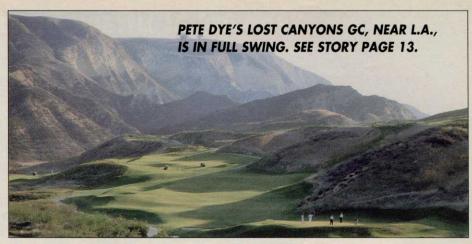
# GOLF COURSE NEWS



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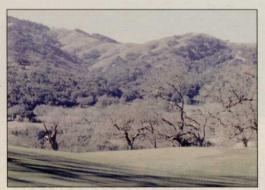
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## Mowers of the future

Robotic and GPS technologies promise to transform mowers

## DaimlerChrysler growing fast

DaimlerChrysler Capital Service's golf division has become the industry's fastest growing lender.......21



PRESERVING CALIFORNIA'S NATURAL SPACE

The new Tom Fazio-designed Preserve Golf Club, high in the hills above Carmel, has created a fund to protect 18,000 acres of open space. The project is an example of the way in which golf development and land conservation can coexist without public funding. See story page 14.

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## Superintendents tapping foreign labor force

By JOEL JOYNER

LAKE OZARK, Mo. — With the golf season fast approaching and labor markets still tight, superintendents everywhere are scrambling to find maintenance workers. Some are even pulling in help from abroad.

John Anderson, director of golf and grounds here at the Club at Porto Cima, will be relying again this year on Practical Employee Solutions (PES), a Dallas company that provides labor out of Jamaica. Last year, 12 of his maintenance staffers came from the Caribbean island

nation. This year he's bumping the number to 16.

"They were very eager to learn and very easily trained," he said. "I'm really looking forward to this year because I'm supposed to have most of them back."

Housing, transportation and schedules were all considered

before the migrant help arrived. "Local transportation was all done by bus," Anderson said. "We leased some apartment units, and they paid their own rent. We knew how many were arriving from the start, and it was very well organized."

Initial start-up of the program may be challenging. "I know it's a pretty lengthy process sponsoring them on a work permit deal," he said. "But some were processed a lot quicker this season, especially the ones returning."

#### JAMAICANS' STRONG WORK ETHIC

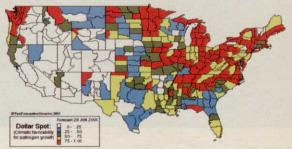
The Club at Porto Cima is one of three courses in the Continued on page 12

## Syngenta Web site to predict pest outbreaks

By ANDREW OVERBECK

GREENSBORO, N.C. — Syngenta has partnered with Warrenton, Va.-based Pest Forecasting Group Inc. to launch an exclusive Internet site providing risk forecasts for diseases and insects. The site, www.turfpestoutlooks.com, was unveiled at the GCSAA Show in February and at press time was scheduled to be rolled out to end-users in late March

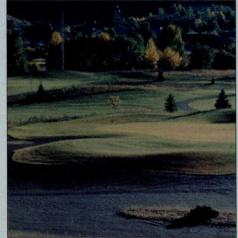
PFG, which began working with Syngenta (then



Novartis) in 1997, has developed proprietary software that crunches weather data from the National Oceanographic and Atmospheric Administration and compares it to disease and pest models that it has devised to create detailed forecasts. The nationwide forecasts are scaled down to provide information on 344 climate districts.

While the site will eventually include information

Continued on page 5



The seventh hole at Old Works GC in Montana will be replicated at Bear's Best Las Vegas.

## ClubCorp to unveil 'Bear's Best' concept this fall

By JAY FINEGAN

LAS VEGAS, Nev. — The first of what could be many Bear's Best courses is slated to debut here Nov. 1, marking ClubCorp's entry into the world of "branded" golf.

The Bear's Best concept is a joint venture between ClubCorp, of Dallas, Texas, and Golden Bear International, of North Palm Beach, Fla., a company controlled by Jack Nicklaus and his family.

The idea is elegant in its simplicity. Nicklaus selects some of his favorite holes from the nearly 200 courses he has designed, and 18 of them are combined into a single layout.

Bear's Best Las Vegas, under construction 20 minutes from the famous casino "strip," will present holes primarily from Nicklaus designs in the

Continued on page 23

#### PERIODICAL

## Bentgrass dead spot detected in 14 states

By JOEL JOYNER

LINCROFT, N.J. — It's difficult to identify. It attacks young turf. Recovery takes weeks. Little is known about how maintenance practices affect its development. Superintendents dread this turfgrass disease known as bentgrass dead spot, first identified in 1998.

Currently, bentgrass dead spot (BDS) has been discovered in 14 states from Illinois and Texas to New Jersey and the Carolinas. "Once it's there on the turf, it kills it and nothing comes back," said Jeremy Schaefer, assistant superintendent here at the Charleston Springs Country

Continued on page 11

## **Penn A-4 at Tiffany Greens**



# "Our Penn A-4 greens at Tiffany Greens earn rave reviews. Meet some of the reviewers."

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## Groups gather to discuss the accessibility of golf

By ANDREW OVERBECK

CLEMSON, S.C. - Major golf associations, along with rehabilitation organizations, accessibility groups and golf professionals will converge on the Clemson University campus in April to hash out education strategies to improve to the accessibility of golf to individuals with disabilities.

The Golf Course Superintendents Association of America, the United States Golf Association, the National Golf Course Owners Association, the National Golf Foundation,

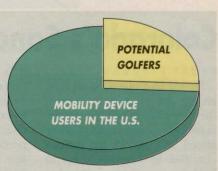
the Club Managers Association, the Professional Golfers Association, and the Ladies Professional Golfers Association (LPGA) will all be present at the National Forum on Accessible Golf VI being held here April 8-11.

The forum is being organized by Larry Allen of the National Project for Accessible Golf at Clemson, Gary Robb, director of the National Center on Accessibility at Indiana University and Betsy Clark of the LPGA.

Although it has been five years since the last National Forum on Accessible Golf, Allen said that another gathering was necessary to sort out ongoing issues, especially ADA mandates.

There is a lot of misinformation still out there. Organizations are still wondering what they should and can be doing," he said. "The purpose of the forum, however, is not to be adversarial. We want to be supportive and discuss not what you have to do, but what is good for the game and what is the right thing to do."

Continued on next page



An estimated 3.3 million of the 9.5 million mobility device users in the U.S. are potential golfers, according to a study conducted by the National Center on Accessibility at Indiana University.

## GTA unloading courses as liquidation looms

CHARLESTON, S.C. - Golf Trust of America took another step towards its expected dissolution Feb. 28, when the board of directors unanimously adopted a plan of liquidation for the company and its operating partnership.

Approval by the Securities and Exchange Commission and by the company's shareholders still is required before the liquidation plan becomes official.

Management estimates that a total liquidation of GTA's portfolio of 44 (18-hole equivalent) golf courses will generate proceeds ranging from \$10.43 to \$14.18 per share, although those estimates could change if the expected sale prices of the properties deviate from current assumptions.

GTA has already unloaded a number of courses. In January it sold two courses in Ohio for \$10.65 million, and in mid-February it completed the sale of Persimmon Ridge, in Kentucky, for \$5.2 million to Persimmon Ridge Golf Course Inc. In addition, the company has 7.5 other courses under definitive sale agreements or non-binding letters of intent valued at \$71.5 million.

Also, in connection with the liquidation plan, GTA has entered into a purchase and sale agreement with an affiliate of its largest lessee, Legends, to sell that affiliate the 12.5 golf courses currently leased by Legends for \$112.9 million. GTA has the right to abort the sale if stockholders fail to approve the liquidation strategy.

The company also may accept higher offers for these 12.5 courses - except for five in Myrtle Beach, S.C. - upon payment of a break-up fee to Legends. Legends is affiliated with Larry D. Young, one of GTA's directors, who resigned from the board upon approval of this transaction.

#### SUPPLY AND DEMAND IMBALANCE

GTA's president and CEO, W. Bradley Blair II, said the plan is in the best interest of shareholders. The company began faltering over a year ago, hit by high interest rates, adverse capital markets and lease defaults on some of it's courses.

Its stock price, which hit \$35.50 in late 1998, began a steady downward drift and stood at \$9 early last month.

"We believe our company's performance has been adversely impacted by economic conditions that have affected the golf course industry," Blair said. "This situation is particularly difficult for us since, as a real estate investment trust utilizing the triplenet lease structure, we do not have control over the operation of our assets."

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## Colorado's Sanctuary a treasure chest for charities

By JAY FINEGAN

SEDALIA, Colo. — Sanctuary, among the most prominent of the new wave of private, singlemember courses, last year raised \$3.5 million for various charities by allowing them to hold tournaments on the dramatic layout carved into the foot-

hills of the Rockies.

Medical organizations such as Craig Hospital, the American Heart Association and the Anchor Center for Blind Children predominated among the charities. But many other causes were given use of the course for fundraising events. They included Food Bank of the Rockies, Make-A-Wish Foundation, Big Brothers/Big Sisters and the U.S. Association of Blind Athletes.

#### 'EYE-POPPING' LAYOUT

Sanctuary, opened in 1997, is owned by Dave Liniger, cofounder of real estate giant RE/ MAX International. Designed by Colorado-based golf architect Jim Engh and built by Niebur Golf of Colorado Springs, the rugged, 7,200-yard layout has swept numerous honors. It's been named Best New Private Course of 1997 (Golf Digest) and One of the 25 Best Courses in the United States (Landscape Management).

"It's 222 acres of eye-popping, bizarre terrain, with rocks and trees and slopes and outcroppings – all sorts of stuff," said Engh. "It's surrounded by 40,000 acres of dedicated open space. So it really is a sanctuary, a little pocket of privately owned land, with no housing on it whatsoever and nothing around it than can ever be developed."

Continued on page 27

## Accessible golf Continued from previous page

**CRUNCHING THE NUMBERS** 

The number of disabled Americans who are interested in playing golf could potentially inject some life into flagging golfer participation rates. According to 1998 statistics from the Centers for Disease Control, the number of American using mobility devices has grown to about 9.5 million. A study conducted by Gary Robb demonstrated that 35 percent, or 3.3 million, of these disabled individuals expressed an interest in golf (see chart on page 3).

'The people who are already using mobility devices are the people we are most concerned about.'

- Larry Allen

"That is a lot of new players," said Allen. "The people who are already using mobility devices are the people we are most concerned about. There is a tremendous opportunity to expand the game of golf if we can make it available to these folks."

### **EDUCATION AT THE FOREFRONT**

Allen believes that education is the key to improving accessibility.

"This forum is specifically geared towards developing educational strategies for enhancing and promoting the inclusion of golfers with disabilities," he said. "We have never focused on education before, so what we are trying to do here is look at what type of educational programs and services need to be provided.

"We have targeted these groups and organizations and we will be discussing what type of education programs and services need to be provided to them and by them to enhance accessibility," Allen said.

Issues concerning golf course design guidelines and rules regarding the use and provision of adaptive golf cars will also be discussed.

"These other issues always come up," said Allen. "We will have an update on federal issues from Peggy Greenwell from the U.S. Access Board and hopefully a representative from the Justice Department will be present as well." ■

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## Syngenta

Continued from page

on weeds and unusual climate events, turfpestoutlooks.com will initially cover a select number of diseases and insects. It will issue weekly forecasts for seven diseases – dollar spot, brown patch, gray leaf spot, summer patch, pythium blight, red thread and rust.

It also will cover eight white grub species

– Asiatic garden beetle, Japanese beetle,
black turfgrass ataenius, May/June beetle,
green June beetle, European chafer,
masked chafers and Oriental beetle.

"This is an extension of our TechNotes newsletter," said Syngenta's golf market manager Joseph DiPaola, Ph.D. "However, this is an Internet application that will allow superintendents to make more reasoned decisions in terms of knowing what insects and diseases are likely to be problems."

According to DiPaolo, this more reasoned approach will lead to less preventive applications of chemicals and is designed to enhance integrated pest management practices. "Instead of saying, 'Gee it's March 7, I better go out and spray for these problems,' superintendents can now look at what the weather is actually doing. He can see how that interacts with these given pests to assess where the problems might occur."

The information on the site will provide documentation for the application of chemicals, which may be useful when explaining budgets to greens committees and justifying chemical use to environmental organizations.

#### **HOW IT WORKS**

For the launch, PFG worked with Eric Nelson at Cornell University and Dave Shetlar at Ohio State University to produce models that predict potential disease and insect problems.

"We take the estimated forecasted weather and run it in proprietary software that estimates the likelihood of that particular weather producing pathogen activity," said Chris Sann, president of PFG. "Those results are based on research that identifies what the growth parameters are for a particular species of insect or turfgrass disease."

This information is then presented on Geographic Information System maps that are created for each disease and insect. "If you select brown patch," Sann said, "a national map will pop up and it will show the levels of intensity or favorablility for the development of that disease. This forecast data gives superintendents the ability to look a week ahead to see what insects and diseases may be potential problems."

The site will be available to golf course and lawncare professionals. However, Syngenta customers will have greater access to information. "It will be like a frequent flyer program," said DiPaola. "You qualify for certain services the more you buy."

For example, everyone will have access to a seven-day forecast, but established customers will be able to get more detailed information and potentially 30- and 60-day forecasts.

The specific level of services and costs for each have not yet been decided, DiPaola said. For now the site is free.

DiPaola expects the value-added site will be useful to both the end users and Syngenta. "We would hope that this provides a tool that allows turf professionals to do their jobs better," he said. "However, it is also fair to expect a return to Syngenta for taking this service to the market."

## Cochran, Jacobson to finish Borland's Coyote Creek

LIBERTYVILLE, Ill. — Two prominent golf course architects have agreed to donate their services to finish a golf course designed by their late friend and colleague Bruce Borland, who died tragically in 1999 in a plane crash with golfer Payne Stewart and four others.

Chris Cochran, a senior design associate with Jack Nicklaus Golf Services in North Palm Beach, Fla., and Rick Jacobson, president of Jacobson Golf Course Design, of Libertyville, Ill., have volunteered to finish the design work and oversee construction of Coyote Creek Golf Club, located five miles outside Borland's hometown of Peoria, Ill.

Cochran and Borland shared an office at Nicklaus Golf Services for seven years until the time of Borland's death. Jacobson had worked with Borland and Cochran at the Nicklaus firm in 1990 prior to starting his own company. The men and their families had been friends for 10 years.

"Nicklaus Design wanted to make sure that Bruce's design was completed and that the course got built," said Cochran, who will be the lead architect on the project. "I have some work in Kansas City and other places in the Midwest, so with the course being in Peoria, it made sense for me to do it."

#### FEE GOING TO CHARITY

Cochran and Jacobson offered to finish Coyote Creek under Borland's terms – the entire design fee will be given to the Palm Beach Community Church in Palm Beach Gardens, Fla., where Borland was an active member. By agreeing to finish Borland's work without compensation, Cochran and Jacobson ensured the church will receive the full amount of Borland's donation.

"At the memorial service for Bruce, several of us decided to pool our resources to fulfill his contract with the golf course developer so that the funds would still be donated to the church," said Jacobson, who plans to travel to the site frequently.

The involvement of Cochran and Jacobson also ensures that Coyote Creek will be the world's only Bruce Borland signature course and will fulfill the realization of Borland's dream of building a golf course near his hometown.

"Bruce attended high school in Bartonville, just outside Peoria, and it was a lifelong dream of his to come back to his hometown and build a golf course," said Stephen Chitwood, president of Coyote Creek Development Corporation. "It's really great that they can do this in honor of Bruce."

#### 'MASSAGING' THE TERRAIN

Borland had largely completed the design of the rolling, 6,700-yard, par-71 daily-fee course and had visited the site four times. He

was scheduled to travel to Peoria on Oct. 26, the day after the fatal crash.

Because of extensive wooded areas and the rolling terrain, some "massaging" will be necessary during the construction phase, which began in September, according to Jacobson. Shaping of greens and bunkers to blend with the existing topography of the site also will be necessary, he said.

The club will have a full practice facility and elevation changes of up to 80 feet from tee to green in some areas. Thirty-six residential lots will be developed in connection with the golf course. The course is scheduled to open sometime during the 2001 golf season.

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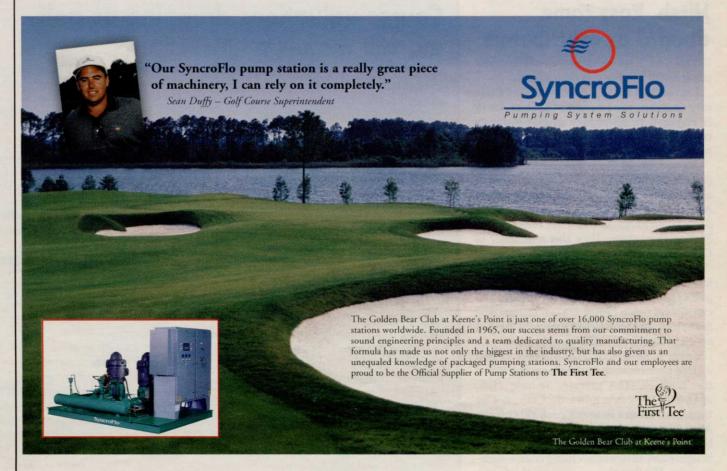
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## 'Estate' courses: golf at a rarefied level

Several months ago in this column, I described the spending frenzy under way at ultra-chic golf developments. The examples came from THK Associates, a Colorado firm that specializes in course valuations. And the anecdotes in its report – "The new wave of golf communities that define WOW" – were captivating.

It detailed the enormous sums paid for build-



Jay Finegan,

ing lots at the most exclusive new golf resorts –\$4.5 million at Maroon Creek in Aspen, up to \$10 million at Desert Mountain in Arizona and Lake Las Vegas in Nevada. At Stock Farm, a new Montana project by Charles Schwab, building lots start at \$800,000.

Golf membership fees at these opulent clubs sometimes hit \$1 million, as they have at The Yellowstone Club in Montana, for instance, and at Cherokee Plantation in South Carolina. La Quinta Quarry, an exclusive club in Palm Springs, even features Frederic Remington statues as tee markers.

#### THE SINGLE-MEMBER COURSE

Now we come to the highest level of all – the private golf course. And I do mean *private*.

Two articles in this issue delve into a couple of examples of these so-called "estate" golf courses. One is the famed Sanctuary, in Colorado, owned by RE/MAX realty co-founder Dave Liniger. The other is a new course under construction in Illinois for energy magnate Gerald Forsythe.

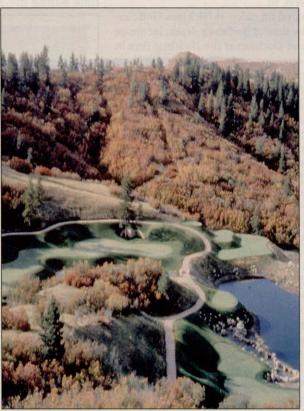
Architect Bob Lohmann designed the Forsythe course, not yet named, which will roll over 290 acres. Lohmann isn't new to this line of work, according to our story. He also designed The Merit Club in Gurnee, Ill., as a personal layout for a wealthy investor

named Bert Getz. That project eventually turned into a more traditional private club, hosting last summer's U.S Women's Open.

#### HITTING FINANCIAL BUNKERS

With course construction easily running \$2 million to \$10 million, and sometimes more, and with annual maintenance costs of around \$500,000, personal courses are expensive hobbies.

"The way it usually starts out is that they



The first hole at Sanctuary course in Colorado

just want to have it their way," Lohmann told *Fortune* magazine, which ran a story about the proliferation of these private layouts last year. "They want a course they can play with

their friends. Then most realize they have to figure out a way to pay for the thing."

Thus far, an inventor named Jim Smith has avoided that financial bunker.

#### CRYSTAL LAKES STORY

In 1983, Smith bought a nice nine-hole course in Montana called Crystal Lakes, along the base of the Whitefish Range of the Rocky Mountains. A year later he brought in Arnold Palmer to design the back nine. To this day,

the course remains Smith's personal preserve, set amid 700 acres of stunning countryside.

"It's an amazing place, a real nice layout," says Dave Meeker, a former superintendent there and now at Buffalo Hill Golf Club in Kalispell, Mont. "It has a lot of lakes, a fish hatchery and fish ponds. They play a lot of golf up there, but it's basically for Jim and his relatives and friends."

According to Meeker, the place is "awesomely well maintained" by a year-round crew.

#### ORDERING UP A MIG

Getting to and from his secluded hideaway is apparently easy for Smith. "He's a got a real nice airstrip up there," Meeker says, "and a number of hangars. He's got a whole bunch of aircraft – a P-51 Mustang, a Navy Corsair, an old Jenny. And he flies all these contraptions. He's a very good pilot." Now Smith is reportedly angling to buy a Russian MiG jet fighter, presumably minus the rockets.

An architect like Lohmann can only dream of such splendor. He does have a 7,500-square-foot putting green in his backyard, but says "that's probably as close as I'll get to having my own personal course."

## COLF COURSE NEWS

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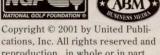
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## Hirsh, Ross come aboard as contributors

This month we welcome two new contributing writers to the editorial lineup.

Laurence A. Hirsh, president of Golf Property Analysts, joins us as a columnist. Larry is engaged in all phases of golf property consulting, appraising and brokerage, with more than 350 course clients nationwide.

A graduate of Penn State, Larry is past president of the Society of Golf Appraisers and a member of the National Golf Course Owners Association, the Golf Course Superintendents Association of America and the USGA Green Section Committee. He's also a member of Golf Digest's course-ranking panel.

He will be weighing in quarterly with views and comments on the financial health of the golf course industry. In the meantime, you can always reach him at (717) 652-9800. His first piece, dealing with the current state of course valuations, starts on this page.

Kevin J. Ross, CGCS, is director of golf course maintenance at the Country Club of the Rockies. The private, 18-hole club, opened in 1985, is in Edwards, Colo., not far from the Vail and Beaver Creek ski resorts. Already a member of our editorial advisory board, Kevin will regularly contribute his insights and advice concerning course maintenance. His first story appears in this issue.

## Course valuations dropping as golf market makes a correction

By LAURENCE A. HIRSH

After 10 years of unprecedented growth, the golf course industry is beginning to sortitself out. As a golf property appraiser, however, I've observed conflicting perceptions of the market, making it harder to get a true reading on where course valuations are heading.

Recent issues of *Golf Course News* and other publications feature stories about the challenges of a soft market for golf course properties and, more significantly, the dearth of available debt financing for golf properties. With interest rates having dropped recently, one would think refinancing would be as busy as ever. Not so. While the golf course finance companies do report brisk activity in terms of inquiries, they are being more selective than ever.

Bank of America's departure from the golf lending business means less competition for Textron Financial, Daimler Chrysler, First National of America, Citicapital and the rest. Accordingly, these remaining lenders are both more selective and more costly – a classic example of the laws of supply and demand.

Combine this with the announced liq-

uidation of the Golf Trust of America properties – in addition to other mergers and downsizings – and you have the largescale elimination of potential purchasers of golf properties.

#### **BULLISH SENTIMENT REMAINS**

Along with other golf industry executives, I recently attended the National Golf Course Owners Association (NGCOA), Golf Course Superintendents Association of America (GCSAA), Urban Land Institute (ULI) and Golf 20/20 events. Here are some of the things I heard:

"I wonder how many of these folks will be here next year."

"Boy, financing is tough."

"We're going to sit on the sidelines until fall 2001, when we think there will be some bargains."

"It's been a tough weather year."

"We're still bullish on new projects."

"We need to create more golfers."

While most comments suggest an impending gloom descending on the industry, it seems developers who spoke at the ULI conference are still optimistically planning new projects. Was it just

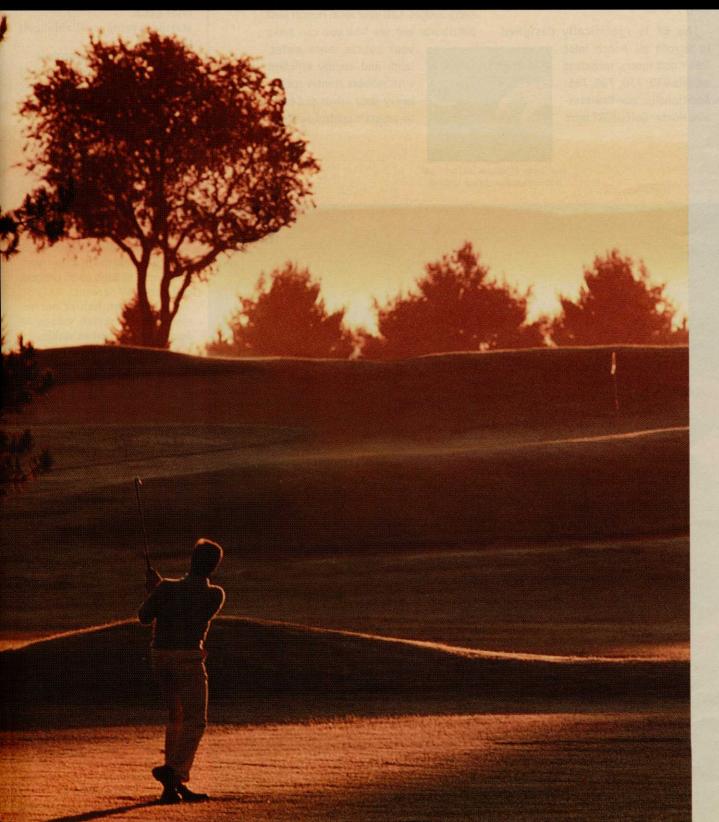
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RANSOMES

TEXTRON

## COMMENTARY

## Hirsh

Continued from page 6

developer's optimism, or is there real substance to this?

#### REPOSITIONING OF COURSES

To discuss the golf market on a macro scale is both dangerous and potentially inaccurate. In the near future, what I expect to see above all else are projects which are more thoroughly planned and focused.

Not only do some locations still offer opportunity, but we need to remember that golf is not a "one product industry." In recent years, many marketshave seen an abundance of upscale daily-fee development with little or no affordable or private club development.

Market segmentation and positioning is even more a key to success than before and I suspect that some of the courses built in the past will be repositioned in the near future.

A textbook example of this is the Stonehaven project in Scottsdale, Ariz. This daily-fee course was completely constructed and paid for, only to be purchased for millions so it could to be plowed under to create a ritzy private facility.

As I have traveled the country appraising, consulting and brokering, I've heard some interesting points made:

- Reportedly, Bank of America did not have a preponderance of under-performing loans.
- · Many markets have a need for golf, much of it in the affordable daily-fee and upscale private sectors.
- While national round counts were down in 2000, much of that was the result of poor weather. particularly rainy weekends in the Northeast.

Why then are we singing the blues? Well, in business, perceptions are reality. Much like the stock market, the golf market is making a correction.

#### SIGNS OF LIFE IN FLORIDA MARKET

Because of the time already invested in new golf projects, most will go on. With 750 projects under construction, most will eventually be added to existing inventory. More supply. But is there going to be more demand? That remains to be seen. The current market is a buyer's market in most cases. That perception has become reality.

A sign of things to come may be found in Florida. For the past couple of years, courses for sale in this market have begged for

lookers. Only recently have buyers, hunting for bargains, once again



started eyeing available golf properties

### GENERATING COMPETITION

So what does all this mean to values of golf properties? Golf Property Analysts is currently in the process of conducting our annual golf investor survey and, while not complete, the returns so far indicate the following:

- · Higher desired capitalization rates, with half of respondents so far looking for deals at 12 percent or higher, or eight times cash flow.
- Internal rate of return (IRR) goals, all in excess of 15 percent, with some as high as 25 percent and one at 40 percent.
- · More than half of our respondents perceive values as declining, the rest as stable.
- · Again, more than half perceive now as a buyer's market.
- · Most respondents plan to acquire more courses in 2001, with some sitting out until the second half of the year.
- · Half of our respondents indicate something other than daily-fee courses as their preference for acquisition.

The bottom line is that golf property values, as a function of income, are probably declining right now. Certainly there are attractive deals that will generate competition, such as those in major metropolitan areas and those with strong, increasing historical cash flows. Many are waiting to see if Bank of America is replaced in the lending market, and most are seeking alternative financing sources.

As many said at the various shows and conferences, it's go-

ing to be an interesting year.■

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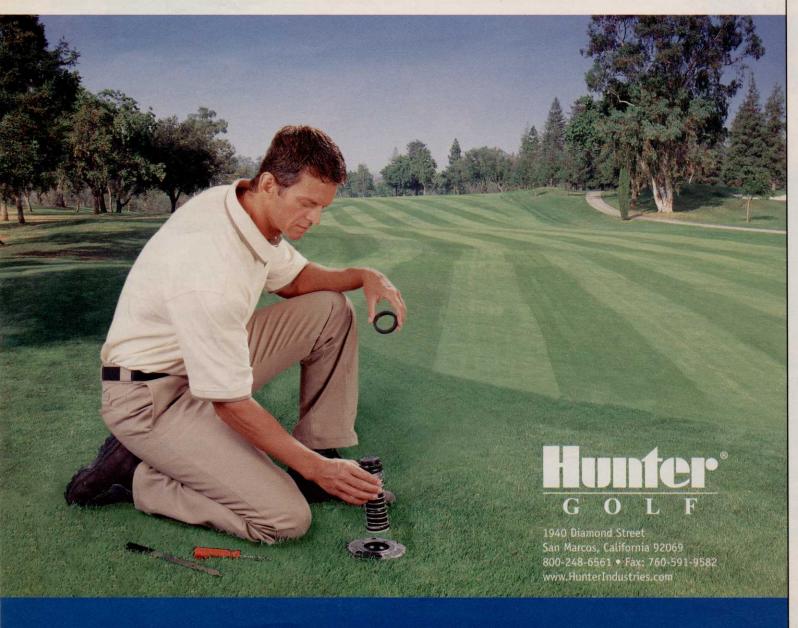
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Laurence A. "Larry" Hirsh is the president of Golf Property Analysts of Harrisburg, Pa.

## MAINTENANCE



#### ST. LOUIS SUPERS AVERAGING \$81,200

ST. LOUIS - A survey of St. Louisarea country clubs reports that superintendent salaries there average \$81,200. The research, by the accounting firm Rubin, Brown, Gornstein & Co., also shows that average maintenance costs per golf hole were about \$41,000, or \$4,000 an acre. On average, maintenance staff ranged from 26 in the peak season to 12 in the off-......

#### **EAGLE FUNGICIDE OKAYED FOR NECROTIC RING SPOT**

PHILADELPHIA - Eagle fungicide has been approved for use on the widespread cool-season turfgrass disease Necrotic Ring Spot (NRS). Produced by Rohm and Haas, headquartered here, the expanded use of Eagle can now be applied in early to mid-spring as a preventive or curative measure or in the fall to limit NRS development.

The root disease attacks Kentucky bluegrass, annual bluegrass and creeping red fescue, and is most commonly found in the Northeast, upper Midwest, Rocky Mountain states and in the Northwest. "NRS is a disease that can take over a golf course, sometimes requiring complete renovation,' said Jim Walter, market manager of turf and ornamental products at Rohm and Haas. Eagle is also labeled to combat brown patch, dollar spot, fusarium blight, and spring dead spot, just to name a few.

### LEACH HEADING UP CGSA

VANCOUVER, BC - Jay Leach, superintendent at the Cottonwood Golf and Country Club in Dewinton, Alberta, is the new president of the Canadian Golf Superintendents Association. Other newly elected officers include: vice-president Bill Fach, of the York Downs Golf and Country Club in Unionville, Ontario; secretary/treasurer and board chairman director Jim McGarvey, of the Seymore Golf and Country Club in North Vancouver, BC; Alberta director Neil Blayney, of the Highwood Golf and Country Club in High River, AB; and Saskatchewan director Terry McNeilly, of the Saskatoon Golf and Country Club in Saskatoon, SK. Merlin Affleck of the Stanhope Golf and Country Club in Stanhope, Prince Edward Island, will be the immediate past president. The elections took place during the 52nd Canadian International Turfgrass Conference and Trade Show here in Vancouver.

## Robotics, GPS technologies promise to transform mowers

Textron's electric mower

BLOOMINGTON, Minn. - Lawn mowers have undergone only minor changes in the past several decades, but a burst of technologies promise to usher in a new world of machines. We're talking about "autonomous" mowers - riderless and controlled by computers. And then there are battery-powered, laser and hybrid

mowers. Are they destined to be all the rage?

Let's begin with the robots, where the experts are optimistic.

"It wouldn't surprise me at all to see some type of robotic mowers on a golf course within the next five years," said Dana Lonn, director of R&D here at the Toro Co. "Will it be like something out of the Jetsons, where you press a button and a fleet of mow-

ers automatically goes out and mows your golf course? I'm not sure I'd bet on that."

According to Lonn, newly engineered technologies will unfold over the next three years to solve the major problems. 'There's the collision-avoidance factor, for one," he said. "You have to be 100 percent sure you're not going to hurt somebody. We're also looking at digital imagery, putting enough smarts on the mowers that you process the picture for the mower to read.

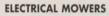
"One approach we're looking at is a 'proper scene,' where there's a relatively

flat, green scene in front of the mower," Lonn said. "If the mower encounters an obstacle it's not programmed to accept, it will have to know to avoid it.'

The advantages of digital imaging don't end there. Robotics mowers also could look for potential disease outbreaks while mowing.

"The University of Arkansas is running

studies using digital imagery to quantify turf disease," Lonn said. "They scan an image looking for changes in color and for patterns of color. They may be able to detect conditions in the turf that are not yet visible to the naked eye. I can envision a digital video camera being installed on a maintenance machine.'



Wouldn't it be nice to have a mower that never

leaked oil, never made noise, and never created exhaust fumes?

It's already here. Electrical mowers are available today for mowing greens, but they have yet to become commonplace.

New trends have more to do with environmental issues more than anything else," said Peter Whurr, vice president of production at Textron. "The idea of being friendly to the environment is really being pushed hard in our industry. We're the only one that currently has a tri-plex greensmower that's battery-powered. It

Continued on page 10

## John Deere Classic to host supers, employers

SILVIS, Ill. - The John Deere Classic pro-am tournament will recognize superintendents and their employers at the TPC at Deere Run on July 23. The course will host 10 teams who will participate in the Employer/Superintendent Recognition program sponsored by the Golf Course Superintendents Association of America (GCSAA) and John Deere

The two-man teams are selected from Class A and B superintendents who are paired with their respective employers to take part in the three-day program, which includes paid travel expenses, room and board, and two rounds of golf.

Three winners were chosen at the recent GCSAA Conference and Show. The winners so far include: Les Kennedy, Jr. at the Blind Brook Club in Purchase, N.Y., with Dean McKay, golf and green chairman; Jim Pitman at the Rolling Hills Country Club in Rolling Hills Estates, Calif., with his general manager, Greg Sullivan; and Kevin Mallow, superintendent at Grand Cherokee Golf Course in Langley, Okla., with Tommy Grisham, director of golf.

Essay submissions are no longer required to be selected for the event. A weekly drawing from entries made on the GCSAA Web site will decide the remaining teams, with April 25 as the deadline.

## 'Super-bent' thatch control made easy

By KEVIN ROSS

In 1995, when Penn State University released the A and G series bentgrasses, questions were immediately raised regarding the thatching potential of these varieties. Their high shoot density and growth rate characteristics were thought to translate into intense thatch development. Now, after five years of use on golf courses around the world, we are learning how to manage thatch on these bentgrasses.

Thatch is a layer of dead and dying

**SHOP TALK** 

tissue that accumulates when the growth

rate exceeds the rate of decomposition.

This tells us that controlling the growth

of these new bentgrasses with astute fer-

tilizer management might be the first step

bents have commented that the fertilizer

requirements are much lower than origi-

nally anticipated. I know one superinten-

dent who, with a 12-month growing sea-

son, is using only two pounds of N/M per

Another superintendent feels that A-4

has the ability to metabolize fertilizer at a

much higher efficiency rate than older

Many superintendents growing these

in the thatch-control equation.

year on Penn A-4.

bentgrasses, although there has been no research to support this statement. However, this supposition is starting to hold true in the opinion of superintendents

who are managing these bents. This knowledge of fertilizer needs has led some to believe that thatch is much less of a problem than originally thought, although its accumulation is still a point of debate.

#### **EQUIPMENT SOLUTIONS**

Regardless of the debate, equipment companies have addressed this issue with new machinery targeted toward thatch management.

The piece that is receiving the most attention is the Graden verticutter/dethatcher

from Australia. This is the first machine on the market that has proven to be a true dethatching unit for greens management.

Some superintendents feel so strongly about this machine's ability to remove thatch that they are saying it may even take the place of one of their scheduled aerifications. The percentage of thatch removal from the green surface area is much greater than with conventional core

aerification. Using this machine in one direction with 0.125-inch blades on 1-inch spacings will remove approximately 12 or 13 percent of the green surface area.



Graden verticutter/dethatcher

This percentage of removal cannot be achieved by aerification unless very large tines are used, which would cause major

surface disruption and require extensive healing time. Superintendents who are using this dethatcher, or vertigroover, also are find-

ing other benefits compared to aerification. They are claiming that, by

Continued on page 10

## Willow Run GC earns Audubon International certification

By JOEL JOYNER

PEWAUKEE, Wis. — The daily-fee Willow Run Golf Club here has become the sixth course in Wisconsin and 246th in the world to achieve designation as a certified member of the Audubon Cooperative Sanctuary Program (ACSP).

The low-budget facility required a team approach in accomplishing the certification.

"I have to share credit with my assistant Pat Wegmann and the course horticulturist Jason Dibb as well as the rest of my staff for their hard work and dedication to the program and the environment," said superintendent Jerry Kienast. "This definitely has been a team effort."

At Willow Run, which opened in 1975, the program worked to provide a more challenging layout for the players. "It's a very old design," Kienast said. "It has the push-up greens, not well-defined and very wide open. Adding prairie grasses and



The 10th hole at Willow Run

leaving watered areas alone rather than stripping them down made a significant difference.

"Instead of having a fairway dogleg where you could miss it by 50 yards, 60 yards or 70 yards and still have a play from the short rough, now you end up in a two-foot high prairie grass," he said. "On the 10th hole, you could spank it anywhere and not have a difficult play at the green. Now, if you miss the fairway by even 10 yards, you're lucky to even find the ball."

The changes have been successful for both the environment and attracting a better grade of players.

"We use to be listed with *Golf Digest* as a two-star golf course, and shortly after completing the certification program we were listed as a three-star course. We've become a more challenging course primarily from defining our holes," said Kienast.

The 6,400-yard course signed on with the program back in 1997.

"To reach certification, a course must demonstrate that they are maintaining a high degree of environmental quality in a number of areas," said Joellen Zeh, staff ecologist for the Cooperative Sanctuary System.

## Thatch control

Continued from page 9

cutting these vertical grooves, then filling them with sand, they create channels that are much more efficient in keeping the surface open for oxygen exchange and water movement.

The healing time of verti-grooving also seems to be faster than core aerification. This does make sense when you consider a 0.125-inch groove that is healing from two directions, along with new plant material initiated from stolon stimulation.

#### LIKE A SKILL SAW CUTTING WOOD

One question I am frequently asked is, doesn't this verti-grooving severely disturb the green surface? My response, along with that of other superintendents I've talked with, is that it's not as disruptive as one might think. The main reason is that the densities of these new bents are allowing the surfaces to be held together so tight that the blades cut a cleaner groove without the edges being ripped or torn. It is very similar to a skill saw cutting a small groove along a section of wood.

I have personally used this machine in two directions on a section of our Penn A-4 practice green with great success and no surface damage. The thought of verticutting in two directions equating to a 25-percent thatch removal is certainly interesting, but may not be necessary when you address your thatch from the beginning.

Now that we have five years of solid experience growing these new "superbents," we are starting to answer these thatch concerns. The combination of astute fertilizer management with the old practice of true dethatching just might solve this problem.

Kevin J. Ross, CGCS, is director of golf course management at the Country Club of the Rockies, in Edwards, Colo.

## **High-tech mowers**

Continued from page 9

allows superintendents to get out on the course and mow early in the morning without creating noise pollution."

Whurr looks toward other industries for advances that can be adapted for golf course equipment. "In the automotive industry, they're researching fuel cell technology," he said. "The amount of money being spent on it is absolutely incredible. If they feel there is a need to develop systems like that, then there's opportunity for us to look."

#### BREAKTHROUGHS IN GPS

Chuck Grief, manager of the golf and turf division at John Deere, says global positioning systems, guided by satellites, will drive some dramatic advances in mowers.

"In five to 10 years, we'll see autonomous mowing with GPS," he said. "We'll see, most likely, self-adjusting cutting units with GPS. Within five years, we'll see onboard GPS diagnostics."

What's the advantage for superintendents? "The superintendent, the mechanic or even the distributor who sells the unit will be able to tap in and receive a signal that says, 'Okay, what's the average oil pressure that this engine has been running in the last 24 hours?' "said Grief. "We'll be able to use GPS to take readings that will extend the life of the product."

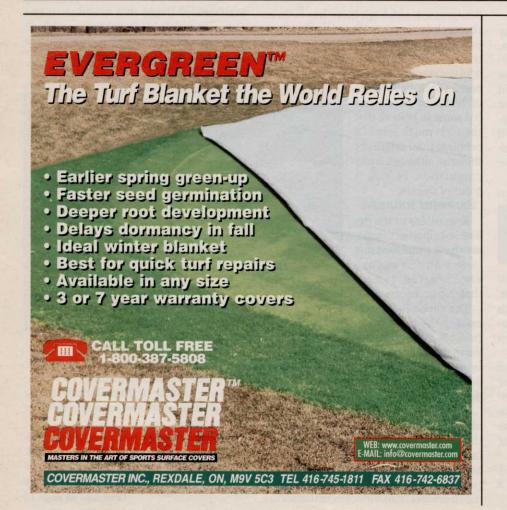
GPS and its spinoff benefits will take course maintenance to a new level of efficiency, Grief said. "I can envision, at some point in time, there being a little white shed next to a putting green. At

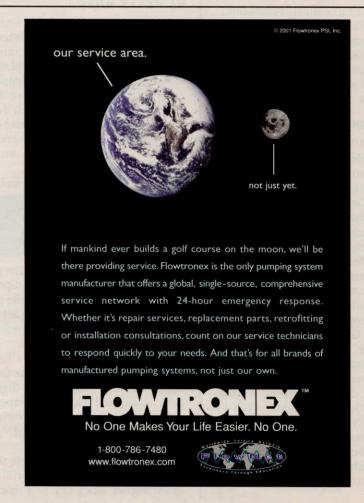
nine o'clock at night a door will open up and a walk-behind mower, as we know them today, will go out and mow the greens so that a superintendent doesn't have to mow them first thing in the morning.

"Prior to that, however," Grief said, "as a manufacturer, we'll use GPS to help an operator mow a straight line. Essentially, an operator will be running the machine but not steering it."

As costs come down, the technology will become widespread, he predicted.

"One of the obstacles is to get the golf course maintenance side to accept or invest in GPS," Grief said. "There needs to be a fair and reasonable price that's acceptable to the marketplace."





## MAINTENANCE

## Dead spot

Club

Often resembling dollar spot, copper spot or even ball mark damage, BDS is difficult to detect. "When we first got it in the summer of 1999, we didn't recognize it as BDS," Schaefer said. "It looked like ball marks with rust rings around them."

#### MISTAKEN FOR DOLLAR SPOT

BDS appears as reddish brown spots that fade to a tan color, no larger than three to four inches in diameter, and are usually dispersed randomly over tees and greens. "On the East Coast, it's been a big problem," said Keith Happ, agronomist at the USGA's Green Section. "Once it shows up, you're plagued by it for the rest of late summer and into fall. It gets very, very aggressive in September and October."

When mistaken as dollar spot or some other fungal disease, BDS escapes proper treatment. "It mimics dollar spot, and is sometimes misdiagnosed," Happ said. "But even if you're spraying it after you see it, then it's already too late."

#### SPRING ARRIVAL

Mistreatment, or lack of preventive measures, gives the disease a lease to target leaf and crown tissues of creeping bentgrass while unleashing ascospores that may be ejected several feet to establish new scars and wounds.

"The problem is that superintendents treat it, but they don't see any results," said Happ. "BDS may be controlled, but there's absolutely no regrowth from where the disease has occurred.

"It comes in the spring, depletes the root system, and you don't see any signs of BDS until you get into stressful times [summer heat, high traffic]. Then you find out how much of a root system you have left," Happ said.

### RESEEDING IS FUTILE

Any attempt to reseed in an infected area is fruitless since the fungus releases toxins that inhibit germination.

"BDS releases toxins down in the soil, and you can't simply reseed on the dead turf," said Schaefer. "It kills the seed once it germinates. We had to take soil probes; actually probe out the spots and put in new sand before we reseeded," he said. "With dollar spot, you spray it, and it goes away. Dead spot, it's there. It's a very labor-intensive process to recover the green."

Last summer, 17 of the 18 greens were under control at Charleston Springs. The course allowed one green to be a test site for plant pathologists from Rutgers. "The disease is much more persistent than dollar spot," said Bruce Clarke, a Ph.D. agronomist. "Fungicides, used

on a curative basis, will require much higher concentration rates than what you'd use for dollar spot or brown patch.

"Even after the infection has been arrested, it takes four to six weeks or more for the spots to heal over," Clarke said. "It also spreads very quickly. Ascospores are produced throughout the summer and into late fall, and they're easily spread by mowers, high traffic and wind. You end up with all of these satellite spots as spores are shot out. It's difficult to control once it occurs."

#### HITTING YOUNG TURF

The fungus has yet to be discovered on well-established turf. The newer the course, the more susceptible. Many young bentgrass greens have been constructed with 80 percent to 100 percent pure sand for efficient drainage, but they also create an ideal setting for BDS outbreaks.

This disease was first identified in 1998 by agronomist Peter Dernoeden at the University of Maryland. Unlike most fungi, which thrive in damp environments, it flourishes in hot, dry turf.

"We identified BDS by a little bit of luck and hard work over two years," said Dernoeden. "Now we're focusing on the basic biology of the pathogen and the disease. It's going to take about five years." Clarke recommends small amounts of nitrogen each week to perk up infected turf. "That's shown to reduce the severity of the disease," he said.

Other measures, like charcoal treatments to hinder BDS toxins, aerification, topdressing and overseeding, will be tested this summer at Charleston Springs. "There are several different processes we're going to try," said Schaefer.



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## **MAINTENANCE**

## Labor force

Continued from page 1

Four Seasons Group, clustered here around Lake Ozark. All told, they brought in 52 Jamaicans last year. Only two won't be invited back. "Overall, we were delighted," said Nancy Adams, director of human resources. "We're looking to get 74 this year."

According to Adams, the Ja-

maicans worked like they were on fire. "People were skeptical at first. They kept telling me that Jamaicans have a high crime rate, that they'd bring in drugs and have long Rastafarian hair," she said. "But it wasn't like that at all. They worked extremely hard.

"They'd get up at four a.m., take the bus to one of our courses, work until 3:30, then change and come back to work as waiters or housekeepers until nine at night," she said. "I actually had to tell managers that they couldn't allow them to work past nine. It would just be too strenuous. Americans wouldn't put up with a schedule like that. The Jamaicans are here to work their six months, make as much money as they can and take it home."

They were covered under their own insurance service, Adams added. "They were required to send a portion of their money back to Jamaica, four percent went to the Jamaican government, and the rest had to be deposited into a savings account of some sort."

Amigos Labor Solutions, also of Dallas, provides a similar service for golf courses. It brings in Mexican labor under H-2B visas, charging an all-inclusive flat fee per worker.

#### INCENTIVES AND BENEFITS

Jeff Holliday, the new super-

intendent at the Salisbury Country Club in Midlothian, Va., knows how to hire and retain quality employees from his previous position at the Country Club of Virginia (CCV), in Richmond. "We struggled with labor shortages at CCV," he said.

Benefits and a pay scale helped to ease the situation. "We found at CCV that if we increased incentives and benefits, employees tended to stick around," said Holliday. "We started a structured pay scale system where the quicker they learned, the more money they made."

Small details like providing uniforms, buying employees the occasional lunch and giving gift certificates make a big difference, too. "We also had a gas voucher program," he said. "If they came to work on time for a two-week period and showed up on their scheduled work days, they'd get a \$15 gas voucher."

#### **LATINOS IN NORTHWEST**

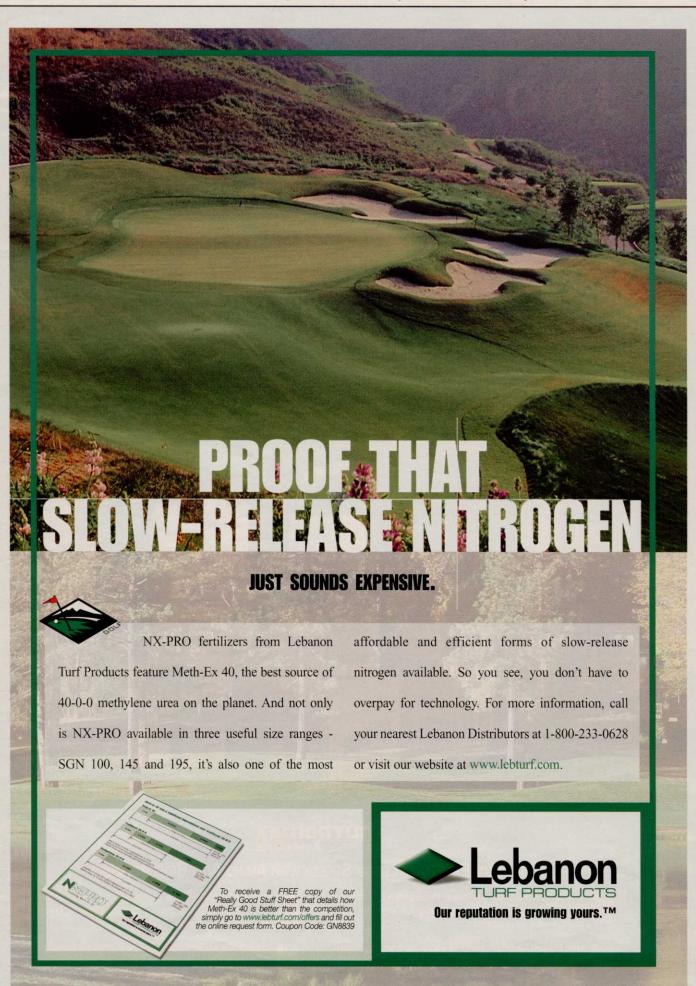
Latino labor has been filling the labor demand in the Northwest. "It's occurring all over the Southwest with very good results, and now it has arrived here on a regular basis," said Larry Gilhuly, director of the USGA's Green Section, Northwest region. "Their work ethic has been amazing from what I've heard. As a generalization, some of them tend to get upset if they only get to work 40 hours a week."

Turf management training programs sponsored by the Future Farmers of America (FFA) have been developed at the high school level in Washington state, according to Gilhuly. "The FFA supports it, but the teachers have really taken off with it," he said. "The main focus is on kids who won't be going to college, who may want to be irrigation or spray technicians or who simply want to work on a golf course."

There are roughly 80 high schools in the state currently teaching turfgrass maintenance. "It's really starting to gain some steam up here," said the director. "It provides a steady source of help that's highly motivated and very interested.

"Most people think that it's some sort of superintendent training ground, but it's not," Gilhuly said. "It's a golf course workers training ground."

One proponent of the program is Jeff Gullikson, superintendent of the Spokane Golf Club in eastern Washington. "Because the kids are in this FFA program, they're allowed to operate machinery, like mowers, that otherwise they wouldn't be able to do due to labor and industry laws that restrict minors using machinery at a workplace," he said. "With parental permission, they're exempted from those regulations."



## **DEVELOPMENT**



## **BRIEFS**

## CLUBLINK BUILDING "PREDATOR" COURSE

KING CITY, Ontario - ClubLink has commenced construction of The Predator at GreyHawk in Ottawa, marking the arrival of a second ClubLink member club in the Canadian capital region. The course is being designed by Paul Takahashi, who was the on-site architect for ClubLink's RattleSnake Point Golf Club, Rocky Crest Golf Club and The Lake Joseph Club. The par-72 moorland-style layout will measure more than 6,900 yards with a variety of tee decks for all levels of golfers, bentgrass greens, tees and fairways, white sand bunkers and a full practice facility.

#### DUININCK GRANTED CHARTER STATUS IN GCBAA

LINCOLN, Neb. — Duininck Brothers Golf has been granted charter member status in the Golf Course Builders Association of America. Charter members have expressed a vested interest in



the continuing growth of GCBAA and have made a one-time contribution of \$5,000 or more above annual dues. Founded in 1926, the contractor, based in

Prinsburg, Minn., has been building courses nationwide since the early '80s and has a bonding capacity of more than \$100 million. "The GCBAA is comprised of the world's premier golf contractors, and we're pleased to garner this level of membership among our peers," said Dave Munkvold, general manager of Duininck Brothers Golf.

## JACKAL TO OFFER MOUNTAINSIDE DRIVES

BRIGHTON, Mich. - The Jackal, a 6,700-yard layout built directly on a ski hill, will open here in June. The Matthews & Nelhiebel design features a large waterfall and four tee shots with vertical falls of at least 100 feet, including one on the highest point of Mt. Brighton. "Golfers will stroll along fairways that skiers glided in the winter," said W. Bruce Matthews. "Few courses are built directly on ski hills. The Jackal will please the eye, with miles of views, and challenge the seasoned golfer." An eight-acre pond, a peninsula green and 72 bunkers pose additional obstacles. Joe Bruhn owns the course, which is being built by Contours Inc.

## Lost Canyons, a public 'crown jewel,' opens near L.A.

By JAY FINEGAN

SIMI VALLEY, Calif. — The new crown jewel of daily-fee golf in Southern California is hitting its stride. Set in rugged mountain terrain where the TV show "Gunsmoke" was once shot, both Pete Dye courses at Lost Canyons have opened to popular acclaim and heavy play.

"It's the best new course in Los Angeles in 30 years," said Mike Finnell, club manager at Lakeside Golf Club in Toluca Lake.

Developed by Landmark National – its first L.A. venture – and built by Landscapes Unlimited, the 36-hole complex is only 30 minutes from downtown. Yet, there's a peaceful serenity at this spectacular layout in the Santa Susana Mountains that belies its location. "You feel you could be in Montana or Wyoming," said head professional John McCook.

#### NO BAD HOLES

The two tracks here – the Sky Course and the Shadow Course – cruise through 300 acres of the 8,000-acre site, part of the historic Big Sky Ranch. So much land is left that residential building lots, part of the master plan, will range up to 100 acres.

For Dye, the design work wasn't so much in taming the environment as gen-



The 17th hole at the Sky Course, which stretches to 7,250 yards, with a slope rating of 79

tly snugging in the layout without disturbing the stunning natural topography.

Course consultant Fred Couples, touring the complex, declared that Dye has produced a "remarkable" course without

a single bad hole. "I don't know anyone who could come up here and not be enthralled by the place," said the 1992 Masters champion.

Continued on page 18



The seventh hole at Lohmann's Merit Club in Gurnee, Ill., designed as a personal course

## Lohmann designing 'estate' course

MARSHALL, Ill. — Lohmann Golf Designs has developed a nice little niche for itself: golf course architects to the anti-NIMBY crowd.

Whereas NIMBYs say "not in my back yard," certain LGD clients say, "By all means, build a golf course in my back yard!"

That's the case here in Marshall, just across the border from Terre Haute, Ind., where Lohmann Golf Designs (LGD) is building a personal course on the estate of energy magnate Gerald Forsythe. Initial clearing has been completed for nine holes, and course feature work begins this spring.

Bob Lohmann isn't new to this sort of project. He designed The Merit Club in Gurnee, Ill., as a personal layout for wealthy investor Bert Getz. This project eventually morphed into a more traditional private club which played host to the U.S. Women's Open last July.

Lohmann was featured in the Sept. 11, 2000 issue of *Fortune*, which published a story on the proliferation of these personal, or estate, golf courses. "You have to be kind of a rebel to do this sort of project," Lohmann told the magazine. "Sometimes it's a lifelong dream, sometimes it's ego. Sometimes it's just someone who has a piece of land he doesn't know what else to do with."

#### MOVING LOTS OF DIRT

That wasn't the case with Gerald Forsythe. He knew exactly what he wanted to do with his 290 acres: build 18 holes of primo golf for his personal use.

"Plans exist for 18, but we're doing nine holes to start with," explained senior architect Mike Benkusky, who's overseeing the project for LGD. "Mr. Forsythe

Continued on page 18

## New Cowboys GC to recall great football moments

By JAY FINEGAN

GRAPEVINE, Texas — In a first for the National Football League, the Dallas Cowboys are getting a golf layout to call their own – almost

The daily-fee, 18-hole Cowboys Golf Course, designed by Jeff Brauer, is a 50-50 joint venture between Evergreen Alliance Golf Limited (EAGL) of Irving, Texas, and the Dallas Cowboys' Blue Star Investments, a Jerry Jones company.

"People are looking for signatures on golf courses," Brauer said, "and nothing says Dallas like the Dallas Cowboys. They felt that had a little more pop to it than just getting another 'name' pro."

The clubhouse is stock-full of Cowboys memorabilia and souvenirs, he added, but there's not much of that on the course. "We're still a little leery of putting Cowboys insignia and so forth out on the golf course," he said, "because there's some fear that the stuff will get stolen. Once you get off the first tee it's just going to be a good, upscale golf experience."

The holes will be named for the 18 greatest moments in Cowboys' history, Brauer said. "The most famous is probably the Hail Mary pass to Drew Pearson, so I'm sure there will be a hole out there called the Hail Mary. We'll sit down over a few beers and figure that out later this spring."

### MASSIVE OAK AND PECAN TREES

The course winds over "some of the nicest land I have seen in the area," Brauer said. "It cried out for a low-profile, traditional design to complement its beauty and let nature dominate. It has the feel of a country club that has been in play for many years. And there are lots of massive oaks and pecan trees."

Continued on page 17

## Preserve GC earns its name, saving 18,000 acres

By DOUG SAUNDERS

CARMEL, Calif. — From the first tee at the Preserve Golf Club, it's obvious that this is a special place. The dramatic backdrop of the heavily forested hillsides frames a tiny green that is tucked under old-growth oak trees like a picnic blanket.

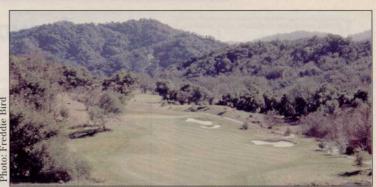
This Tom Fazio-designed gem winds through 350 acres of one of

the most pristine settings on the West Coast and is the cornerstone of an ambitious development known as the Santa Lucia Preserve.

The 7,067-yard course peels off the first rise and works through three valleys that are representative of the immense landscape that makes up the Preserve. Located nearly nine miles up a narrow mountain road in

the middle of the 20,000-acre site, at 1,500 feet above the Pacific Ocean and nearby Carmel, the peace and serenity of the region is overwhelming, stunning, and calming all at once.

Situated on a piece of property that is larger than Manhattan Island, The Preserve is more than just an exclusive golf course community. Rather, the Santa



The third hole at the Preserve Golf Club in Carmel, Calif.

Lucia Preserve is attempting to show how private development can be a positive force in the preservation of massive tracts of

## open space. FORMER SPANISH LAND GRANT

When the golf course opened to rave reviews last year, it was the culmination of 10 years of litigation, planning revisions and redefinition to make the Santa Lucia Preserve a reality. This huge plot of land was first a Spanish land grant dating back two centuries. Ownership changed hands several times but the estate hung together, eventually becoming one of the largest single tracts of property on the California coast.

When a developer first proposed a plan for over 2,000 houses in the late 1980s, the nogrowth sentiment in the Carmel-Monterey area was staunchly opposed to losing such a huge piece of open space. The current ownership, Union Pacific Co., under the leadership of partner Tom Gray, obtained the property in 1990.

Aware of the property's unique traits, the firm hired a prominent environmentalist to develop a plan to both build on and preserve the landscape in a sensitive manner. His 1,300-page report became a blueprint for the Preserve.

#### SAVING 18,000 ACRES

Initial plans called for two golf courses, a hotel, and over 1,000 home sites. After a revision, the final concept called for just one golf course and only 300 exclusive home sites ranging in size from three to nine acres, which all told would affect only 2,000 acres of the property. A \$20-million endowment, generated through the sale of lots priced from \$900,000 to \$4 million, would be the financial engine used to save the remaining 18,000 acres as open space.

These guidelines were directed towards the design and construction of the golf course as well. Tom Fazio and his lead architect, Kevin Sutherland, strived to do only what was necessary to blend the course into its natural setting. Only 350,000 yards of dirt were moved and care was taken to preserve trees, natural stream flows and wetlands. The green sites that the designers chose seem to be discovered rather than created, as they tuck around trees and blend into the natural topography.

Continued on next page
GOLF COURSE NEWS

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## **DEVELOPMENT**

## Weiskopf adding course at \$5-billion Vegas resort

HENDERSON, Nev. — Tom Weiskopf has broken ground on his first design in Nevada, this one on 180 acres here at the Lake Las Vegas Resort, a \$5-billion residential and golf complex unfolding on 2,245 acres.

The resort already has two highly rated Jack Nicklaus-designed courses, SouthShore Golf Club and Reflection Bay. The Weiskopflayout has not yet been named but is scheduled to open in summer 2002. It will offer daily-fee play.

"We're looking forward to watching this masterpiece take shape and expect the course to rank among the best of Tom's acclaimed designs recognized throughout the world," said John Herndon, director of golf at the resort.

Weiskopt said his design will feature two contrasting nines. "The front nine exists in more subtle elevation changes and winds through the natural desert landscape," he explained. "The back nine has quite dramatic changes in elevation with spectacular views to the distant mountains and downtown Las Vegas. The strongest characteristics are definitely going to be the water

holes, unique canyons and some unbelievable changes in elevation."

The par-72 track will offer multiple tees on every hole, and measure 5,400 yards from the forward pegs to 7,100 yards from the back. Wadsworth Golf Construction is building the course.

Lake Las Vegas Resort is being developed by Transcontinental Properties, a subsidiary of the operating owner, Transcontinental Corp., with entities

owned by Sid and Lee Bass of Fort Worth, Texas. Transcontinental, based in Santa Barbara, Calif., specializes in developing master-planned communities.

The proximity of two Nicklaus courses has driven the price of the community's 850 residential lots to a range of \$300,000 to \$10 million

Nicklaus and Weiskopf were teammates on the Ohio State golf squad in the 1960s.

## Preserve GC

Continued from previous page

Throughout the design and construction, the course's impact on the land continued to be the primary concern. Four collection lakes exist on the course, and together they can hold 50 percent of the annual water usage. Modern disease-resistant and drought-resistant grasses were used on tees, greens and fairways. Only 49 bunkers exist on the course; any more than that, Tom Fazio believed, would pull a golfer's attention away from the endless vistas that frame each hole.

#### WINTER DRAINAGE WORK

Head superintendent Forrest Arthur came to the Preserve in1998, just as construction was about to begin. After several years as superintendent at Spanish Bay Golf Links, he was familiar with the challenges of the coastal climates.

Arthur took extra care in the selection of grasses that would not only do well but would also be more disease-resistant in order to minimize the need for chemical applications

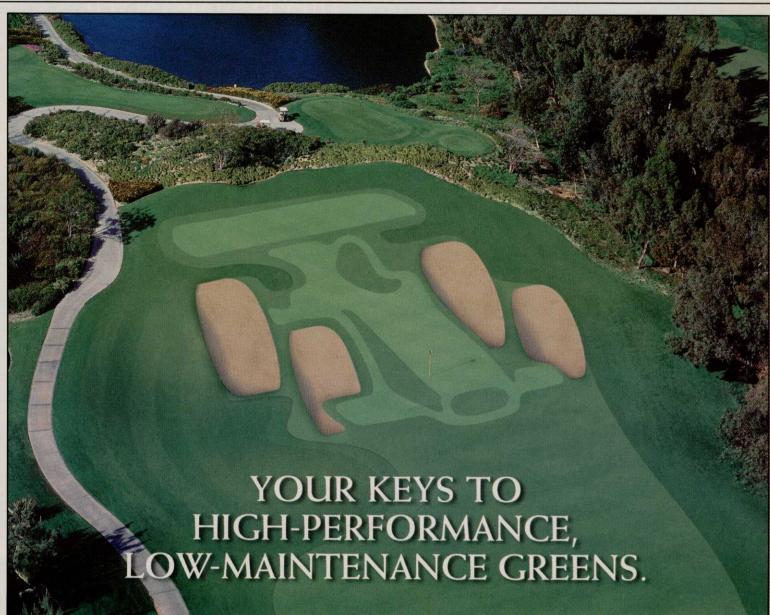
Throughout the shaping phase, drainage and collection of run-off become a strong priority.

"One obstacle was that the natural soil doesn't have a strong percolation rate," Arthur said. "We decided to lay down an eight-inch sand cap across the fairways to improve winter drainage, and we supplemented this with an extensive amount of drain tile to collect the run-off. During construction we brought in 38,000 tons of sand, but the effort will pay off in the long run by allowing for a stronger root system for the turf."

This determination to create a more sustainable environment drove every stage of construction, from hole locations to cart path building. The result is a course that flows through the varied terrain while providing an exceptional golfing challenge. The absence of homes near the course adds to the feeling of total immersion in this superb environment.

Golf here is truly played in a natural preserve of a rare kind, and this project will serve as a shining example of the ways in which golf development and land conservation can co-exist without public funding.

GOLF COURSE NEWS



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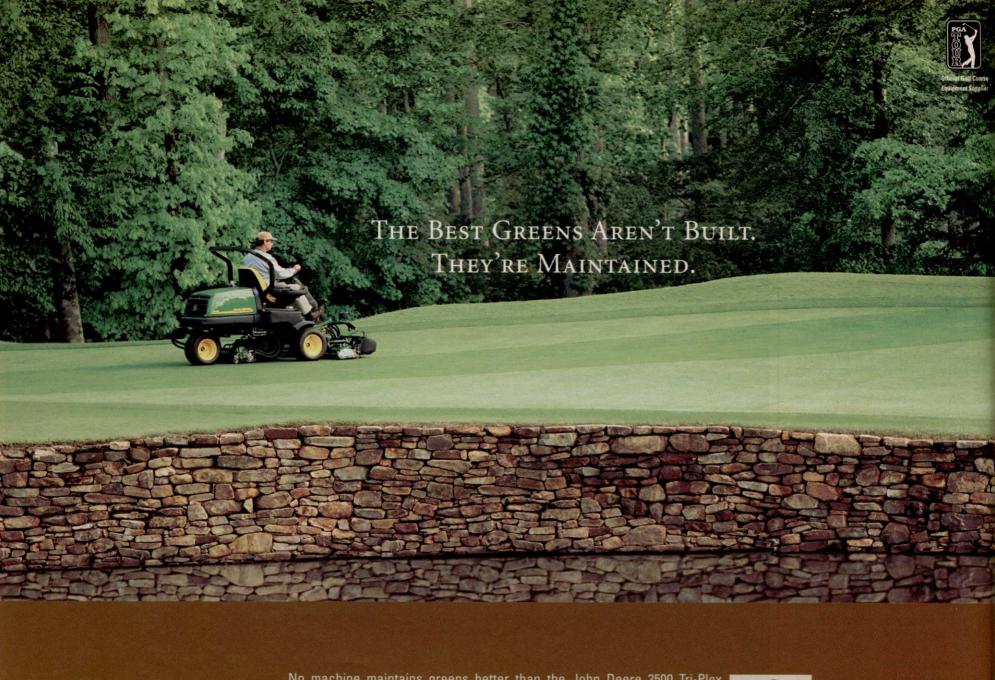
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## DEVELOPMENT

## Cowboys GC Continued from page 13

Keeping with the traditional feel of the course, Brauer let the woods frame holes. "We moved about 160,000 yards of earth," he said, "but about 70,000 of that was just filling in an old sand quarry above flood-plain elevation.'

Construction was handled by Golf Works of Austin, and the total budget for the layout was \$5.5-million.

Holes two and four play 100 feet downhill, a rarity in Texas. The greens will be moderately sized, averaging around 6,000 square feet, "to convey that oldtime feeling," Brauer said, and the course will just tip 7,000 yards from expert pegs. It will meander through woods on the front nine and near Lake Grapevine on the back nine.

"To have this great a site in this particular spot is an unbelievable opportunity," said Brauer, president of the golf course architectural firm Golf Scapes, in Arlington, Texas. "It is a rare combination of being a perfect site in the perfect location. You usually have to go way out of town to get a property like this that is fully wooded and has dramatic elevation changes. It's got big hills and great topography.'

#### **EARLY INDIAN SETTLEMENT**

The U.S. Army Corps of Engineers property sat unused for years after construction of the Grapevine Lake dam. Evergreen Alliance had the foresight to inquire if it could be used for golf. The Corps agreed that was consistent with its mission for the property, which has been leased to the city of Grapevine and now subleased to EAGL for development.

Employing current technology in his design and construction, Brauer ensured that all environmental laws were closely adhered to on the ecologically sensitive property. Among other challenges, he had to work around an early Indian settlement and an active heron rookery.

Steven Jones, Cowboys vice president and the son of owner Jerry Jones, is spearheading the organization's involvement in the golf club, which he said is unprecedented for any NFL franchise.

"We're highly enthusiastic about pioneering this golf concept and its potential," he said. Cowboys players are expected to tee it up often and the organization intends to hold various activities there year-round - from press conferences and Cowboy appearances to charity tournaments and other events.

#### **NEW HOTEL HUB ENVISIONED**

Just minutes from Dallas-Fort Worth International Airport, the property sits below the dam for

Lake Grapevine. In three years developers expect a half dozen hotels to be built in the immediate vicinity, which already boasts the Bass Pro Shop Outdoor World and Grapevine Mills Mall.

"The Opryland-Texas Hotel is just starting construction there," Brauer said, "and we're designing their course, which will be right across the street from the Cowboys course. They will run out of the same clubhouse. The courses will mostly cater to hotel and convention guests just north of the airport.'

According to Brauer, the Cowboys Golf Club will formally open in mid-June, with a week-long string of festivities. "Jerry Jones will have his celebrities one day. The city and the Corps of Engineers will have their dignitaries the next, and Evergreen Alliance will have their dignitaries the third day," the architect said.■



The 17th hole at Cowboys Golf Club



## **DEVELOPMENT**

## **Lost Canyons**

Continued from page 13

A resident of nearby Santa Barbara, Couples said he was pleased to see a high-end public course with a resort atmosphere built in the area. "There's a real need for public courses in Southern California," he said. "And this one has some incredible views. It's just a fantastic spot."

#### COUNTRY CLUB AMBIENCE

There's no question that the views are striking. "You couldn't get any better unless you had an ocean," said Jeff Pritchard, director of agronomy at the facility. "It's really awesome. You meander through all these canyons, and there's a lot of target golf. Of the 300 acres of golf corridors, we planted 173. Pete tried to leave it as natural as possible, so it looks like we just planted out

these fairway areas and God built the rest of it."

Both courses were planted with 328 Bermuda, then overseeded with ryegrass. The greens feature A-4 bentgrass, a Penn State product renowned for its hardiness.

"We wanted to create a country club-type atmosphere," Pritchard said. "The A-4 provides the opportunity to cut the grass much lower for faster green

speeds, without having to do double cutting. We want to feature championship greens 12 months a year without causing undue stress on the grass. Right now we're cutting it at 5/32nds of an inch, and we're running consistently at a speed of 10.5.

"Pete Dye built a lot of movement into these greens," he said, "so we're afraid to get too much faster than that. It wouldn't take much effort at all to move them to the 12 range. If we started cutting at 1/8th of an inch or lower, we could get these greens blazing."

#### \$10-MILLION CONSTRUCTION TAB

Fortunately for a golf development in Southern California, Lost Canyons has no water worries, at least for the time being.

"We're in a pretty good aquifer," said Pritchard. "We have a well that flows at 1,600 gallons a minute. We buy the water from the city and hold the water for both courses in a five-acre lake, which is on the ninth hole of the Sky Course. We're not obligated to use any effluent at this point, though that's always a possibility."

Pritchard had high praise for Landscapes Unlimited, of Lincoln, Neb., which built the 36 holes in less than a year. "With every project these days, there is such a demand to get the course built quickly to start generating revenue. Under the circumstances," he said, "they did a great job. They are very good to work with. Their people are very nice and cordial, and they have great attitudes."

The total construction tab came in at \$10 million, he added, not counting structures except the pump station.

Not surprisingly for Dye designs, these two courses play long and tough. The Sky Course, for example, stretches to 7,250 yards, with a slope rating of 79 – and that appears to be the easier of the two.

"Canyons are more numerous on the Shadow Course, so there's more target golf," Pritchard said. "It's not as long as Sky, but it's more mentally demanding. If you miss the fairway, you're out in the native areas."

Besides a driving range and extensive practice facilities, the complex features a rustic, 20,000-square-foot ranch-style clubhouse with all the trimmings.

## Lohmann

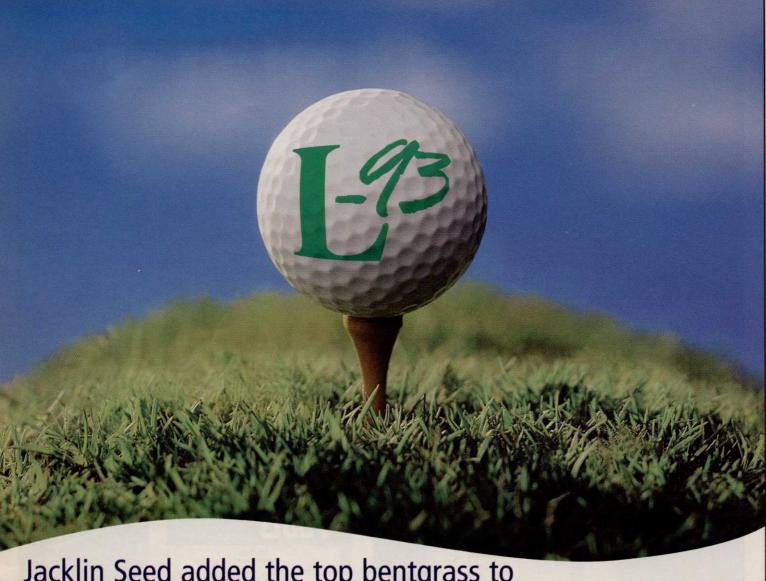
Continued from page 13

wants the course to be as dramatic as something like Blackwolf Run, so this layout is really going to be something special. We're planning to move some 330,000 cubic yards of dirt for the first nine alone."

Golf Creations, LGD's sister construction division, is involved in building the course, which hasn't been officially named yet. The first nine should open come spring 2002.

"As I told the reporter from Fortune, there's nothing more fun than taking a piece of property and sculpting it to your own dreams," Lohmann says. "I'd love to be able to say, 'I don't care what anyone else thinks. I want it that way'. But then, I design courses for a living. I do have a 7,500-square-foot green in my backyard, but that's probably as close as I'll get to having my own personal course."

GOLF COURSE NEWS



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## **NEW PRODUCT NEWS**

## New meter from Spectrum measures chlorophyll

Spectrum Technologies' Chlorophyll Meter uses "point and shoot" technology to instantly measure relative chlorophyll content, a key early indicator of plant health. The unit is a tool that will help to manage nitrogen programs more effectively.

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Spectrum's Chlorophyll Meter

area of leaf or canopy. The ambient light sensor automatically corrects measurements for varying light conditions. The handheld meter calculates and displays a running average for multiple readings while simultaneously recording each sample in the data logger. With the PC interface cable the readings can be analyzed at any PC. For more information, contact 1-800-248-8873.

## Flowtronex ready with Web-based software

Flowtronex PSI has unveiled a new version of PumpLog 2000, its Web-enabled monitoring and control software. PumpLog 2000 allows users to monitor and control their pump systems from anywhere in the world through the Internet.

Communication with the system can be achieved through Web-enabled PCs, cell phones and all types of PDA devices. In addition, the software permits the irrigation system central control and pump stations to communicate together. Working with the Toro Co. and employing open architecture, the new Site-Pro 2000 system will permit users to monitor their pump station from the irrigation control computer. PumpLog also has the ability to send e-mail and messages to mobile telephones when any system changes or faults occur. Once notified, the user can reset the fault remotely or take corrective actions. The system can also page or e-mail the appropriate service technician.

For more information, contact 800-786-7480 or www.flowtronex.com.

GOLF COURSE NEWS

## Textron rolls out LF-series mowers

The new Jacobsen LF-4675 and LF-4677 seven-gang mowers from Textron Golf, Turf & Specialty Products combine a tournament-quality cut and operator comfort, with the lightest footprint in its class.

The LF-4675 has five-inch diameter, seven-blade reels. The LF-4677 has seven-inch diameter reels with nine or 11 blades. Reel

width is 22 inches for both models and maximum cutting width is 11.7 feet. The patented FlashAttach reelmount system is standard, along with joystick reel positioning. A turbo-charged, high-torque, 44-hp Kubota diesel engine and fourwheel-drive transmission provide a top speed of 12 miles per hour.

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The Jacobsen LF-4677 seven-gang mower in action



## NEW PRODUCT NEWS

Kawasaki's new Mule 3020

## Kawasaki Mule 3020 ready for business

Kawasaki has unveiled its new Mule 3020 utility vehicle that is designed specifically for use on turf. The Mule 3020 rides on wide, turf-application tires and is well suited for golf course maintenance. It also features a steel, tilting cargo bed, bench seat, fully automatic transmission and car-like controls.

The aggressively styled vehicle is constructed of durable plastic that has molded-in color to help prevent scuffing. The front hood of the Mule 3020 can be lifted with the touch of a button to reveal a large storage space with tie-down loops to secure cargo. Power for the Mule 3020 is provided by a liquid-cooled, fourstroke, 617-cc, V-twin engine that features a larger radiator and digital electronic ignition. The chassis features stiffer front springs for increased ground clearance and a better ride. and the DeDion rear leaf spring suspension is designed to carry heavy loads.

For more information, contact 949-770-0400 or www kawasaki com



The hand Aerifier with Core Collector

## Aerify by hand

Standard Golf Co. has introduced a quick and clean way to spot aerify bentgrass or Bermudagrass surfaces. The new hand Aerifier with Core Collector features a uniquely designed collection box that holds ejected cores as it aerifies. The unit has five four-inch by one-half-inch replaceable hollow tines. The complete unit weighs just nine pounds. For more information, contact 319-266-2638 or www.standardgolf.com.

## SyncroFlo ready with EagleEye 2000

SyncroFlo has introduced a new version of its popular remote monitoring software. EagleEve 2000 is Windows 95, 98, 2000 and NT compatible and will interface with any Windows-based irrigation control system. Built as an OPC server/ client, EagleEye 2000 uses Microsoft's OLE/Comtechnology to exchange data between applications. It also uses open database connectivity and dynamic data exchange to interface between applications. It can be connected via the comport, is Internet accessible and will have secondary connectivity to a network. With EagleEve 2000, superintendents can access set points including flow, pressure and system mode. They can also print an alarm history report detailing the past 200 alarms, and trend graph all the major functions of the pump station. For more information, contact 770-447-4443.

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## **BRIEFS**

#### SUNCOR APPOINTS FORREST

PHOENIX, Ariz. — SunCor Golf, based here, has appointed Bill Forrest as director of teaching and coaching. Forrest, formerly direc-



Bill Forrest

tor of instruction at TPC of Scottsdale, will be responsible for creating and marketing a golf instruction program at all six SunCor golf courses in the

Southwest. He'll also be charged with organizing golf schools, corporate outings, junior camps and individual instruction. Forrest has 24 years of golf teaching experience in 29 countries and has taught more than 100,000 students.

#### PALMER PROMOTES LEVINE, AHERN

ORLANDO, Fla. - Arnold Palmer Golf Management has promoted Jeff Levine and Tom Ahern to newly created regional vice president of operations positions. Prior to the promotion, Levine was regional director for Palmer Golf's Texas region, as well as its University Clubs in South Carolina, Kentucky and Alabama. In his new role, Levine will oversee operations for the West Coast courses in the Palmer Golf portfolio. Ahern previously served as Palmer Golf's regional director for its upstate New York properties and its University Ridge property in Wisconsin. As regional vice president, Ahern will oversee operations for Palmer Golf's East Coast properties, as well as its courses in Wisconsin and Illinois.

#### RAIMER TO HEAD FIDDLER'S CREEK TEAM

NAPLES, Fla. -Gulf Bay Group of Companies has appointed Jeffrey Raimer head golf professional at Fiddler's Creek. Raimer will initially oversee the operation and management of the Arthur Hills-designed Creek Course and a pro shop, while coordinating golf-related events and supervising golf employees. When completed, Fiddler's Creek will have 72 holes of golf and two clubhouses. Most recently, Raimer was director of golf at Bay Colony Golf Club in Naples. He has held management positions at several golf clubs in Naples and was named "Golf Professional of the Year" in 1996 by the PGA's Southwestern Florida Chapter.

## Golf Matrix waiting for a buyers' market

By ANDREW OVERBECK

SCOTTSDALE, Ariz. — With golf development financing getting tougher and the acquisition market still bottoming out, Golf Matrix, along with many other management companies, is turning its attention inward and playing the waiting game.

"There is too much for sale out there right now and no one is buying anything," said Deron Bocks, president of corporate operations and acquisitions. "Why buy something now when it will be cheaper in August? Those guys [companies selling off courses] are in trouble and we are not going to bail them out."

Instead of concentrating its efforts on the volatile acquisitions market, Golf Matrix is spending the first half of



GolfMatrix began managing Woodlake Resort and GC this fall.

2001 optimizing the performance of its existing portfolio. "We'll poke our heads up July 1, and look around to grow again," Bocks said.

#### ADDING COURSES IN THE SOUTHEAST

Golf Matrix, however, has been far from dormant.
In the past two years, Golf Matrix has amassed 15 courses in the Southeast and the mid-Atlantic. This fall, the company added three management contracts in the Pinehurst, N.C., area, bringing the total number of courses

Continued on page 23

## Despite \$50-million cache, LinksCorp on sidelines

By JAY FINEGAN

BANNOCKBURN, Ill. — With an acquisition war chest of \$50 million and a buyer's market in golf properties, you might think LinksCorp would be busily adding to its 24-course portfolio

You would be wrong.

"This is probably the toughest buying environment we've seen in a long time," said Ben Blake, LinksCorp's president and CEO. "There's a lot for sale, but you don't see many transactions happening except for the real high-end stuff."

Course prices are dropping, he said, but not far enough. Many sellers seem to have "overly optimistic" expectations.

"We're coming off a pretty tough year in 2000," he said. "People are putting their courses on the market and aren't even coming close to getting the price they want. It's largely because the relationship between current cash flow and asking price shows a significant gap."

#### PIE SLICED TOO THIN

The large number of courses for sale is a function of supply and demand, Blake said. "Too many courses probably have been built," he observed, "and the number of golfers isn't corresponding. The pie is getting sliced too thin in some places."

The most visible acquisitions are taking place at the top of the market. Heritage Golf Group, for example, recently bought White Columns GC in Atlanta and Talega GC in Southern California, reportedly paying about \$20 million for each one.

LinksCorp prefers to buy courses in the \$4-million to \$7million range, so it can offer affordable golf.

"There aren't many transactions being done at our level," Blake said. "If they are, they're localized, where a few guys put up the dough and get it financed at a local bank."

#### TRAILING CASH FLOW

At one time, Blake said, course valuations hinged on the replacement cost of the asset. That's changed in recent years, and 12-month trailing cash flow is now viewed as the best indicator.

"The industry has usually traded at six to 10 times earnings before interest and taxes, and it's probably closer to 10 than six," he explained. "You're now seeing those multiples coming down to nine."

The deals he's looking for are those priced at eight times cash flow or better. "A course that's doing \$500,000 net and is selling for \$4 million would be a good deal," Blake said. "It would qualify for financing.

Continued on page 22

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-Monthly payment (for three pieces

(\$50,000 - \$13,704) =

With \$36,296 extra cash flow,

DALLAS, Texas — Leasing and financing options have long been available in the golf car business and have become the preferred method of pay-

ment for large fleet purchases. However, leasing is a relatively new option when it comes to buying turf maintenance equipment.

"We have seen a strong buy into the marketplace in turf equipment in the last three years," said Ron Ort senior vice president of golf and turf for CitiCapital, formerly known as The Associates. "We launched our product in 1995. It was hard to get it out there beforehand because turf equip-

ment was treated as a commodity. You bought it, you used it until if wore out and then you bought more."

Leasing, though, is quickly becoming popular. In fact, in the four years that the

Toro Co. has offered a leasing program, approximately one third of its business is now being done through leases, said Toro's finance marketing manager, Paul

Danielson.

According to Ort, attitudes about leasing turf equipment have changed because courses are realizing that leasing allows them to leverage their budgets and maximize cash flow.

"Superintendents have seen that by leveraging buying power over the course of four years as opposed to a capital expenditure in one year, they have gained a tremendous amount of purchasing power," he said.

The chart above illustrates how much equipment a \$50,000 yearly equipment budget can buy over a 48-month leasing period.

- Andrew Overbeck

## DaimlerChrysler builds portfolio to \$225 million

By JAY FINEGAN

DALLAS, Texas — The golf division of DaimlerChrysler Capital Service has quietly become the fastest-growing lender in the golf industry. The firm funded \$50 million in projects in 1998 and \$50 million more in '99. But last year DCCS stepped up with about \$125 million, bringing its portfolio to about \$225 million invested in 45 golf courses.

"Our focus is on existing facilities," said Bobby Fitzpatrick, the Dallas-based national director of the DCCS Golf & Sports Finance Division. "The majority of what we're doing is the refinancing of courses. We also fund a lot of acquisition deals.

"We might even take a look at a start-up, if it's already built," he adds. "But we're not into construction lending. We'll only make a couple of construction loans this year, and we already know which

Continued on page 22

## MANAGEMENT

## **DaimlerChrysler**

Continued from page 21 two we're doing."

Fitzpatrick acknowledges his operation is nowhere near the size of the industry leader, Textron Financial Corp., but in percentage terms it is growing faster. "We had a big year last year - we doubled our portfolio," he said. "We feel we're gotoo, volume-wise. The deals will be structured more conservatively than two years ago, though. We're anticipating an economic slowdown and increasing pressure on existing facilities from all the new supply."

DCCS, a wholly owned subsidiary of DaimlerChrysler Corp., was formerly known as Debis Financial.

Surveying the outlook for golf courses, Fitzpatrick predicts

some challenging times for many of the newer layouts. "People spent too much money in recent years," he said. "They went kind of crazy. They thought they needed the best architect, the best cart path, the best irrigation system, the best clubhouse. And all of a sudden, a course that started out needing to be an \$8million project turned into a \$12million golf course. Now you're forced into being a high-end daily

fee, where you wanted to be a moderate daily-fee.

"Obviously that means charging more, and maybe you could get that," he said. "But with a slowing economy and all the new supply, the higher-end courses will clearly be challenged in some areas."

#### WHITE COLUMNS EXAMPLE

Consequently, Fitzpatrick is interested in some selective financing of acquisitions that show an upside as turnaround prospects. A case in point is White Columns Golf Club, a daily-fee course north of Atlanta. Bob Husband's Heritage Golf Group recently acquired the club with some DCCS financing.

"The Japanese owned White Columns and undermanaged it," Fitzpatrick said. "They made money, but not enough relative to what Heritage paid for it. [Industry reports put the purchase price at \$20 million.] So it definitely needs to get better. It's the best public course in Atlanta, a Tom Fazio design - it's just fantastic.

"It won't be hard for Heritage to enhance the cash flow there. There are some easy opportunities to bump it," he said. "The trailing 12-month cash flow could have serviced the loan, but barely, and we like to have a cushion. So we definitely underwrote some improvement in the cash flow. If we didn't think it would happen, we would not have done the loan."

Golf developers targeting even underserved areas need to look elsewhere for funding, however. DCCS isn't interested. "We'll get packages on 200 courses for construction loans, and we'll pick

Continued on page 28

## LinksCorp

Continued from page 21

"If the same course was throwing off only \$200,000 in cash," he added, "it wouldn't qualify for debt financing anyway, because the lender wouldn't get comfortable with that kind of coverage."

#### 30 PROPOSALS, NO DICE

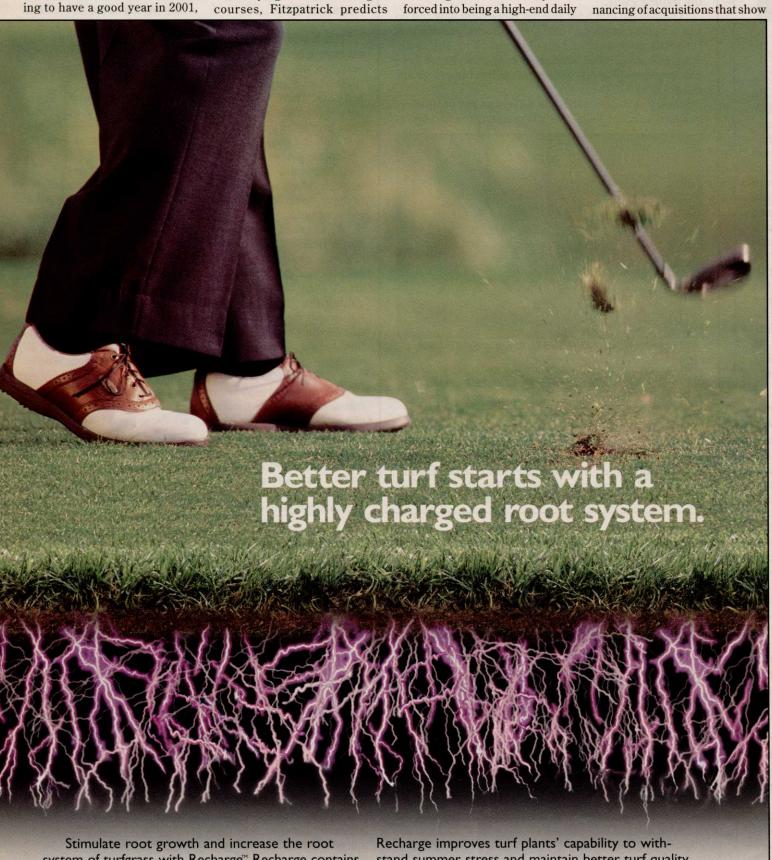
Blake is actively searching for workable deals, primarily in the Southeast, where the price points are more to his liking.

'When you go out to California, say, it's almost doubled. The courses are twice as expensive, and they throw off twice the cash, he said. "A \$50 [green fee] golf course in the Southeast might cost \$90 in California. That's what the market will bear. But you need a lot of money to get into course ownership out there."

Although LinksCorp has \$50 million budgeted for acquisitions this year, Blake has yet to see a deal he likes.

"Thirty proposals crossed our desk in January, and not one of them made it to the next level," he said. "What's out there are many properties earning maybe \$300,000, butthey're asking \$6 million. Who's interested in those kind of economics? That should be valued at maybe a \$2.5-million deal."

Until prices become more realistic, Blake is prepared to sit tight. "To buy courses just to get bigger doesn't get you anywhere," he said. "I think you're better off buying a few good deals rather than a lot of marginal deals, because sooner or later they come back to haunt you." ■



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## **MANAGEMENT**

## Golf Matrix Continued from page 21

in its "Carolina Collection" to six. It also recently signed a management contract for the new Jim Lipe-designed course that is being built in Alexandria, La. as part of the economic redevelop-

ment of the closed England Air Force Base.

Golf Matrix also is involved in course ownership. In November, the company broke ground on its newest project, The Golf Club of Louisiana, in

Shreveport. The Jack Nicklaus signature design is scheduled to open in spring 2002 and work



will be directed by construction and development vice president Barton Tuck.

## DEVELOPMENT DEALS BECOMING SCARCE

Development deals like the one in Shreveport are becoming more and more scarce said Bocks.

"We have some unique things going on with the home builder partner," he said. "There were a lot of enticements to make the deal."

The homebuilder agreed to give Golf Matrix free land for the course, a subsidy for Nicklaus' fee and a one-third interest in the profits of home sales.

"Two years ago, I'd be lucky if I got the free land," said Bocks. "These days it takes a perfect situation like this one and the home builders know that."

As a result, Bocks doesn't see a lot of development deals on the horizon.

"I don't see us developing more than one course a year for the next couple of years," he said. "There are not a ton of people jumping to finance new golf projects right now."

#### TARGETING THE SNOWBIRDS

When acquisitions and development opportunities present themselves, Golf Matrix will look to add facilities in the upper Midwest and the Southwest. In the meantime, the company aims to acquire management contracts in these target areas as well as in the Southeast and mid-Atlantic regions.

"We are looking at getting into the northern Midwest and the Southwest," said Bocks. "There is a tremendous opportunity to build a brand up there so that in the winter if someone comes to Scottsdale they can play a Golf Matrix facility and know that they are going to get the same service and programs that they are used to getting. It would also help to steady out our cash flow."

ClubCorp building first Bear's Best in Las Vegas

Continued from page 1

Southwest. Bear's Best Atlanta, scheduled to open in spring 2002, will feature 18 holes mostly from eastern states. But Nicklaus couldn't resist picking two holes from Scotland, and one each come from England and Ireland. For the finishing hole in Atlanta, he went with number 18 at Castle Pines Golf Club, in Colorado.

QUEST FOR EXACTNESS

Each hole will be an exact copy of the original, down to the tiniest details, based not only on original plans but on "as built."

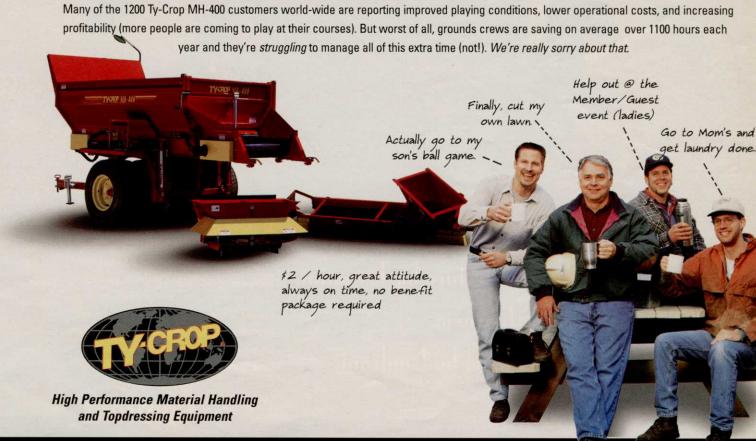
"Jack makes a lot of changes in the field as he's building a course," said Dave Richey, ClubCorp's seniorvice president of development and the program's prime mover. "To make sure we're replicating today's hole, we sent a survey team to each of the holes Jack picked. We did a GPS survey of the entire hole, down to 20-foot grids. Then we had photos taken from all angles and loaded everything into the computer. So the shapers have a very good depiction of the current golf hole."

The fanatical quest for accuracy doesn't stop there.

"We want to make sure that the shot values and the playing environment are replicated," Richey said "We can't do everything the same outside the playing area. Castle Pines has 5,000 pine trees around each hole. We can't do that in Las Vegas. But if there are trees that are part of the playing strategy of the hole, they will be there.

"At the eighth hole at La Paloma, Continued on next page





## MANAGEMENT

## Bear's Best

Continued from previous page

in Tucson, there's a large cactus that sits inside one of the bunkers," he said. "That's the 13th hole at Bear's Best Las Vegas, and that cactus will be there."

#### NO BEAR SIGHTINGS

The Golden Bear himself never actually walked the Las Vegas site, nor the one in Atlanta. Richey has been impressed by Nicklaus' fluency in reading topography.

"Jack can just look at the topo and tell his staff, 'Go pull out number five from Desert Mountain, the Geronimo Course. I'll bet you that will fit right in here.' And sure enough, 80 percent of the time they worked," Richey said. "We missed on some and went back to the drawing board, but most of those were due to wetlands and buffer zone issues that came up in

Atlanta. For the most part, the Vegas holes all worked.

"We also had to make some adjustments because of elevation," he added. "On the Vegas course, we're using the seventh hole from the Old Works Course, in Anaconda, Montana. It sits at something like 5,000 feet. That hole worked there because the ball flies farther at that altitude, but it was too long for Arizona. So we just brought up the back

tees 10 or 15 yards."

#### STANDARDIZATION DEEMED VITAL

A Nicklaus design associate, Frank Henegan, is the on-site project manager to make sure the holes flow smoothly. The overall managing director of the Bear's Best project is Richard Ellis, a 25-year ClubCorp veteran currently morphing out of his position as general manager at Gleneagles Country Club, in Plano, Texas.

"We're putting one manager over all of them because this is a branded product," Richey said. "It's critical that everything be standardized at all locations, and we envision a managing director possibly managing four or five of these. He'll handle the big picture, and local staff will run the operations."

Weitz Golf International, headquartered at Golden Bear Plaza in West Palm, is building the courses and clubhouses.

#### **BUILT FOR CORPORATE OUTINGS**

Although every Bear's Best course will be public, the target market is not the normal daily-fee player.

"The courses are intended to be corporate entertainment sites," Richey explained. "They will cater to larger groups who need four tee times, or 12 or 30, who want to have an outing any day of the week at any time.

"We're going to get up every day with the attitude that every green has to be cut first thing in the morning, because we have a shotgun start every day," he added. "The cart paths are double wide at every tee, because when you put on an outing, typically you have to pass by other groups and you're always off onto the grass, wearing it down."

Beyond that, the practice ranges will have a huge number of hitting areas to accommodate large groups. The carts will come equipped with GPS systems, and tournament scoreboards will help players keep track of the competition.

"Everything has been thought out," Richey said, "down to how we handle them when they come off the course. We'll be hosting outings of 140 people every day, and twice a day if we need to. The clubhouses will have indoor and outdoor pavilions, each for 150 people. Right down to food and beverage, it's all been planned."

#### GOING FOR CONVENTION TRADE

Richey selected Las Vegas for his prototype due to the city's huge convention trade. Atlanta, he points out, has a strong base of *Fortune* 500 companies. As to future locations, he mentions Los Angeles, Dallas, Orlando and the Washington, D.C. area.

"As we learn our way through this, we're going to find the key to go to the next tier of cities, more regional in nature," he said. "It might be a San Antonio, maybe a Chicago. We'll start at the top of the market, where we know a lot of companies are looking for this, and then try to decide if it will work at the next level. There's no cap on the number that could be built."

ClubCorp and Golden Bear International will jointly own the real estate and the golf courses. "It's intended to be a long-term relationship with Jack and his family," Richey said.



## SUPPLIER BUSINESS



## **BRIEFS**

#### OTTERBINE BAREBO APPOINTS BAREBO

EMMAUS, Pa. — Otterbine Barebo Inc., has appointed Chris Barebo as the company's new president. Barebo



Chris Bareho

started with Otterbine in 1980 and became vice president of manufacturing in 1988. During 2001, he will oversee the manufacturing and introduction

of the company's new aerating fountain line that was released in March.

## RAIN BIRD SENDS UP DONOGHUE, LIRON

AZUSA, Calif. — Rain Bird has promoted Mike Donoghue to the position of vice president, golfirrigation and support operations. In his new role,

Donoghue will be responsible for the company's golf irrigation operations. He will also manage the electronic manufacturing facility in Tijuana,

Mexico, and over-



Mike Donoghue

see distribution centers in Azusa and Calera, Ala. Most recently, Donoghue served as the director of the golf division. Mindy Liron will replace Donoghue as director of the golf division. In her new role, she will oversee all manufacturing, engineering, customer service and marketing. Liron was formerly director of support operations.

### JACKLIN SEED NAMES UNDERWOOD

BOISE, Idaho — Jacklin Seed has named Rich Underwood to manage



Rich Underwood

its new Albany, Ore. seed blending and warehousing facility. Underwood has more than 20 years of experience in the seed industry and most recently

served as president of Halsey, Ore.based Cebeco International Seeds.

### O'DONNELL JOINS PATTEN SEED

LAKELAND, Ga. — Patten Seed Co. has appointed Joe O'Donnell to serve as vice president of Georgia Super Sod Outlets. O'Donnell most recently served as general manager of Sunbelt Seeds.

# ParCar, Briggs & Stratton unveil revolutionary electric motor system

By ANDREW OVERBECK

REEDSBURG, Wis. — In a unique joint venture agreement with Briggs & Stratton, Columbia ParCar Corp. has unveiled its new, more efficient ACE Electromotive Power System in select golf car and utility vehicle models.

The new cars use Briggs & Stratton's new Etek electric motor system that utilizes neodymium permanent magnet technology allowing for a motor that is 50 percent smaller and 20 pounds lighter. As a result, the new ACE *EPS* 48v Electric Eagle golf car is 10 to 15 percent more efficient and 30 pounds lighter.

"By utilizing a permanent magnet, there is no need to use battery energy to generate a magnetic field," said Ward Utterback, ParCar's manager of sales and marketing support. "The power is used more efficiently, significantly reducing



The Etek motor uses a permanent magnet.

heat energy loss, thus providing more energy for motion."

According to Utterback, the new car's efficiencies will add up to cost savings. "You can get more rounds of golf per car, spend less time charging and save electricity," he said. "In addition you can control speed with the accelerator, leading to less brake wear."

#### A FIRST FOR BRIGGS & STRATTON

Sensing a market shift towards electric power sources, Briggs & Stratton, which makes 11 million gasoline engines a year, saw a need to diversify into making electric motors.

"If things keep going electric, like they have in golf cars, we need to get involved in electric motors," said John Fiorenza, director of business development for Briggs & Stratton.

Briggs & Stratton, which has been developing the permanent magnet system for the past five years and holds a patent on the motor, formed a joint venture with ParCar to get the motor

Continued on page 28

## Davey Golf rolls out laser mapping technology

By ANDREW OVERBECK

DALLAS, Texas — Davey Golf has teamed up with Aerotec LLC to provide a high tech alternative to conventional aerial topographic maps. LiDAR mapping technology, which is used primarily for mapping cellular sites and power transmission lines, was developed by NASA and later used by the U.S. military during the Gulf War for missile guidance systems.

Aerotec is one of the commercial suppliers of the technology and is offering LiDAR mapping services exclusively through Davey Golf.

### DALLAS NATIONAL

The system, which is faster, more accurate and less expensive than conventional mapping technologies, was introduced to the golf course industry at Dallas National Golf Club, which is currently being developed by TSC Golf

"The developers needed a topographic map of the site," said Jack Swayze of Davey Golf, a division of the Davey Tree Expert Co. "They had tried conventional survey methods, which were becoming time-consuming and expensive because of the site's size and vegetation.

Continued on page 26



LiDAR mapping generates detailed topographic maps using lasers (above) attached to a helicopter deployment platform (inset).

## Royster-Clark to acquire ProSource One

MEMPHIS, Tenn. — Royster-Clark Group has signed a non-binding letter of intent with Agriliance LLC to acquire the assets of ProSource One and its parent company, Agro Distribution South. Terms of the transaction, which at press time was expected to close

March 31, were not disclosed.

The businesses being acquired by Royster-Clark, a leading agricultural supplier of fertilizer, seed and crop protection products, have been operated by Agriliance since their purchase from Terra Industries in 1999. To-

gether they employ approximately 1,100 people.

#### **ENTERING THE GREEN INDUSTRY**

The acquisition gives Royster-Clark, which has 350 retail outlets and numerous production and distribution points across the eastern United States, an instant entry into the green industry.

"The acquisition of Agro Distribution South and ProSource One fits into our long-term growth strategy," said Francis P. Jenkins, chairman and CEO of Royster-Clark. "We are particularly excited about the acquisition of ProSource One, which brings us the experience and knowledge that we need to effectively expand our presence in the extremely important mar-

kets that they serve."

#### EXPANDING PROSOURCE ONE'S REACH

The deal will also allow ProSource to expand into North and South Carolina and Virginia. "These are areas that we have been eyeing for the last five years," said Bob Lee, director of ProSource

One. "They have established locations we can work through and that expands our reach."

The combined company will also have a strong hold on the Florida market, according to Lee. "This will make Royster-Clark one of the largest suppliers of plant nutrients, seed and crop protection products in both the professional and specialty ag markets in Florida," he said.

## IntraSearch creates golf mapping arm

DENVER — IntraSearch Inc., an aerial mapping and digital imaging company, has formed a sports mapping division in response to its growing client base of golf courses and other professional sports ventures.

Littleton, Colo.-based GroundLinkx LLC and Bordentown, N.J.-based Mapping Events & Associates LLC join the new division as affiliate companies. GroundLinkx is a developer of customized Geographic Information System (GIS) programs for golf course maintenance, and Mapping Events is a provider of site-planning services and GIS program training for event organizers.

"The sports mapping division allows us to consolidate the individual strengths and industry recognition of all three companies into a one-stop mapping and GIS source for golf courses and sports organizations," said Michael Platt, IntraSearch president.

The new division will package its highresolution aerial mapping and 3D topographic imagery of sports and entertainment venues with GroundLinkx geographic information/site-analysis programs.

## **SUPPLIER BUSINESS**

## **LiDAR** mapping

Continued from page 25

With LiDAR we were able to map the site in a more time-efficient and cost-effective manner."

TSC's construction coordinator Tom Mead said he would definitely use LiDAR mapping again. "Typically, aerial photographs are used to make the maps. We had already flown the

property but because of the vegetation we could not get accurate readings with that technology," he said. "The LiDAR was extremely accurate even with the thick vegetation."

#### **HOW DOES LIDAR WORK?**

"LiDAR takes GPS to the next level because it integrates GPS with inertial navigation systems," said Aerotec CEO Jim Dow. detection and ranging, combines a powerful laser sensor with a Global Positioning System (GPS) receiver, inertial GPS unit, a custom pilot navigation system and a helicopter deployment platform to provide precise 3-D coordinate point data.

From above, the laser that is mounted to the underside of the helicopter emits rapid pulses of near-infrared light. The time it takes the laser light to conflict with any feature is measured and converted into a point location, thus mapping the site in X, Y and Z coordinates. The system is only limited by rain, snow or ice and can map terrain, topographic features and vegetation.

"Using LiDAR, as many as 35,000 points can be captured every second," said Greg Ina, manager of computer sciences for

Davey Resource Group. "The speed at which LiDAR data is captured allows for the compression of project timelines originally estimated for conventional surveys. The data are then used to create a topographical map of the site. Developers and architects are able to see even the smallest details."

Ina said the high volume of laser light data allows the terrain to be surveyed even through dense vegetation. "LiDAR data penetrates dense vegetation through volumes of laser light emissions," he said. "Up to 35,000 pulses of laser light can be released per second from a laser scan survey unit. Although leaves and tree branches conflict with the laser light path and the ground, the sheer density of information ensures coverage

Up to 35,000 pulses of laser light can be released per second from a laser scan survey unit.'

- Greg Ina

through vegetation. Employing laser scan data involves supervised and unsupervised data classification algorithms, the process always involves the elimination of unwanted data."

#### TIME IS MONEY

Using LiDAR, the data to map the Texas site was collected in approximately 11 minutes. "When you factor in air time, the whole process takes only half a day," said Dow.

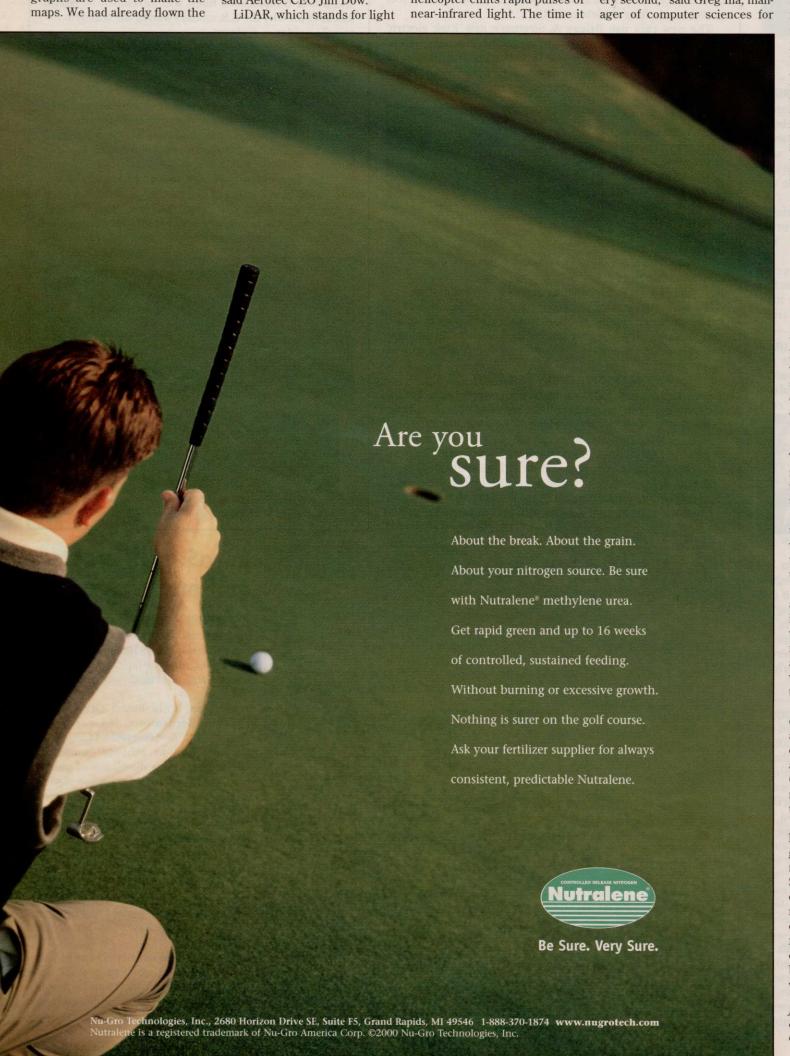
The results are provided to the client rapidly. "From the time we ordered the service to the time we had our maps, it took three weeks," said Mead.

The Aerotec team consists of a helicopter with a two-man crew in addition to two on the ground who record GPS point data. The mapping at Dallas National cost about \$25,000, said Swayze. Cost varies depending on the size and the shape of the site.

In addition, LiDAR surveys offer accuracy that is beneficial at each stage of development and course maintenance. The results are in electronic format and are Geographic Information Systemready and can be re-used for future projects.

"Because the topo can be overlaid with the ortho-photos, the golf architects have a visual representation of the terrain," Swayze said. "With LiDAR, architects can see the features right in the topography, so they can choose to incorporate the features into the design of the course. These features can also be rendered into 3-D models for visualization purposes." ■

Jennifer Lennox, communications specialist with Davey Tree Expert Co., contributed to this article.



## Sanctuary a treasure chest for charities

Continued from page 4

#### THE ELK OLYMPICS

As animal sanctuaries go, this place would be tough to top. It's got the whole menagerie of Rocky Mountain wildlife mountain lions, bobcats, bears, foxes, deer, wild turkeys, coyotes, golden eagles and more.

'We have a couple of herds of elk, about 80 to 100 each, that roam around the course at various times of day," said Engh. "And I've personally killed probably 10 rattlesnakes there, mostly during construction but a few since then."

Little to no effort is made to shunt wildlife away from greens or fairways, with the exception of elk during the mating season.

"In the fall, the elk tend to have elk Olympics to see who can skid the farthest across the greens," said Engh. "We have tried every possible scenario to ward them off. We've run radios out there to blare music. We've sprinkled mountain lion urine on the greens. We've had those flashing lights like you see on police cars. No matter what you do, they figure out it's harmless. Oddly enough, if you put a rope fence around a green, they'll leave that green alone."

Ongoing maintenance keeps the appearance of damage minimal. Superintendent David Hare runs a winter crew of 10 that builds to 30 during the summer.

"It's not a part-time deal," said Engh, who sometimes plays "paintball" with owner Liniger at the course. "They probably have the premier maintenance facility in the state. It's all professionally run. They have a full-time pro and an assistant pro, and they staff up for the summer."

## **OVERRUN BY CHARITY REQUESTS**

Charity work wasn't the original goal of the course.

"When it all started, it was going to be just for Dave Liniger and his friends," Engh said. "Then he decided, 'Okay, we'll have a couple of charity events.' He got requests for 200 a year, and he narrowed that down to 15 or 20."

A typical tournament nets \$100,000 to \$135,000

To accommodate additional charities, RE/MAX, the presenting sponsor, holds foursome "auctions." Every year, about 40 charities not holding tournaments receive a foursome to auction for fund-raising. Bidding starts at \$1,200, averages \$3,000, and has hit as much as \$16,000. An invitation to play Sanctuary is seldom refused, and the foursomes are popular among business people.

### PONDS STOCKED WITH TROUT

It's easy to understand the demand to play the course. Liniger spared no expense in building it, and Engh was happy to oblige.

The layout features recirculating waterfalls on three holes. It is the only course in Colorado with powder-soft white silica sand; 1,100 tons worth were shipped in from Idaho. The 6.93 miles of winding, eight-foot-wide concrete cart paths have a terra cotta tint to blend with native rock.

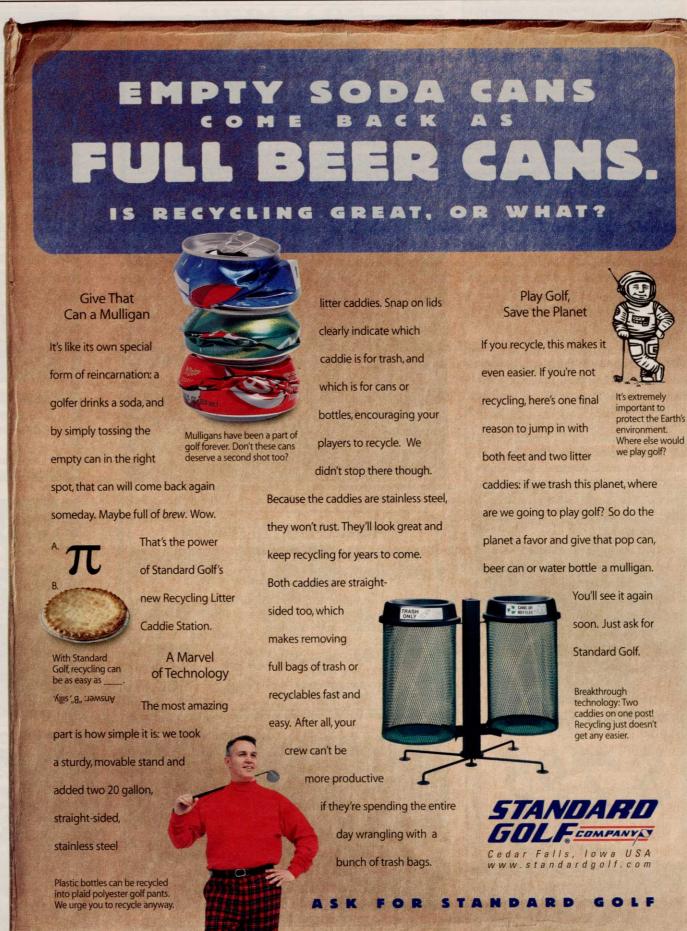
Nearly 100 trees, some 70 feet tall and weighing as much as 90,000 pounds, were transplanted. Ponds near the maintenance area and on the 14th hole are stocked with steelhead, brown and rainbow trout, and a ramp is being built to make one

pond handicap accessible. The course also has some 20,000 square feet of manmade rock walls, primarily supporting trees and tee boxes.

Unfortunately for designer Engh, his masterpiece is rarely seen. "When it doesn't have easy access for golfers or people in the media, it doesn't help my business any," he said. "During charity tournaments, they have the tees up so far that the better players, who are the reputation builders, probably are playing on tees they aren't enjoying all that much." ■



The 13th hole at the Jim Engh-designed Sanctuary in Sedalia, Colo. The course, owned by Dave Liniger, raised \$3.5 million for charities 2000.



## **GOLF COURSE MARKETPLACE**

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## **ParCar**

Continued from page 25

into the golf car market.

"We have a two-year exclusive arrangement with ParCar because they have put a lot of time and money into testing the product with us," Fiorenza said. "This is the first time the motor has been used."

According to Fiorenza, the motor could be used in turf maintenance equipment and the company is currently testing the system in other applications, such as power sand rakes.

"The motor and control system can be easily programmed and adapted to other machines," he said. "We have a capacity to produce 30,000 engines a year, so we will be looking to grow into other markets."

In the meantime, ParCar intends to exploit the market advantage that they have with the new ACE EPS system.

"We capitalized on an opportunity to bring another unique technological innovation to the market," said Utterback. "This is an opportunity to support our customers and provide cost savings and performance enhancements that are not available elsewhere in the market today."

## DaimlerChrysler

Continued from page 22

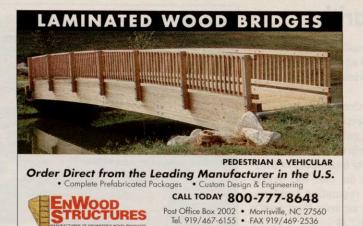
one," Fitzpatrick said. "On one we're doing, the guy doesn't need the money. We talked him into taking a loan. It's a 50-50 deal, a total of \$10 million, and he'll put in the other \$5 million and personally guarantee it. It's kind of a no-brainer."

The sheer plethora of struggling new courses, along with falling prices, portend an active market in turnaround acquisitions, starting around September, Fitzpatrick predicts. "Six months from now we'll be doing a lot more of them. Once prices fall a little bit more, you're going to see the operators jumping into the market and picking these things up," he said.



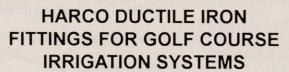
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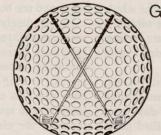
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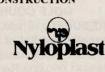
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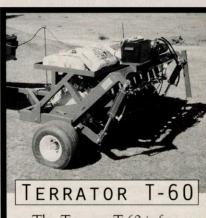
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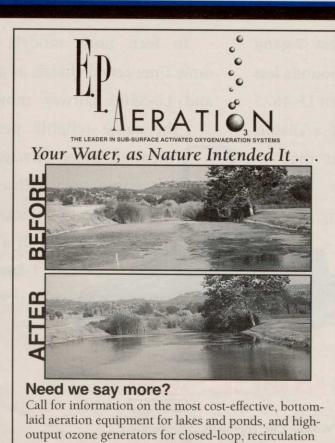
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