from page 39

weeks or so and works with Fazio’s field supervisor, Charles Feeley. They spend a lot of time discussing the specifics of a hole, whether it’s going to be a maintenance problem.”

For many marquee-name architects, what counts is high-profile publicity, usually on opening day. But it’s one thing to have designed a “best new course.” It’s quite another to have to live with it years afterwards. Florida courses are especially susceptible to criticism because they are open year-round. Snowbirds can be especially demanding of course conditions, though perhaps less concerned with what happens the six or seven months of the year when they are not in town to play.

As a lot of Florida superintendents know, the result of all the demands upon them can be an annual maintenance budget that approaches (and in a few cases, passes) $1 million. But few facilities can afford such levels of care.

“Fazio and Beljan definitely try to stay away from severe slopes that would require manual labor and expensive handwork like fly-mowing and the use of weed-eaters,” says Cook. “They understand initially what causes problems and they plan and adjust so that we’ll get it right. I haven’t had to change anything at The Bayou.”

But Beljan acknowledges that “sometimes extra handwork is required to take best advantage of a natural setting.” At the par-three third hole at The Bayou, “only a long bunker with steep Fly-Mo slopes would accent the green. The bunker is set in a narrow area framed by oaks and palms. The only way to avoid fly-mowing there would be to build a bland hole, and that wouldn’t do justice to the golf course.”

Learning to work with, rather than against the land is basic to golf architecture. Like many designers, Beljan has sought inspiration from the past in order to confront the future.

She made her first visit to the classic British courses in 1986 and hasn’t been the same since. For three weeks she studied, played and photographed over two dozen venues — among them Ballybunion, Muirfield, and Royal St. George’s. She came away with an enhanced understanding of classical design features and of the very different conditions governing U.S. architecture.

Beljan saw that golf was made to be played while walking. Players judged distances without markers. Deception, she found, was not so much built in as allowed to reveal itself naturally.

“Despite — or maybe because of — the simplicity of the features there, challenges to depth perception confront every golfer. Architects couldn’t move much dirt back then, so they were selective in siting tees, bunkers and greens. Small mounds, large dunes, that’s what the player relies upon to aim and judge distances.

But Beljan recognizes that “sometimes extra handwork is required to take best advantage of a natural setting.” At the par-three third hole at The Bayou, “only a long bunker with steep Fly-Mo slopes would accent the green. The bunker is set in a narrow area framed by oaks and palms. The only way to avoid fly-mowing there would be to build a bland hole, and that wouldn’t do justice to the golf course.”

Learning to work with, rather than against the land is basic to golf architecture. Like many designers, Beljan...
means possible. In the U.S. we have so much more to work with technically. The question is how to make all the pieces fit.”

Of late, Beljan has been sharing that commitment with industry leaders involved in the Florida Golf Summit (page 13). She points to government-industry interaction as part of the plan and is pleased that the Sierra Club and Audubon Society are among those environmental groups that have been asked to participate in developing a long-range plan.

Beljan’s work with the Florida Golf Summit is a further step in her emergence as an influential voice in U.S. course design. A growing community of designers and superintendents is finding out about Beljan’s experience and her concern for the game.

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### Jan Beljan’s Florida Work

<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
<th>Course Details</th>
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</thead>
<tbody>
<tr>
<td>1979</td>
<td>Palm Beach Gardens</td>
<td>PGA National, The Haig **</td>
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<tr>
<td>1980</td>
<td>Palm Beach Gardens</td>
<td>PGA National, Championship**</td>
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<tr>
<td>1981</td>
<td>Stuart</td>
<td>Mariner Sands, Gold*</td>
</tr>
<tr>
<td>1981</td>
<td>Palm Beach Gardens</td>
<td>PGA National, Squire**</td>
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<tr>
<td>1981</td>
<td>Juno Beach</td>
<td>Eastlakes CC**</td>
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<td>1981</td>
<td>Niceville</td>
<td>Bluewater Bay**</td>
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<tr>
<td>1985</td>
<td>Naples</td>
<td>Pelican's Nest**</td>
</tr>
<tr>
<td>1986</td>
<td>Naples</td>
<td>Long Point GC**</td>
</tr>
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<td>1986</td>
<td>Tallahassee</td>
<td>Golden Eagle GC**</td>
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<tr>
<td>1986</td>
<td>Niceville</td>
<td>Bluewater Bay, New 9***</td>
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<tr>
<td>1986</td>
<td>Largo</td>
<td>Bayou Club at Bardmoor, New 9***</td>
</tr>
<tr>
<td>1987</td>
<td>Orlando</td>
<td>Lake Nona**</td>
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<tr>
<td>1988</td>
<td>Vero Beach</td>
<td>John's Island West**</td>
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<tr>
<td>1989</td>
<td>Fort Myers</td>
<td>Westinghouse Gateway**</td>
</tr>
<tr>
<td>1989</td>
<td>Naples</td>
<td>Pelican's Nest, New 9***</td>
</tr>
</tbody>
</table>

Key:
- *Preliminary Routings*
- **Design and drafting of construction documents and specifications**
- #On-site construction supervision

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### Second annual $6,000 research grant

Wayne Miller, center, business manager of The John’s Island Club in Vero Beach, last summer presented a $6,000 research donation to Bob Yount, executive vice president of the Florida Turfgrass Association and vice president for development of the Florida Turfgrass Research Foundation. Holding a plaque recognizing the second annual $6,000 gift is Trevor Wright, club general manager. “We are concerned about protecting the environment and are anxious to support turf research in Florida,” said Wright.
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Tom Wait is a man filled with ideas. The ideas pop up everywhere... on airplanes, on golf courses, in the middle of a good night's sleep. Once he gets an idea, he can hardly wait to act on it. It becomes an obsession.

But Wait admits this obsession can sometimes get in the way of good business sense, it can push aside legal advice, wiser counsel. And it can bring about great success... but also create costly mistakes.

Wait's company, Donut Trimmer Equipment Inc. in Pompano Beach, is involved with several golf course maintenance products, all invented by Wait: Donut Trimmer, Level-Eez, Aqua-Quick, and a greens encroachment barrier system.

Each of these devices has met with success in the golf industry.

Incredibly, none existed before 1987.

"In 1984, I started a landscaping company, PSU Property Maintenance," Wait recalls. "We received the contract to maintain all the landscaping for the city of Boca Raton, and also worked at some condominiums on their landscaping maintenance.

"At the condominiums, they had cement donuts for sprinkler heads, and we had to trim them by hand every month as apart of our maintenance routine. After doing this for awhile, I thought there had to be a better way. I came up with a metal blade which attaches to a Weedeater. You drop the metal blade over the donut, and it trims the sprinkler heads. You can do 200 heads an hour, as opposed to 200 heads a day by hand."

Originally Wait thought the device could be sold to landscapers but a friend told him that golf courses also had sprinkler heads. Lots of sprinkler heads.

"The blade on our Donut Trimmer was only 7 inches in diameter. The golf course sprinkler heads were 8 to 11 inches in diameter. The theory about dropping the blade over the top and trimming around the sprinkler head wasn't going to work. But by tipping the Donut Trimmer at an angle, we found we could trim around any head, from 8 to 80 inches. It didn't matter. With a little further experimentation, we discovered the trimmer could edge anything on the golf course, including the bunkers."
Cobra, the very fine textured creeping bentgrass, which is now considered one of the world’s finest, was developed jointly by Rutgers University and International Seeds, Inc.

Cobra thrives when cut at 6/32 inch and normally requires less mowing, verticutting and brushing and produces measurably less thatch.

On a golf green built to USGA specifications at Griffin, Georgia, Cobra’s color was rated superior to that of Penncross in March, May, August and October and better than that of Penneagle in March, August and October.

In the matter of color, shoot density and cover Cobra was judged comparable to Penncross and Pennegle.

In a North Carolina State trial Cobra’s turf quality was rated superior to that of Penncross and Penneagle.

At the same time Cobra proved to be superior to Penncross in dry root weight and had better resistance to dollar spot.

Cobra is winter-hardy, heat tolerant, disease and drought-resistant and, while vigorous, is not as aggressive as Penncross.
Wait went on the road with the Donut Trimmer. He went to the 1988 GCSAA convention and show and talked to golf course superintendents. With their positive response, Wait decided to market the product, putting ads in trade publications. The ads brought tremendous response.

But, he says, “We had to show how the Donut Trimmer really worked under exacting conditions. We decided to contact Eagle Trace, home of the Honda Classic, and volunteered to do all the detail work on the course — sprinkler heads and bunkers — for free, just to show what it could do under tournament circumstances. It was a success, especially with the caddies, who could see the yardage markers more easily.”

The Donut Trimmer show moved west. Wait contacted a marketing firm in Fresno, Calif., Growth Marketing, whose owner Nick Dvorack arranged for a demonstration at Hillcrest CC.

“There were several of the best golf course superintendents in the state there for our demonstration, and after seeing it, they too were sold,” Wait said.

The young businessman was also able to secure a distributor in California, Pacific Equipment, the first distributor of the Donut Trimmer.

Business was good, but Wait says it was here that he made several mistakes.

He now admits he should have stopped, concentrated on the Donut Trimmer, its manufacturing and its marketing instead of developing more devices in quick succession.

Dvorack tried to develop a marketing program.

“But I was young, aggressive and egotistical,” Wait said. “I wouldn’t listen to him. It was one of the biggest mistakes I made.”

Despite his mistakes, his youthful eagerness and inventiveness did produce several additional devices to help golf course superintendents.

“When I was at Hillcrest, the golf course superintendents were all talking about encroachment of grasses onto the green. There were several methods used to control it, but many courses were edging the greens by hand every day.

“On the plane home, I opened up a pack of gum... yes, a pack of gum... and it gave me an idea. If there were a way to design a barrier between the green and fairway grasses, you could then imbide in the barrier 350 pieces of fishing line and each day pull the line, like the string on a pack of gum. Then you could edge the green very simply.”

Wait had met Paul Latshaw, former superintendent at Augusta National GC a few months before and Latshaw became a mentor and informal consultant.

“Paul told me there were several problems with the methods being used
to keep the fairway grasses from encroaching on the greens," Wait says. "Even with a barrier, once the turfgrasses hit the barrier, they would grow right over it, and attach themselves to the green. If we could develop a barrier that would eliminate this problem, then it would be a boon to golf course superintendents."

Another problem was minimizing damage during installation.

"After all, you couldn't go to a club and say, 'Well, I need to put this barrier around your greens and we'll have to shut down your corse and disrupt the area to do it.'"

Wait learned about a company called Line Ward, owned by Gene Ward of Buffalo, N.Y. He and Ward met, discussed the problem, and Ward said that his machine could be adapted to cut the trench and pull the plastic barrier into place at the same time. It was still Wait's concept to have the ground crew pull a steel leader each day to trim the green edge with the fishing line.

By August 1989, Wait had developed the plastic barrier, and Ward brought his machine to South Carolina for a demonstration at the Carolina CC. The implanting of the plastic worked perfectly.

"We were able to have the machine pull 200 feet of the plastic barrier non-stop around the green," Wait said. "In four hours, we had installed the barrier, rolled it, and were ready to imbed the steel leader into the plastic barrier's center groove.

But there was a problem.

Simply put, Wait's fishing line idea didn't work.

"Gene was watching this disaster. Finally he said that if we gave him a week, he could develop a system that would work. So we continued onto the golf courses that wanted the barrier installed... Plantation CC, Loxahatchee, The Falls, and put in the

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Undercapitalization is often the culprit

Undercapitalization is the chief cause of small business failures, according to Randy Cravey, business analyst with the Small Business Development Center at Florida Atlantic University in Boca Raton. Cary Lewis, now golf course superintendent at Orlando Country Club, knows firsthand about poor financing.

He and John Seid were partners in an infrared photographic service to the golf industry — Remote Sensing, Inc. — that had a brief life in Florida and may now be resurrected in Arizona.

"We could photograph golf courses, lakes, drainage, and could identify subsurface problems through this infrared photography," Lewis says. "We could find drainage lines put in 10 years ago, we could find pine trees in decline from too much water, before their problems were evident to the naked eye. It was a great concept."

But as Seid notes, the business was underfinanced, and that led to its decline.

"After giving it a try for more than a year, we parted company. We're still close friends."

Today, Seid is still promoting the concept and from his base in Tucson, Ariz., he has teamed up with a new partner who is developing financing sources for the project. He is confident that proper financing will make his infrared aerial photography business a success.

According to Cravey, Remote Sensing's problems were typical.

"Most people have an idea about their business," says Cravey, "but they don't have a business plan, and they don't have the financial or management expertise to run a company.

"They may not know their market potential or have an adequate cash flow to continue to run the business."

Cravey adds that from the early stages of developing the business, the owner needs to establish a relationship with a qualified attorney and an accountant.

"These professionals can help you make the decisions that will affect the business throughout its lifetime. They can help you develop the business plan that spells success rather than failure."

plastic barriers. We promised them, that we would be back with a device that worked with the barrier."

Within a week, Ward had come up with a tool with two guide wheels and a blade, dull side up, that slipped into the groove and allowed the superintendent to clip the bermudagrass easily.

Eventually, Wait added a simple chemical control drip system to this tool at the request of superintendents. The problem had been solved. The tool created by Gene Ward worked with Wait's barrier design.

Since developing the Donut Trimmer, Wait also had developed the Aqua-Quick, a device which enables superintendents to bring water anywhere on the course and Level-Eez, which raises the sprinkler heads to grade without digging.

To use the Aqua-Quick, the superintendent pops the drive assembly out of the coupler valves in the sprinkler head, installs the Aqua-Quick, locks it with a snap ring, and puts a hose on the device. This, according to Wait, can be done in less than a minute.

Raising sprinkler heads was another challenge.

"On most golf courses, you have a swing joint connected to the sprinkler head, and you have to probe to locate that swing joint before beginning work. Then you have to dig by hand, and this can take an hour or more with a skilled irrigation technician doing the work. Once you've raised the sprinkler head, you've created an area what looks like you exploded a land mine. The damage is incredible."

"As a landscaper, I've installed a few trees in my lifetime. After you dig a hole, fill it with water and put the tree in, if the tree is too low, you raise it with the help of water and soil. I woke up in the middle of the night and realized that this same principle could be used"
GCSAA report reveals buying habits

The Center for Golf Course Management, a subsidiary of the GCSAA has released its first marketing research report, Buying Habits of Golf Course Superintendents. The report, scheduled to be published annually in August, was compiled from the results of surveys mailed to more than 11,000 superintendents. It includes information on course demographics, purchasing behaviors, equipment inventories, expenditures, customer satisfaction, and planned improvements.

A second report, Maintenance Trends, studies current and emerging golf course maintenance practices based on the results of a survey sent to 1,200 certified superintendents. This year's report features deep-tine aerification, poa annua control, lightweight fairway mowing, 72-inch rotary mowers for maintaining roughs, and computers.

Buying Habits is $945. Maintenance Trends is $100. Both are available from the Center for Golf Course Management, GCSAA 1617 St. Andrews Dr., Lawrence, KS 66047; phone 913-841-2240.

Ciba-Geigy, Greensboro, N.C., and Biosys, a Palo Alto, Calif., biological pest control company, have agreed to jointly evaluate nematode-based product that controls cutworms and armyworms on turf, and black vine weevils, fungus gnats and white grubs on ornamental plants.

Ciba Geigy will gather field data, test-market the product, which is based on the nematode Steinernema carpocapsae (See Research Report, page 33), and conduct market research with turf managers and ornamental growers.

The Biosys formulation, exempt from EPA registration requirements, can be applied with standard spray equipment.

PBI/Gordon Corp., Kansas City, Mo., has acquired amidochlor, the active ingredient in Limit Turf Regulator developed by the Monsanto Co. of St. Louis.

PBI/Gordon has developed a new tank-mix program combining Limit and Embark 2S. The products work in different ways, according to Doug Obermann, PGR product supervisor for PBI/Gordon. Limit is taken up through the roots and Embark through the foliage. The tank mixture reduces the amounts used of each product with results that combine the best features of both, according to John Van Haften, PBI/Gordon director of research.

Jacobsen Division of Textron, Racine, Wisc., sponsored a three-day turf seminar in Manchester, England, for 25 students from the United Kingdom and the Netherlands.

Among the featured speakers was John Piersol of Lake City Community College, who discussed the U.S. golf industry.

Lofts Seed Inc. conducted a field day for turf professionals at the company's farm in Martinsville, N.J. in July. Among the speakers was Dr. Virginia Lehman, who recently worked on developing heat-tolerant bentgrasses at Texas A&M University (Florida Green, Spring 1990) and now heads Lofts West Coast Research Center in Oregon.

Lesco Inc., Rocky River, Ohio, has promoted Carl Meermans (PIX) to vice president/operations. He joined Lesco in 1987 as a systems analyst and was promoted to operations manager a year later. He will add transportation to his duties.