shelf-life issues. The system is ideal for smaller applications and is being used by more than 1,000 courses.

Stability and consistency were the major concerns for Growth Products when developing its new biofungicide Companion.

"When we started looking at biological control, we looked more at the solution because stability was the most important aspect," said Clare Reinbergen, president of Growth Products.

The active ingredient, bacillus subtilis, has been around since the 1930s, but it has not been used commercially because scientists have been unable to stabilize it outside the laboratory.

"Our solution is an organic base that has more than two years of shelf life," said Reinbergen.

Biologically, Companion has been shown to reduce necessary rates of chemical fungicides and achieve greater results.

Also new to the market is Soil Technologies' Nemastroy and Plant Healthcare's Lepinox. Nemastroy uses an extract of chili and mustard to kill and repel nematodes and other worms. Lepinox contains active bacillus thuringiensis that is effective at controlling armyworms and sod webworms, especially when used as a preventative to attack small larvae.

WORKING WITH CHEMICALS
Despite all the research and new product developments, biological controls are still best used in concert with traditional chemicals to achieve reduce rates.

"If you can get biologicals out there," said Vargas, "the disease comes in a lot slower and gives you a chance to go out and put down a curative spray."

Indeed, most are designed and tested to work along with chemicals.

"We have learned that you have to use the biologicals to reduce the amount of fungicides or chemicals," said Gelwix. "But they are also complementary to each other."
Supers try out biologicals

Continued from page 21

Dinelli also suggested studying university research results and what organisms are involved. Even then there are risks involved.

“There are often inconsistencies. What worked for one university might not work for my course and vice versa,” he said.

However, using university research data gives superintendents a baseline of what to expect with product performance.

By using a wide variety of biological controls and strong cultural practices, Dinelli has also reduced chemical use by an average of 50 percent.

“I can’t say for sure that it has been biologicals,” he said. “Every year we massage our plans and get better at what we do, so there are a lot of cultural things that we wind up implementing as far as aerification tools and management. The biologicals need to be a part of the overall program, but it is not a stand-alone.”

“This whole approach has to be combined with other cultural practices to take you to the next level... but every now and then you get smacked down to the first level and you have to use a fungicide.”

Since biologicals are not fail-safe and require constant monitoring, many superintendents are not thrilled about using them, said Reising.

“Some guys say that with aeration, cultural practices, feeding and nutrition, you don’t need fungicide,” he said. “But how do you tell that to a guy who just lost a green or fairway and his job is on the line because he didn’t spray a fungicide?”

“This is a dynamic new science and there are more questions than answers,” said Dinelli.

Scott Niven, superintendent at Stanwich Club in Greenwich, Conn., used research as a guide when instituting the use of Companion in his turf management program.

“I took my cues from Dr. Bruce Clark at Rutgers, who had been using it for three years,” said Niven. “He was able to reduce his fungicide by half and I took that information and reduced my program by one-third and got good control. He demonstrated how much I could reduce fungicide use and still be safe.”

This year Niven is building Companion into his program and making it pay for itself by reducing rates.

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BRIEFS

WEITZ BUYS FAIRWAY CONSTRUCTION
NORTH PALM BEACH, Fla. — Weitz Golf International here has purchased Fairway Construction, located in Temecula, Calif. No organizational changes will occur, and the current staff in the Temecula office will continue to service all existing clients. Weitz Golf International is a wholly owned division of The Weitz Co., Inc., a construction company established in 1855.

ERMISCH SETS UP DESIGN SHOP
SHAWNEE, Kan. — Chuck Ermisch Golf Design has opened an office here. Ermisch is a 1992 graduate of Kansas State University, with a bachelor’s degree in landscape architecture. His career has concentrated on both design and field experience. Over his 10 years of industry experience, he has supervised projects for various golf course contractors and has been employed by Don Sechrest of Kansas City, where he was chief designer. For more information, contact Ermisch at 913-438-8422.

GOLFPLAN HIR ES RAMSY
SANTA, ROSA, Calif. — Golfplan, Fream and Dale, has hired Kevin Ramsy as senior golf course architect. Ramsy was previously a senior designer with J. Michael Poellot Golf Design Group and director of golf design with Walter Raleigh Stewart. He is working on the Serapong Golf Course at Sentosa Golf Club in Singapore, Barbarosa Golf Club in Texas and Yong Pyong Golf Club in Korea. Ramsy brings 11 years of golf course design experience to Golfplan.

COURSE TO MEMORIALIZE BING CROSBY
RANCHO SANTA FE, Calif. — Starwood Development, an affiliate of Starwood Financial, Inc., has reached an agreement with the family of Bing Crosby to name the company’s property in northern San Diego County The Crosby Estate at Rancho Santa Fe. The Crosby Estate will encompass 722 acres and feature 501 houses and homesites. The Crosby Estate will include The Crosby National Golf Club, an 18-hole championship golf course designed by Masters champion Fred Couples and Brian Curley.

Snead opens design firm
STUART, Fla. — Sam Snead has formed Sam Snead Course Design, heralding the entry of the Hall of Famer into the golf development arena. Snead won 185 tournaments, including seven major championships on the regular Tour and 11 majors on the Senior Tour. He competed on 10 Ryder Cup teams, including four as a playing captain.

Heading up the firm will be Sam’s son Samuel “Jack” Jackson Snead Jr., along with President Ronald Coruzzi and design associates Edward Carton and Scott Applegate.

Citing a desire to be more active in golf course design endeavors, Snead said: “I hear from players all the time about how difficult a course is and how they will never go back there again. The classic-styled courses that I love don’t have those problems. Most of the courses being built today do. I’m just an old mountain boy from the hills of Virginia and I’ve probably played more golf than anyone alive. I know what it takes to design golf courses that are challenging for the low-handicapper as well as fun and enjoyable for the high-handicapper, for the guy who pays the freight.”

Sam Snead Course Design will provide golf course architectural services for Sam Snead Signature course designs, redesigns, and renovations. Additionally, extensive consulting services will be available through Sam Snead Golf Management and Sam Snead Golf Academies.

Through countless rounds of golf Sam and Jack Snead have played together, Jack has been instrumental in the development of his father’s course design philosophy, and endeavors to instill those ideas into every Sam Snead design.

Coruzzi has a comprehensive career in the business of golf, including golf real-

Engh returns home for Hawktree
ISMARCK, N.D. — Native son and golf course architect Jim Engh, who gained fame in his hometown of Dickinson when he startled the world with The Sanctuary in Sedalia, Colo., surprised even himself when he beheld his finished product here — 18-hole Hawktree Golf Club.

“I had high expectations,” Engh said of the course that opened May 1. “But when we finished, I ‘missed it.’ The course really blew me away. It’s amazing how the site came together. It fits so well within the natural topography.

From the unexpected elevation changes to the tendrils of water, to the black lignite coal slag that serves as bunker sand, Engh believes Hawktree stands out as a grand experience.

“The exciting thing to me is the diverse character of the site,” he said. “Burnt Creek runs through the property and forms a small valley with a stream bed. The creek has fingers of very sharp or severe valleys that run perpendicular to the bigger valley. We ran holes up and down the valleys and used the open areas to create some ponding features.”

Areas on both nines jump in and out of woods, and the 4,830- to 7,117-yard, par-72 layout features “open

Samoset’s 4th meets ocean
By MARK L E S L I E
ROCKPORT, Maine — One of the top-ranked resort courses in the country just got better. On June 1 Samoset Resort Golf Club here will unveil new seaside 4th and 5th holes that golf course architect Brad Booth and superintendent Gregg Grenert feel transform the layout into a tougher and more eye-catching venue.

Winter work has become Grenert’s trademark over the last six years as he has taken advantage of frozen ground to dig ponds, create bunkers and completely rebuild long lengths of breakwater to dramatically upgrade Samoset.

Although he has more work ahead that will, in the end, mean eight or nine rebuilt holes on the 1973 Robert Elder design, the crowning creation could be the new 4th and 5th.

“That whole complex now is unbelievable,” said Grenert, “with the contours and the sloping we put in.” Booth and Grenert brainstormed and Booth drafted a final product which sends the golfer almost into the ocean to the green on the par-5 4th, then along the rugged shoreline on the uphill, par-3 5th.


The stone wall breakwater along the left side of the 4th hole now continues on toward Rockland Harbor. Above the 4th green, three new sets of tees face up the hill, with a series of bunkers stepping up the slope to a green precipitated into the hill.

The bentgrass approach frames the bunkers. As Grenert said, the green "looks like it has always been there; a beehive hole."

The new 4th hole at Samoset Golf Club runs down to the Atlantic Ocean, nearly meeting the resort’s famous breakwater.

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Continued on page 33

"open

Continued on page 32"
First totally SubAir course doing well in Indiana

By JOHN TORSIELO

NEWBURGH, Ind. — Victoria National Country Club here has won numerous plaudits since opening in May 1999, including a coveted "Best New Private Course" ranking from Golf Digest magazine for 1999.

Mike Schaefer, sales manager for SubAir of Deep River, Conn., likes to think his company had something to do with that designation.

Victoria National was the first course in the world to have all its putting surfaces, 20 of them (including two practice greens) installed with in-ground SubAir systems. While a number of courses have installed the system on "trouble" greens or employ SubAir's portable systems, Victoria National constituted the company's most ambitious project to date.

Schaefer said his company is installing its in-ground units on every green at the Leopard Creek Country Club currently under construction in South Africa.

The SubAir in-ground system — which includes a 7.5-horsepower generator, fans and controls in a unit measuring 6-by-4 feet — is enclosed in a "vault" at each green at Victoria National.

The system can be used for several purposes. It can create two-way airflow through the green by either pushing or pulling air through the root zone to purge harmful gases, such as carbon dioxide, methane and hydrogen sulfide, which gradually build up in the root zone and inhibit root growth and plant health. By using the system to create higher oxygen concentrations, organic matter buildup and thatch accumulation can also be prevented through the increased decomposition by soil microbes.

The SubAir system can be used to draw excess water off the putting surfaces, down through and away from the root zone by using the vacuum port of the SubAir blower. By controlling soil moisture, the system can prevent the occurrence of surface algea.

In addition, SubAir systems can move ambient air through the more temperate gravel and subsoil surrounding drainage pipes located below the surface of greens, allowing a more moderate root-zone temperature.

The SubAir systems are designed to be used on greens built according to U.S. Golf Association specifications, and are hooked into below-ground drainage pipes. This allows the greens to be kept cooler in the blazing heat of summer and warmer in winter, the latter factor effectively extending the growing season.

Dale Minck, a certified golf course superintendent and superintendent at Victoria National, said the decision to install the SubAir system was made early in the planning stages for the course.

"It gets nasty during the winter, and summers are hot and humid here," he said. "We wanted to attempt to incorporate everything possible to help the golf course be in excellent condition at all times and use every tool available to us. What we are hoping to do with the system is provide consistent quality on each putting surface."

Minck has used the system extensively to remove excess moisture and to promote healthy root growth on Victoria National's bentgrass greens. It helped maintain quick grass growth on many of the greens during construction.

"We used the systems a lot this past summer and they worked well," Minck said. "Our goal is to some day host a U.S. Open and this is a great tool to have."

Minck said the cost of installing 20 in-ground SubAir systems was significant. "We figured around $600,000," he said, "but if you take out the cost of electrical service installed throughout the course, which we probably would have done eventually anyway, it was around $300,000."

Installing the SubAir systems added about a day's work to the construction of each green, he added.

SubAir systems are used on a number of professional and college athletic playing fields, such as Safeco Field in Seattle, Busch Stadium in St. Louis, and the University of Colorado. The six-year-old company has also installed the system at several professional soccer fields in England.

The firm employs 12 people.

"The reception we have received has been tremendous. Our portable systems have been very popular for trouble greens," said Schaefer.

One of the aesthetic advantages of the in-ground SubAir systems is that they cannot be heard during operation, a plus for golfers trying to line up tricky 4-footers. Also, controls can be remotely located for easy operation.

SubAir's portable units are designed for greens up to 12,000 square feet in size and range from 7.5 to 25 horsepower. They are available in gas, diesel and electric motors. The system is mounted on a trailer and accessories include a portable water separator, an airflow silencer and quick-connect tees for hooking up to existing drain lines.

Schaefer said his company is developing a hybrid system that will combine the designs of both the portable and in-ground systems.

"We are thinking of larger, localized units that would be located in something like a pumphouse, with the system serving a number of greens rather than have a vault at each one," he said.

SubAir, Soil Air dispute in courts

Continued from page 1

that the president of Soil Air Technology is David A. Potts, who once headed up SubAir, then left the company to form Soil Air with other investors. Ferris Industries and SubAir Inc. allege in their November 1998 suit that Potts broke a number of laws, including misappropriation of SubAir's intellectual property regarding trademark, design, manufacture, advertising and distribution of its SubAir system; breach of contract and fiduciary duty; and even using SubAir Inc. accounts to pay for services that eventually would benefit his new company.

Potts, in turn, claims in his February 2000 suit that "SubAir has infringed and continues to infringe Soil Air's patent by making, using, selling and offering for sale, subsurface soil remediation systems and component devices embodying the patented invention."

And he adds that he had developed the gas-soil analysis device before being hired by Ferris and SubAir Inc.. Indeed, "They hired me because I had that invention," Potts said.

Ferris and SubAir Inc. are seeking injunctive relief and damages from Soil Air Technology, Potts, patent attorney Charles Nessler and several investors. Potts is seeking damages for patent infringement and attorneys' fees.

Discovery in the SubAir suit against Potts is supposed to close by June 30, after which motions and trial will be scheduled. Meanwhile, the case management plan meeting for Potts' suit is scheduled for June 5 and that trial date could be 18 months later.

"I anticipate the first case [SubAir suit] should be resolved at the trial level by the fall," said attorney Theodore Araujo, whose firm — Brown, Pinnisi & Michaels of Syracuse — is representing Ferris and SubAir Inc.

However, the two cases could be joined because the subject matter is very close and they are both assigned to the same judge.

"I hope that happens," said Potts, boasting the lengthy course proceedings which have been delayed in part because he did not get his method patented.
continue from previous page

Continued from previous page

continued until this February.

Although others have either blown or sucked air through soil long ago, SubAir's technology was the brainchild of Marsh Benson, senior director of golf course operations at Augusta National Golf Club, in the early 1990s.

He and Dave Ferris of Ferris Industries began developing the technology, leading to creation of SubAir Inc. in 1994. In June 1995, Ferris hired Potts, who had been employed in the soil-remediation field, primarily dissipating environmental hazards.

Ferris's suit claims he assigned Potts in September 1995 to measure the soil gases to determine the impact of the SubAir system on subsurface aeration at Augusta National. That same gas-analyzer probe "was later refined by SubAir employees, including Potts, and included as a component in the SubAir system," the suit says — although attorney Araujo said the probes have never been used in system installations.

Over time, Potts was given much authority at SubAir, especially when Ferris was forced for many months to deal with consequences from the bankruptcy of one of his major investors.

During this time, Ferris' suit alleges, Potts developed a provisional patent for the probe, then made "false representations regarding the source, description and ownership of the invention," enticing Ferris on Aug. 5, 1997, unknowingly to sign a letter purporting to acknowledge Potts' rights to the supposed invention.

In response to Potts' suit against Ferris and SubAir Inc., Araujo said probes similar to Potts' have been sold "off the shelf" for many years, and, regardless, SubAir Inc. sold a couple of those gas analyzers but does not run its system off them.

"What we're doing is not covered by Potts' patent," Araujo said. "There is no relation between what SubAir does and this. We decided not to do it because of its complicated nature."

Araujo's response to Potts' suit, he said, is threefold:

1) "We claim we own the patent, so we can't infringe it... Potts' patents were made in conjunction with SubAir, and the property of SubAir and Marsh Benson because they derive from the work Potts was exposed to."

2) "The patent is invalid because the way it was procured creates fraud on the U.S. Patent Office."

3) "If it is valid and we don't own it, that does not matter because we don't do it [use the probe] and neither do our clients."

But Potts said his attorneys — Bond, Schoeneck & King — have a SubAir Inc. brochure that sells a gas-soil analyzer as part of its system.

Both Araujo and Potts said the two sides have had negotiations to settle the issues, but to no avail.

"We certainly have tried to work it out and have said we would license them the technology," said Potts. "At this point it is more a matter of principle."

In the months since Ferris Industries first filed its lawsuit, its shares were sold to Simplicity Manufacturing. SubAir Inc. remains as an independent company, owned by David Ferris and a group of investors.

Therefore, Ferris Industries is no longer truly involved in the court actions, according to Araujo.

Potts said Soil Air Technology offered the new SubAir ownership group $1 million for the system and they have set the value at $5 million. "It's not worth $5 million," he added.

SubAir and Soil Air duke it out in courts

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Samoset retooing nearly half course

Continued from page 29

While Samoset Resort Golf Club opened for the season in mid-April, golfers will play temporary 4th and 5th holes until the new ones are ready on June 1. Meanwhile, during the winter, Booth and Grenert oversaw a major transformation to the 14th hole. The 14th flows downhill to an oceanfront green bracketed by bunkers—a green complex that was recreated in 1998-99. It was a par-5, 350-yarder, but the tees were pushed back 200 yards into a grove of woods, creating a tee shot over wetlands and onto a landing area near the old teeboxes. The result: a 550-yard par 5.

That move was necessary to bring the course back to a par 70, since the former 5th hole was a par 4 and the new one is a par 3.

Samoset's facelifts began six years ago when the resort was owned by SRI, then continued when Ocean Properties Ltd. of Portsmouth, N.H., bought the resort in January 1999 and began sinking $1 million into the golf course.

• Winter 1994: Construction began along the front entrance to the property, which was flat and unexciting. With golf course architect Geoffrey Cornish consulting, Grenert made substantial changes to the overall playability, flow and rotation of the golf course and the main entrance.

• Winter 1995: The 12th and 16th holes were targeted, as well as the fairway of the 4th hole. Grenert added a gold tee to the 12th hole. Crews dug ponds and used the earth hauled out to build fairway bunkers, mounding and movement around the course. A lot of bunker work was done around the first and second landing areas of the 12th hole. Next came mounding and fairway bunkers on the 16th.

• Spring 1996: Grenert's crew redid all the bunkers on the 14th hole and all the tees on the 15th. The old tees were set up way to the right, off-center. You couldn't draw the ball, so we pushed earth to move the tees and center everything," he said. "We also created two shorter tees. That work we actually started in March."

• Spring 1998: John Miller of Miller Construction in Massachusetts did major bunker work and reshaping on the 13th hole, "which made a dramatic change to an already great par-3 that plays 225 yards from the tips," Grenert said.

Another finish crew has also been brought in on various projects for fine-tuning and sodding, which Grenert has supplemented with his crew.

Despite all the work, Grenert promised, "This is just the tip of the iceberg."

Other changes have been mandated that will ultimately also improve the layout.

"We have sodded as much as we can," he said, "to have it all ready this spring. In the meantime, we're trying to convert the greens to L-93 bentgrass."

Most of the work has been contracted out, although Grenert used his crew members when needed, including the irrigation system and the lasering of the tees, since Ocean Properties has its own construction company.

And, Grenert added: "Brad [Booth] is instrumental. He is the architect for the future. He does great work. He works with you, listens to your ideas, and he comes up with a final product."
Miller joins Gill as partner

RIVER FALLS, Wis. — Garrett Gill has taken on longtime assistant Paul Miller as a partner in Gill Miller, Inc., Golf Course Architects.

The partnership "recognizes the contributions" of Miller to the firm formerly known as Williams, Gill & Associates, Inc. of River Falls, said Gill. Miller has collaborated with Gill on course designs since August 1990.

Gill, a member of the American Society of Golf Course Architects since 1981, followed his father, David Gill, into the profession and established his own design practice in 1985. He is a registered landscape architect in Wisconsin and Texas and a member of the American Society of Landscape Architects. He earned a bachelor's degree in landscape architecture from the University of Wisconsin-Madison and a master's in landscape architecture from Texas A&M University.

Miller is a registered landscape architect in the states of Minnesota and South Dakota. He holds a bachelor's degree in landscape architecture from the University of Minnesota.

Engh in N.D.

Continued from page 29

meadows, valleys, woods, ponds — the full spectrum," Engh said.

The black coal slag, reminiscent of Jack Nicklaus' Old Works Golf Course in Montana, is a by-product of the power plant in Elgin. Wind and dust were factors in selecting the slag, a striking visual effect, Engh said.

Five area businessmen — Steve McCormick, Bill Fleck, Mike Halpern, Rob Sattler and Dan Waldoch — developed the project with the hope of bringing world-class golf to Bismarck.

Hawktree will offer daily-tee play — from eight different yardages — and limited membership programs.

Fleck developed a system through which golfers could use the four and five tee boxes per hole to drive eight different course yardages. By allowing golfers to change teeing areas within an 18-hole round, "we are able to create eight unique ways to play and enjoy the course," he said.

A 20-handicapper, for instance, could play from the Eagle tees, and the course will play 5,640 yards. The next time, the golfer could mix in some Hawk tees and play the course at 6,042 yards. The golfer is not forced to play all the more difficult tees.

"It can make a lot of difference," Fleck said. "We want to get gender, age, or ability out of the equation. There's too much pride about what tee you're playing."

The North Dakota Golf Association told the owners it could not force them to play all the more difficult tees.

"We will see how popular it is this year. It will be a fairly integral part of what we do," Fleck said.

Sned to design

Continued from page 29

e-business to business

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Troon Golf moves on Japan

By Peter Blais

OKYO — Troon Golf, which recently opened a new office here, is poised to acquire six to eight Japanese golf courses within the next year and possibly three times that many over the next few years, according to Chairman and Chief Executive Officer Dana Garmany.

"Our expansion into Japan is a natural extension of Troon Golf's global strategy," explained Garmany. "We are confident that our 12 months preparation for this move will allow for a smooth transition into this new market."

Garmany believes up to 40 percent of Japan's 2,500 golf courses — as many as 900 golf facilities — may change hands over the next few years, a belief that prompted Troon's entry into the island nation's golf market. Troon affiliate Troon Golf Japan will be the company's operating arm in Japan. Shareholders in the venture include Medallist Golf Developments, a joint venture between Greg Norman and Australia's Macquarie Bank, along with Goldman Sachs & Co. and Starwood Capital.

"This initiative presents my partners and me with the opportunity to establish a solid foundation for bringing our products and services into the world's second largest golf market," Norman said. "I believe the Japanese golf and investment markets will embrace management groups to address some significant ownership and membership issues which exist in these golf investments."

John Sauter, president of acquisition and development for Troon Golf, said: "We see a series of one-time, non-recurring events unfolding in a sequence that creates a unique environment to profit from the restructuring of an industry."

WHAT ARE THOSE CHANGES

According to Garmany, an improving Japanese economy should allow banks holding under-performing golf courses to take a loss and sell off those facilities. They will be sold either directly from banks to investors, through loan pool bids, or at auctions.

"It's not just golf, but everything," Garmany said. "With the Japanese economy showing signs of revival, it allows banks to write off some bad loans."

The Japanese have developed an organization called the Resolution and Collection Corp., a year-old agency charged with buying bad loans from both collapsed and relatively healthy financial institutions. Its purpose is similar to the Resolution Trust Corp. (RTC), which sold off troubled savings and loan properties in the United States during the early 1990s. Though similar in purpose to the RTC, the RCC is culturally different than its U.S. counterpart and will function in a different way.

"They aren't just biddng things out," Garmany said of the Japanese agency. "They are going out and researching people who should own these assets. A larger, more solid foundation is being laid for future sales."

"With the Japanese economy showing signs of revival, it allows banks to write off some bad loans."

In addition, the government is considering proposals for a 50 percent write-off on some bad loans.

"In addition to Prescott Lakes Golf Club, Lyon Golf also manages The Karsten Golf Course at Arizona State University in Tempe, Chaparral Pines Golf Club and The Rim Golf Club in Payson, and Black Forest Reserve Golf Club in Colorado Springs, Colo. The company also owns and operates The CottonFields Golf Club in Laveen, Ariz.

For more information on Lyon Golf contact 602-953-6553.
combination of governmental action plus banks creating their own internal pressure is causing these things to boil to the surface.

Land values have dropped dramatically since the heyday of the Japanese economy, the Troon executive said. Many courses are showing little cash flow. That means a golf course may be listed on a bank's books at an asset value of tens of millions of dollars, but is barely breaking even in terms of cash flow.

Many Japanese courses also sold memberships that were traded like stocks, Garmany explained. Many of these investments were made with a 10-year call period, meaning that at the end of that time investors were scheduled to receive either the amount of their original investment or market value. Today's market value for memberships is often zero and the developer has no money to pay back the investors. That means people who invested thousands of dollars now have memberships that are worth nothing. Additionally, the same bank that loaned the membership investor that money, may have also loaned the golf course developer his money.

Garmany expects 600 to 900 courses will come on the market over the next 36 months. They won't all come available at once, but in small waves as financial entanglements are resolved. They will, and in fact some already have, become available through bid pools, banks finding investors independently, and governmental intervention.

"We are there to invest, manage and joint venture," Garmany said. "We will be doing a combination of all three. We expect to have six to eight properties by the end of this year and future growth to be a bit more rapid.

"We'll have six to eight come cleanly through the process by the end of this year. They will be bankruptcies and foreclosure events. We'll be doing everything from underwriting to work-out provisions before we get the asset clean. Those we get this year will be things that have been bubbling around for the past 12 to 18 months. The ones we're working on today are probably 12 to 18 months out before we gain possession."

"It's a huge series of events coming together to make this a once-in-a-lifetime opportunity. But you must have the wherewithal to be there and the extreme amount of cash it takes to operate there. It's a huge undertaking to operate an office of 12 people in downtown Tokyo with rents that are quadruple anything we've ever seen before."

The few management companies in Japan, Garmany pointed out, have primarily been Japanese-owned-and-operated firms. "There have been several domestic companies," he noted, "pretty much all of which are in financial trouble because they own assets valued at X that are now worth Y."

How will the changing ownership affect the Japanese golf experience? "You will see less pressure on these facilities because they will be absorbed, much as the U.S. hotel industry was when there was an infusion of Japanese capital into American hotels," Garmany said. "Big multiples were paid. You had that old saying in the hotel industry, 'You want to be the third owner, not the first.'

"It's a little bit the same here. You'll see these assets acquired by new owners, partnerships and management companies with a lot less pressure on them. They will, perhaps, be able to focus on improving the quality and experience."

Garmany does not expect the new owners to make golf more accessible to public golfers. "There are few truly private clubs in Japan the way we [U.S.] view private clubs," he said. "There is always some outside play. And with the economy down, there has been a good bit, albeit at a high cost."

"The number of members may go up a bit, and rates may become more reasonable. The pressure to perform when carrying a $100-million mortgage compared to a $10-million mortgage..."
Troon in Japan
Continued from previous page
will make a big difference. That's what you are looking at. Some of these properties will make a big difference. That's why we're talking about 100 percent acquisition in Japan. Australian golf has not been totally American-ized, Garmany said. "It is still very much a caddie or trolley, hard-and-fast type of game. Only in Queensland, where you used to have a lot of Japanese tourism, do you see golf cars and ryegrass overseeding.

"We're looking at 50-50 mix of development and acquisition in Australia, where we're talking about 100 percent acquisition in Japan." Australian golf has not been totally American-ized, Garmany said. "It is still very much a caddie or trolley, hard-and-fast type of game. Only in Queensland, where you used to have a lot of Japanese tourism, do you see golf cars and ryegrass overseeding.

Continued from previous page
Troon currently plans to limit its Asian purchases to Japan, even though many courses in other Asian countries were financed by Japanese investors. "We look at it a country at a time," Garmany said. "Our Sydney office is looking at things in Indonesia, which is in more upheaval than anywhere. We looked at things in New Zealand, Australia, Malaysia and Thailand. Right now we'd be more comfortable in New Zealand and Australia, which is [the other area] where we are focusing. It would be difficult to go do one course in Malaysia and one course in Thailand. If we think there is scale there, we could make those moves later.

Troon has no plans to build courses in Japan, even though many courses in other Asian countries were financed by Japanese investors. "We look at it a country at a time," Garmany said. "Our Sydney office is looking at things in Indonesia, which is in more upheaval than anywhere. We looked at things in New Zealand, Australia, Malaysia and Thailand. Right now we'd be more comfortable in New Zealand and Australia, which is [the other area] where we are focusing. It would be difficult to go do one course in Malaysia and one course in Thailand. If we think there is scale there, we could make those moves later.

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CMAA

Continued from page 1

want to do is develop a certification program for the entire facility.

"Right now we're focused on golf courses. But now that we have club managers thinking about the entire complex, we want to develop a program that would provide Audubon Cooperative Sanctuary Program certification for the entire club. If a club has a golf course that is already certified, it's part way down that track.

CMAA and the Golf Course Superintendents Association of America have also asked Audubon to develop a certification program for individuals. "Our certification currently is for the property," Dodson explained. "Both organizations would like to see Audubon come up with a program that would eventually lead to an Audubon certification for both a club manager and a golf course superintendent."

CMAA Executive Vice President Kathy Driggs said CMAA has mailed the audit to all its members and enclosed a partnership form asking whether clubs intended to participate.

"We've been very pleased with the number of partnership forms we've gotten back," she said. "We want to make this [audit] available to the National Golf Foundation, National Golf Course Owners Association and other groups willing to share their mailing lists with us. Any facility can obtain the audit by simply calling CMAA [703-739-9500]."

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ClubLink/GolfNorth

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dar Creek Golf Club (nine holes) in Woodstock, Fairview Golf Club (nine holes) in Fergus, and Belwood Golf Club (18 holes opening this year) in Fergus. All these courses will now be marketed as GolfNorth by ClubLink.

ClubLink and GolfNorth members will have reciprocal playing privileges at GolfNorth by ClubLink.

ClubLink has also agreed to purchase an additional $2 million of debentures under certain circumstances. The debentures have a five-year term and are convertible at 30 cents per share, subject to an increased conversion price after March 24, 2001, based on GolfNorth's financial performance.

Justin Connidis and Susan Hodkinson, senior officers of ClubLink, have joined GolfNorth's board of directors. ClubLink has also been granted a five-year option to acquire the GolfNorth shares held by Al Kavanagh, GolfNorth's founder and president, which represent approximately 70 per cent of the issued and outstanding shares of GolfNorth. Kavanagh is entitled to require such purchase upon conversion of the debentures.

ClubLink President and Chief Executive Officer Bruce Simmons said: "ClubLink is pleased to enter this strategic relationship with GolfNorth, which provides us with greater penetration into the fast-growing Southern Ontario golf market. The alliance allows GolfNorth to benefit from synergies with ClubLink while focusing on operating and marketing mid-market nine-hole and 18-hole courses."

Troon Golf

Continued from page 37

Troon will open a London office this summer that will be the base for its European expansion.

"But all of Europe is not as big a market as Japan," Garmany said. If you look at the hotel model, like a Four Seasons or Ritz Carlton, you want to be represented in those major areas. But you won't be represented as deep into the European market as you would be in the United States or Japan."

GOLF COURSE NEWS
BAYER PROMOTES FLAGG
KANSAS CITY, Mo. — Bayer Corp. Garden & Professional Care has ap-
pointed Heather Flagg to the newly created position of market planning manager. Flagg will be in charge of strategic plan-
ning and will work to maximize business opportunities and profits. Prior to assuming her new role, Flagg worked for six years in the Animal Health unit of Bayer.

MILORGANITE ADDS ARCHER
MILWAUKEE — Milorganite has hired Mike Archer as marketing de-
velopment, organizational management and development of Rain Bird’s golf cars, utility and specialty vehicles. Archer will have various marketing and research responsibilities. He will coordinate agronomically based edu-
cational and technical training programs for distributors and sales agents. Archer also will design, imple-
ment and evaluate agronomic research projects and conduct and evaluate marketing studies.

RAIN BIRD SNAGS ROMAINE
AZUSA, Calif. — Rain Bird’s golf division has named David Romaine to head the company’s golf products team. Romaine will be in charge of integrating the two products, building our utility vehicle line up and specialty cars,” said Muetzel.

PROFILE NAMES MAEDER
BUFFALO GROVE, Ill. — Profile Products LLC has named John Maeder Northeast regional project manager. Maeder will promote and support the sales of Profile for new construction and renovation projects at golf courses throughout the region. Maeder, who served as a senior technical representative for the Scotts Turf Care Company, is scheduled to close May 31.”

Yamaha Golf Cars launched as independent entity
New factory key to company’s growth strategy
BY ANDREW OVERBECK
NEWNAN, Ga. — After years of sharing the same factory floor as water vehicles and all terrain vehicles (ATVs), Yamaha Golf-
Car Co. (YGC) is finally moving out on its own as a separate entity of Yamaha USA. The new company, led by President Jim Robinson, will be constructing a new manufacturing facility and headquar-
ters designed specifically for the production of golf cars, utility and specialty vehicles.

“This new entity is a tremendous opportunity,” said Mike Muetzel, sales and marketing division manager of YGC. “It is very clear that Yamaha wants to put a lot of resources into golf cars.”

The new plant will be built in the Newnan area and will double existing capacity as well as add another 400 to 600 employees to the 800 already employed by the division.

Yamaha, which sold more than 40,000 units in 1999 and experienced record growth through its national buying group alliance with the National Golf Course Owners Association, needs the new factory space to keep pace with demand and expand product offerings.

“We have been competing for manufacturing time and re-
sources. Now we are going to be able to concentrate on new products, building our utility vehicle line up and specialty cars,” said Muetzel.

Continued on page 41

NEW PRODUCT OF THE MONTH
First Products Inc., manufacturer of the AERA-vator, introduces the all-new SEEDA-vator designed as a primary and overseeder. The unit is capable of overlapping and primary bare ground seeding with the same machine, significantly lowering equipment cost. Using the same principle of cultivation as the AERA-vator, the SEEDA-vator has 50 percent more tines and seed placement in front of the vibrating tines, resulting in better seed-to-soil contact for increased germination. The SEEDA-vator is available in a standard 5-foot width and can be equipped with an electric or ground-driven seed hopper. For more information, contact 800-363-8780.

Golf Course News STOCK REPORT (4/17)*
Company Symbol Stock Price P/E 52-week Range Proj. 5-yr. Growth
Astrazeneca AZN 42.75 2.40 4.33 31.16 31.48 94 10.8%
Deere & Co. DE 39.97 5.75 3.50 41.49 32.45 8.5%
Dow Chemical Co. DOW 20.57 10.00 3.50 32.45 23.24 5.0%
Family Golf Centers FGC 9.94 8.00 3.50 18.06 61.84 11.5%
Golf Trust of America GTA 17.75 10.00 3.50 12.00 22.85 8.5%
Ingersoll-Rand IR 42.5 21.00 10.00 3.50 17.55 12.34 7.5%
Lacso Inc. LSCO 14.25 13.24 11.94 10.85 14.25 7.5%
Nat’l Golf Prop. TEE 19.97 0.95 5.00 14.42 13.82 27.75 9.1%
Toro Co. TTC 31.75 10.00 5.00 11.84 29.35 12.0%
Textron Inc. TXT 59.25 22.74 8.10 4.03 51.98 14.2%
*Data provided by Value Trend Linkes, Links Fund Dupa 3.33% in 00, www.golfmutualfunds.com

BASF to absorb AHP’s American Cyanamid
LUDWIGSHAFEN, Germany — Beat out rival bid-
ers Bayer A.G. and Dow Chemical, BASF has agreed to acquire American Cyanamid, the crop-protection busi-
ness of American Home Products Corp. for $3.8 billion. The companies signed a contract March 21 and the purchase is expected to be completed by July 1, pending approval from governmentt antitrust authorities.

In the turf and ornamental market, BASF’s Memphis-
based subsidiary, TopPro, will be absorbing the products of American Cyanamid’s Specialty Products Division. American Cyanamid will add Pendulum and Image herbicides, Amido fire ant bait and Mach 2, an insecticide it developed with Rohm and Haas Co. American Cyanamid will retain its worldwide professional business.

Through the acquisition, BASF will double its annual crop-protection sales, which were approximately $1.9 bil-
lion in 1999. The combined business would have had pro forma 1999 sales of $3.0 billion and income from opera-
tions before one-time restructuring costs of $50 million. About $250 million in annual synergy effects are expected to be generated by the transaction, with approximately half of the benefits to be achieved in the first full year after the acquisition. BASF expects the acquisition to make a positive contribution to earnings from 2001.

However, BASF will also assume about $100 million of debt from American Cyanamid, whose sales of herbi-
cides have been slipping since the introduction of Monsanto’s Round-Up resistant seeds.

Andersens signs definitive agreement to buy Scotts Pro Turf
BY ANDREW OVERBECK
MAUMEE, Ohio — The Andersons Inc. has signed a definitive agreement to pur-
chase the U.S. professional turf business of Columbus-based Scotts Co. The terms of the sale, which was initially announced in February, were not disclosed.

“This is the sec-
ond step of the pro-
cess,” said Tom Handel, general man-
ger of Andersons Professional Turf Products Division.

“The signing of a de-
finitive agreement spells out the terms of the transaction which is scheduled to close May 31.”

Handel, who has been with the Andersons for 12 years, has been chosen to lead the combined businesses and will be in charge of integrating the two prod-
uct lines as well as the marketing and sales teams. Both companies will handle their own product lines for the 2000 sea-
son.

“We have moved into the transition phase where we are working on how to bring the businesses together to make sure that when June 1 rolls around we are able to deliver what the customers need,” said Handel.

Cognizant that other fertilizer compa-

ies are planning to fill the $100-million gap left by Scotts, Handel is working to ensure that customers who are used to the Scotts brand are not left disenchantment.

“We are not one to tamper with suc-
Continued on page 41

GOLF COURSE NEWS

Continued on page 41
POST FALLS, Idaho — Scientists at Simplot Turf & Horticulture have announced the patenting of two novel turfgrass species. Dr. Doug Brede and Susan Samudio cooperated in the identification, breeding and patenting of Seashore zoysiagrass (*Zoysia sinica*) and Idaho bentgrass (*Agrostis idahoensis*), two obscure grasses that had never been used for turf purposes before. These patents represent the first time an entire species of grass has been developed from nature and patented for turf use.

Brede believes Idaho bent has a dual purpose. "When we were first developing Idaho bent, we were targeting it as an alternative to *Poa trivialis* for winter overseeding of dormant Bermuda grass putting greens," he said. Simplot harvested its first commercial crop of the variety, GolfStar Idaho bentgrass, in 1999.

Salt-tolerant Seashore zoysiagrass was discovered by Brede during trips to the shores of Eastern China. He found it growing along the beach, often with saltwater washing over its roots. Samudio, a Simplot plant breeder, developed the germplasm into the variety J-14, which is currently ranked in the zoysia national test. It is set for commercial seed release in 2001.

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Yamaha
Continued from page 39

The factory will have state-of-the-art technology and robotics, enabling Yamaha to enhance its current golf car products and pay more attention to building other vehicle lines.

"Yamaha is a leading manufacturer of ATVs," said Muetzel, "so we will be adding a product with ATV-like durability for use in golf course construction to our utility-vehicle line-up."

Muetzel said the new space will also be used to launch a refurbished golf cars and utility vehicle program.

"We know that the drive train and engine have a 10-year life, minimum. We will take cars that are 3 to 5 years old and re-body and re-mat the car, get the engine in shape and give it a warranty," he said, "and then sell it for 50 to 60 percent of what you would usually pay for them."

He believes this strategy will appeal to superintendents and golf courses because they can get good life out of cars that look brand new but cost half as much.

Muetzel expects the new entity and factory to have a huge impact on the growth of the company—not only in new products, but also in sales, profits and market share.

"Our competitors are taking profitability off their specialty cars and utility lines to enhance their entire company. Until now, we did not have that ancillary product base. Instead of living off the single entry of golf car profits, we will now have the capacity to do some things," he said.

While Muetzel projects that growth will be 8 to 10 percent per year, he admitted that the company has a more aggressive plan.

"We now have the ability to maintain dialogues with other turf companies about potential products that we may work on together," he said. "If we get into a joint venture with a company or go through the acquisitions market and buy a utility line and put our engines in them, growth could easily double or triple."

Andersons, Scotts reach definitive agreement
Continued from page 39

"Consolidation will be good for the company, and for the distributor because it is an opportunity to get a single source and a complete line of products." Andersons hopes to bring all the Scotts' sales staff on board once the acquisition is completed. In the meantime, Handel and his marketing team are examining the needs and concerns of superintendents and distributors.

"We are going to survey customers and distributors and plan a lot of emphasis on marketing in the next six months," he said. "We have to make sure that in 2001, when we come out with our programs, that they are going to meet the customers' needs."

DATE SET FOR GERMAN SHOW
FRANKFURT, Germany — Messe Frankfurt Ausstellungen GmbH will hold Golf Course International, a trade show and conference on golf course planning, construction, maintenance and management, here Dec. 5-7 at the Frankfurt Fair Grounds exhibition center.

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Andersons hopes to bring all the Scotts' sales staff on board once the acquisition is completed. In the meantime, Handel and his marketing team are examining the needs and concerns of superintendents and distributors.

"We are going to survey customers and distributors and place a lot of emphasis on marketing in the next six months," he said. "We have to make sure that in 2001, when we come out with our programs, that they are going to meet the customers' needs."
J.R. Simplot accelerates Turf Partners purchase
continued from page 1

Eco Soil. "They are more interested in Turf Partners and wanted a simple buy-out for the purpose of distributing their fertilizers."

The financial performance of Eco Soil, which lost $13.8 million in the fourth quarter, also contributed to the restructuring of the deal.

"The financial situation was a bit more tenuous than what we thought it was," said Wayne Burk, senior vice president at Simplot. "Now it is going to be a straight $20-million investment, taking on some of their debt and essentially acquiring Turf Partners."

Simplot will pay a $20-million down payment for Turf Partners in July in addition to assuming $17 million of liabilities and debt. The initial $20-million payment is subject to adjustment based on Turf Partners' 2000 financial performance. In March 2001, Simplot will pay the balance of the purchase price, equal to six times the company's 2000 earnings before interest, taxes, depreciation and amortization. According to Gelwix, if Turf Partners hits its 2000 goal, Simplot could wind up owing Eco Soil at least another $7 million in March.

Simplot has already moved in with a management team to facilitate the transition and ensure that Turf Partners is financially healthy when the acquisition is finalized. In addition to their other roles at Simplot, Burk is now general manager of Turf Partners and Mark Howland, CPA, will become the chief financial officer.

"I will be taking an oversight role," said Burk. "We are obligated to try to run the business and help them as much as we can. But I can't go in and make a lot of changes because the purchase agreement is predicated on the performance of Turf Partners. If I go in and do some things and make that [sales] negatively and the value drops, Simplot could then buy it for less money. Eco Soil won't stand for that."

Simplot is taking this cautious approach to ensure that it is taking over a viable operating entity.

"We don't want to see another AgriBioTech," said Burk referring to the beleaguered seed company that grew too much too fast and is now bankrupt and selling off its assets.

This is not to say that Burk and Simplot aren't excited about adding to the firm's distribution network.

"We'd like to be in a position to be up and running in the Midwest and East by the fall selling season," said Burk. "So we need to get something in place and get going."

What does the Turf Partners sale mean for Eco Soil?

"We learned through the negotiations process that our mission is to be a technology company," said Gelwix. "This gives us the opportunity to focus on our technologies which we think will serve us well in the future."

Gelwix projects that they will be able to grow proprietary products at 20 percent a year.

Despite losing Turf Partners, which racked up $97.1 million in revenues in 1999 — a sizable portion of Eco Soil's $123.5-million total revenue, Gelwix is confident that Eco Soil will continue to perform.

"Eco Soil as a stand-alone, with the reduction of corporate overhead and debt, will be profitable in 2000," he said.

Eco Soil also signed a five-year deal with Simplot to continue to have exclusive distribution of its proprietary products through Turf Partners.

"We will accomplish everything we want by staying independent," said Gelwix. "We get an injection of cash by selling off assets, while at the same time having guaranteed distribution channels for our products."

We'd like to be in a position to be up and running in the Midwest and East by the fall selling season."

— Wayne Burk, Simplot senior vice president

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Reports To: Division Vice-President
Location: Glendora, California
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tion with the Golf Division’s brand managers.

Qualifications:
Qualified applicant will have an undergraduate degree in business, engineering, or liberal arts. Applicant must also exhibit effective communication skills, have expe-
rience in dealing with distributors, their installers and specifiers, and have five to 
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Please FAX resume and cover letter to Jack Buzzard, Rain Bird Sales Inc., (626) 963-4287, or e-mail dyoung@rainbird.com, EOE

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Deal (N.J.) Golf & Country Club for the habits, and protect wetland areas on the up bird houses, monitor wildlife feeding ronmental advocate. Early in his tenure at Deal, he had his golf course crew set expressed great interest in the full-facil-

Donald Ross-designed course. He has part of this," de Kovacs said. "If you setup an environmental program for the outside crew, you should also do it for the inside crew."

Printed audits are currently available. CMAA plans to have it available on CD-Rom by early summer.

The United States Golf Association (USGA) awarded CMAA a $95,000 grant earlier this year to help offset the cost of developing a comprehensive self-audit for the entire club facility. CMAA worked with AI, USGA and the U.S. Environmen
tal Protection Agency to develop the audit, which is based on the foundation established by the GCSAA and the “Golf and the Environment” initiative.

The audit allows managers to assess all aspects of the club operation in terms of its environmental impact on its community. Club supervisory personnel can use the audit to identify challenges in their environmental practices and set a working strategic plan to enhance those practices, without oversight from local, state or national regulatory agencies.

The audit addresses all components of a club facility including environmental planning, training and communication; buildings and landscaping; dining facilities; parking lots and roads; golf course; tennis courts; swimming pool and spa; marina, equestrian; shooting club and general maintenance facilities. Managers complete only those sections that apply to their clubs.

The audit examines six key components pertinent to almost all facilities:
• environmental planning, training and communication;
• wildlife habitat enhancement and management;
• energy conservation;
• water conservation and water-quality management;
• chemical-use reduction and safety through integrated pest management, best management practices and other environmentally sound maintenance fa-
• waste reduction and recycling.

The audit provides a series of state-
ments regarding environmental management practices. The golf course is the component with the most questions (122) compared to buildings and landscaping (64); dining facilities (22); parking lots and roads (9); tennis (8); aquatics/spa (6); marina (13); equestrian (20); shooting club (9); and general maintenance facilities (18).

Managers review each statement and determine to what extent, if any, the practice is being carried out at their clubs. The club’s overall score is based on the number of environmental practices in place in each component.

Following are some examples of component headings and sample statements:
• Golf course. Our plan for wildlife habi-
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<td>Toro-Irrigation Div</td>
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