

GOLF COURSE NEWS

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Mark Leslie offers a detailed analysis of the golf-turf industry's second biggest trade show 19,33-37



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A protégé of Wadsworth, Nicklaus and Nugent, Rick Jacobson is stamping his own trademark on the world of course design. See Q&A, page 47.

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CONFERENCE AND SHOW PREVIEW
Meet the board candidates, pages 40-43

Accessible, sustainable golf gets its due



The newly renovated 6th hole at East Lake Golf Club will play host to one of Atlanta's most ambitious junior golf initiatives to date.

• The First Tee takes giant step forward

By M. LEVANS

ST. AUGUSTINE, Fla. — The First Tee, launched in November in a national publicity wave headlined by George Bush and Earl Woods, has managed to pull together the golf industry's heaviest hitters in what is being called the most significant concerted initiative to create acces-

sible golf facilities for minority and junior golfers.

According to The World Golf Foundation, The First Tee's founding organization, the initial focus will be on developing financial support to acquire locations for the facilities. To supplement these acquisitions, The First Tee plans

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• East Lake: Atlanta's inner-city gem

By PETER BLAIS

ATLANTA — It's too early to say exactly what the effects will be of the \$100 million East Lake Meadows project here. But the private/public partnership that resulted in the renovation of the historic East Lake Golf Club, construction of a new executive length golf course and

building of a 500-unit residential community looks like a boon for the Georgia capital's inner city.

The initial focus was the famous East Lake Golf Club, where golfing legend Bobby Jones learned to play the game. The club had deteriorated badly since the late 1960s when

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Reaction to ADA gauged

By BOB SPIWAK

The Americans with Disabilities Act (ADA) appears to have consequences in the world of golf which go well beyond disabled golfers. Courses may be forced to change facilities as well as policies, such as the "Cart Path Rule."

To get a superintendent's take on ADA, *Golf Course News* spoke with Jerry Coldiron, superintendent of Lassing Pointe Golf Club in Boone County, Ky.

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TALKING STICK SPEAKS VOLUMES

Coore & Crenshaw's Talking Stick, two 18-hole courses built on Salt River-Pima-Maricopa Indian Community land, promises to bring a little Scotland to Scottsdale, Ariz. See story page 54.

MAINTENANCE

Genetic engineering could drive seed costs up

By MARK LESLIE

COLUMBUS, Ohio — Remarkable advances in genetic engineering of turfgrass will bring new cultivars to the marketplace more quickly. But seed costs could go up markedly, particularly because different companies own patents on the various techniques and genes that drive the discoveries.

Future release of new turfgrass varieties will be punctuated by negotiations "to see who gets what out in the marketplace," said Dr. Virgil Meier, a plant breeder responsible for turfgrass development at O.M. Scott.

Meier explained that to
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Genetic engineering: Patents a key

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Meier explained that to succeed in genetic engineering, researchers need:

- a gene of interest, whether for its herbicide-, or disease-resistance or another trait;
- a way to put the gene into the plant cell — such as the gene gun, which has proven the easi-

est, fastest and surest method;

- a “promoter gene,” one which “turns on and off the main gene in the plant” — whether in the roots, leaves, flower, or seed; and
- a selectable marker gene, one with antibiotic resistance.

For instance, he said, in genetically engineering a certain

bentgrass cultivar, a company would deal with Scotts, which has exclusive rights to the gene gun for all turfgrasses; AgrEvo, which owns a herbicide-resistance gene and the selectable marker gene; and Monsanto, which owns the promoter gene.

Underlining the importance of owning the patent to any of the

parts of the whole, Meier pointed out that AgrEvo spent nearly \$1 billion to buy PGS, which owned the selectable marker gene.

“A lot of people have been involved in this research. It seems to double every year,” Meier said. “Some have found and patented genes and feel like they own them. And there are people who have invented the gene gun and other methods of technology that they have patented. The

promoter and selectable market genes are patented. When people patent things they want to keep them and to sell them.

“To come up with a new, fantastic variety you have to have all four parts. It so happens that different people own different parts, and each person or company feels their part is the most important. They feel they deserve most of the benefit from that new variety.”

Therefore, he said, the hardest part of genetic engineering is the negotiations to determine who gets what when a variety gets into the marketplace.

Meier predicted a lot of extensive genetic research. And this research circumvents much of the work inherent in standard plant breeding. “Somewhere in nature,” he said, “you find a gene that has a resistance to, say, dollar spot, and you can put that gene into a variety to improve it. As a result, you don’t have to test the cultivar as extensively as the other because you know the variety and you only have to test for the dollar spot resistance.”

He said the timeframe in developing a herbicide-resistant bentgrass and getting it into the market, for instance, will be a minimum of four years, or more likely six. New bluegrasses will be available in seven to eight years, he said.

“It takes three years to build up a seed supply,” he explained. “So, new varieties can be expected in two to three years, but not available for four to five years.”

The near-term potential of genetic engineering will include new grasses with herbicide-, insect- and disease-resistance — perhaps some coming from 18 genes in corn and cotton that might be used in turf.

In the long term, people are working on heat-, cold- and drought-tolerance; and grasses that require lower water use and less mowing, produce fewer clippings, use nutrients more efficiently and yield higher seed counts.

On the one hand, Meier said, genetic engineering will make it easier to grow better turf. “If you have herbicide resistance, you will be able to control all weeds instead of just a few,” he said. “You won’t have to worry about pre-emergent herbicide in the spring, or broad-leaf ditox in the summertime. You won’t have to worry about what time of year you spray, because it will be a non-selective herbicide except for the turfgrass variety that has resistance to it.

“When you get into disease



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Duncan: Mutual help in green industry

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Duncan noted that the first day of the OTF conference was filled with joint sessions of the three disciplines, dealing with topics common to them all.

"It's a sign of the times," he said. "It's amazing what we [lawn-care industry] have learned from the golf course guys. We don't have structures of golf greens on lawns, but what they do filters down to us, and vice versa.

"Going into the 21st century, we will be learning more and more this way."

Saying the lawn-care industry is "constantly being thrown curve balls with regulations, such as composting and yard waste," Duncan added that ideas coming from the golf course industry have helped cope with the new rules.

Referring to the \$260,000 in grants and scholarships OTF donated to Ohio State University this year, he said he hopes to continue, and even improve, this performance, "especially with the addition of turf plots and new professors [recently added to the staff].

"We have more good reasons

to support their research," he added. "None of us individually has the funds, or the staff to do this research. We appreciate what OSU does for us."

The OTF function, Duncan said, is the research and technology of products and services. "We feel we are the education arm of all the other groups —

the golf course superintendent associations, Ohio Lawn-care Association and Professional Grounds Management Association. We feel they better serve their constituents in the administration and business aspects. What we're doing in gathering and disseminating information and research is the beauty about

the marriage. It's what makes the green industry in Ohio so successful. Both groups are very viable and important to all the people involved."

Duncan, who has been in the lawn-care industry since 1975 and started Evergreen Lawn Care in 1985, said extraordinary advances have been made in technology and the use of computers.

"These things will come more

naturally to the next generation," he said. "Some of us in this industry are dinosaurs. Look where we've come in the last 20 years, in the way we managed turf then and now. It is the difference between night and day. I can't imagine where we're going to be 20 years from today.

"It's exciting because what we're doing now is so much better for the environment, for our clients, and for the turf."

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Genetic engineering

Continued from previous page

and insect resistance you will have fewer dead spots ... less mowing, fewer clippings, and less irrigation."

On the other hand, he said, "more people will want finer turf. There will be more do-it-yourselfers in lawn care. There will be a higher demand for greens, tees and fairways, and for renovation of existing turf to new varieties."

Overall, he said, it should be easier to manage turf, "but it depends on what spectrum of turf-care management you are on. If you're on the professional end, you'd better know what the varieties are you are treating, and from that standpoint you will need more knowledge, more record-keeping, better communications with your crew, and able to keep up with a faster pace of advancing technology."

...

Market size is critical to pay for genetic research, Meier said.

"One of the concerns is, if you find a fantastic gene for herbicide or disease resistance, do you have a plant that is going to be harder to control?" he said. "Who knows, if it is disease-resistant, is it going to grow wild and take over [tracts of land]? The USDA [U.S. Department of Agriculture] controls the release of transgenic organisms and this is one criteria it looks at."

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