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# GOLF COURSE NEWS

THE NEWSPAPER OF THE GOLF COURSE INDUSTRY

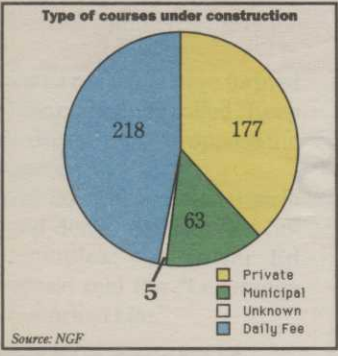
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**For coverage of the Golf Course Superintendents Association of America's 61st International Golf Conference and Show, see pages 36-47.**

## Toro aerator a breakthrough

BY MARK LESLIE  
The Toro Company has unveiled a revolutionary machine that aerates greens without disturbing the surface and interrupting play.  
The HydroJect 3000, which uses high-velocity spurts of water to aerate greens while leaving no telltale cores behind, was introduced in a dramatic exhibition at the 61st International Golf Course Conference

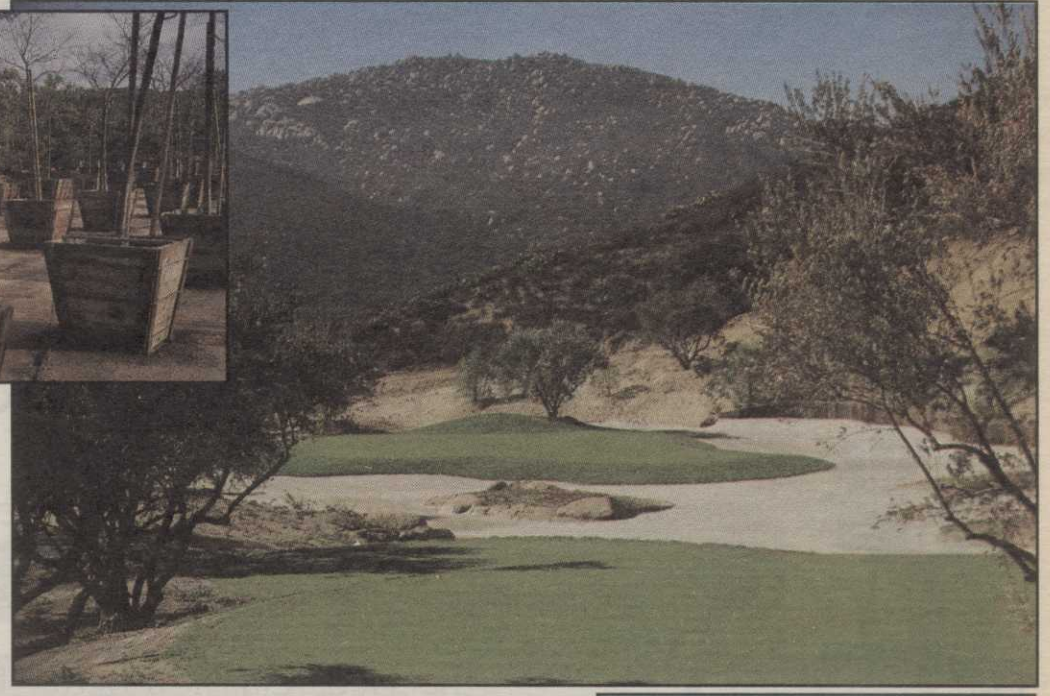
and Show in Orlando, Fla., in February.  
Dana Lann, Toro's head of research, projected late-fall production of the HydroJect 3000 and full availability to golf course superintendents by the summer of 1991.  
Dr. Paul Rieke of Michigan State University, who with a graduate student worked on the project with Lann's researchers for three years, said: "The beauty of this (equipment) is that we're able to use it frequently on the

putting surface and thus keep soil in good physical condition.  
"We think this is a versatile tool that the golf course superintendent will be able to use in his program to provide better quality turf and to improve the stress tolerance of that turf."  
Toro officials hailed the work of the researchers and the impact the machine is

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When Golfplan Design Group and PGA Tour pro Mark O'Meara got together to collaborate on Redhawk Golf Course at Temecula, Calif., three years ago they were confronted by a 150-acre site with perhaps a half-dozen trees. One of their first steps was to start a 25-acre nursery, above, to grow trees enough to beautify the overgrazed pastureland. The result, Ron Fream says, is "our best course in the United States," boasting hundreds of trees that are now 12 to 30 feet high. For more on new golf courses, see pages 14-15.)



## Hawaii lengthens wait

The Honolulu City Council passed an ordinance in late February requiring courses proposed on farmland to go through the lengthy annual review process.  
That means it could take up to two years to get the required zoning change to develop a new course, according to Bob McGraw, an aide to Councilwoman Donna Mercado Kim.  
"It would be reasonable to characterize that as lengthy," said McGraw.  
Proposed sites designated for resort, preservation or park use don't have to go through the yearly review.  
Development has been a major issue on the island of Oahu where residents were concerned about the loss of agricultural land and possible ground water contamination from new courses.

A 10-month moratorium on new construction ended Jan. 1. The council considered a bill that was stricter than the old law, but was vehemently opposed as not stringent enough and allowing development in too many zoning districts by citizen groups, like Hands Around Oahu.  
The proposal was sent back to the Zoning Committee, which passed the new bill that the council approved in February.  
Ordinance No. 90-15 restricts stand-alone courses to a single zone. Approval requires such measures as the use of non-potable water for irrigation, increasing opportunities for public participation and compatibility with the surrounding area.  
The council is also encouraging programs for displaced residents and for monitoring golf course chemicals.

## UST coverage said crucial

BY PETER BLAIS  
It wasn't so long ago at a course called, well let's make it East Overshoe CC, that an underground storage tank (UST) leaked.  
The tank's contents contaminated an underground water supply and required the installation of two purifying wells. It's estimated it will take two to five years to clean the water. The course's cost to rectify the situation — \$200,000.  
Richard Shanks, president of Financial Guardian Insurance of Kansas City, Inc., related that sorry tale during February's Golf Course Superintendents Association of America conference in

*Continued on page 39*

## International superintendents share views

BY PETER BLAIS  
Growing memberships and the need for more educational opportunities are among the common threads binding national superintendents associations, reported representatives of a dozen such organizations during February's Golf Course Superintendents Association of America conference in

Orlando, Fla.  
Canada, Australia, Argentina, Italy, England, Sweden, France, Germany, South Africa, Japan and the United States were all represented at an international roundtable moderated by GCSAA Immediate Past President Dennis Lyon and President Gerald Faubel.

All described increasing interest in their organizations as a result of the growth of golf in their home countries.  
But in many instances, educational opportunities to increase the professionalism of superintendents are still lagging behind the United States. Many of the foreign rep-

*Continued on page 46*



## Conference Report

## Toro

Continued from page 1

expected to have on both manufacturers and groundskeepers.

Mike Hoffman, director of commercial marketing, said: "We consider the HydroJect 3000 to be truly a breakthrough-type product in that it has the potential to cause a significant change in the way aeration practices are performed by superintendents today. And 'breakthrough,' used literally, in the way this product can penetrate through the turf, and any hardpan area that has developed. The Hydroject 3000 is a tool designed to take the stress not only out of the turf but out of the superintendent."

The normal greens aeration cycle involves coring, cleanup and, in some cases, verticutting and top-dressing. Greens can take seven to 10 days to heal from this process.

"That's not something the greens superintendent can do every month and keep his job," Hoffman said. "It's also not something the turf can take in the high-stress period of the dog days of summer."

"In addition, shutting down the golf course can cost from \$2,000 to \$25,000 per day depending on what course it is."

"The most important feature is that the turf can be treated without disturbing the surface," he said. "In the past, aeration was generally known as just a spring and fall application. This is when the roots are developing faster and can recuperate from the stress associated with mechanical aeration. This timing also coincides with reduced golf course play, especially in the cool-season market."

"Aeration and golfers don't mix. Golfers want lush, healthy, smooth putting surfaces. They are not willing to put up with the surface that conventional aeration and top-dressing causes."

"Now there is an answer. A superintendent can treat greens when necessary without con-



Toro's HydroJect 3000

cerns of this conflict. Now aerations and heavy play can both occur on the same day."

Citing a trend toward more frequent aerification, Hoffman said the HydroJect 3000 can be used more often "to keep the soil loose and productive for healthy new soil throughout the growing season and during high-stress periods."

"Turf can be treated when necessary and not just when golfers and timing permit."

Most conventional solid and hollow tine core aerators penetrate no more than three or four inches. The HydroJect 3000 reaches depths of four to eight inches with a single shot of water. To reach greater depths, the operator can either install larger nozzles, or stop the machine in one spot and let several spurts penetrate.

Depths of 30 inches have been reached, Lann said. "It will make a hole in asphalt," he added, answering any question that high-velocity water might have problems penetrating heavy thatch.

Michigan State's Rieke said the more the machine is used, the deeper the holes in the greens will get.

After the jets of water aerate the turf, rollers uniformly smooth out the green. The machine has a quick coupler to the course's water supply and uses four gallons per minute across the typical green.

List price of the HydroJect 3000 is \$18,000 to \$20,000. Its hydrostatic drive means no gears to shift, and it has very few parts to replace. Powered by a 24 HP Onon engine, it travels at 4mph.

Toro Commercial Division General Manager John Szafranski said the company spent several million dollars to design and engineer

the technology into a practical working machine.

Confronted with the initial challenge of finding a better way to pick up the cores, Lann said the Toro research team presented this answer: "The easiest way to pick up the cores is to eliminate them."

Lann and a crew of 10 people worked full-time on the project since 1985. "The technology is simple but the engineering isn't simple," he explained. "Now we have the technical things done and it's just the matter of getting everything into production."

A major problem, he said, was dealing with water. "It's a universal solvent, so it's hard to keep lubrication. And it's corrosive. We solved that by using corrosion-resistant materials used in other industries, but not the turf industry."

Rieke put off a question about the possibility of using the HydroJect 3000 to inject chemicals into the turf, saying he has "concerns" about using chemicals in the machine.

Using a three- by three-inch pattern, the HydroJect 3000 will aerate 13,200 square feet per hour — a somewhat higher productivity rate than Toro's other models.

Changing travel speed alters the amount of aeration. "You can go anywhere from zero to six-inch spacing," Lann said. "There is a nozzle every three inches. But you can plug nozzles if you want."

Toro President and Chief Operating Officer David Morris said the company has formed a business entity called Toro Ventures to focus initially on water aeration, lawn and turf equipment and utility vehicles.

## Int'l supers

Continued from page 46

**sociation.** JSA's membership has increased eight-fold to 800 from its original 100 of 30 years ago, explained Vice Chairman Katsuhiro Owada. Most hail from eastern Japan.

There is no licensing or certification program, although one is in the works. The group meets six times a year and some educational opportunity is available.

Golf is very popular in Japan where 60 courses are being built annually in a nation smaller than the state of California. Superintendents are in short supply, said Owada.

• **Swedish Greenkeepers Association.** The Swedish association's membership has grown to 550 superintendents and course workers since its inception in 1978. Included are 75 trade members (corporations).

There are 220 courses in the Scandinavian country with another 50 under construction. There are 50,000 golfers, a number that has increased significantly in the past 10 years, according to President Stig Persson.

The superintendents association is closely affiliated with the Swedish Golf Association. Together they sponsor a yearly trade show; educational seminars; college programs that allow students to specialize in golf courses their second and third year and will produce their first graduates in 1991; foreign speakers; and a 2,500-circulation magazine.

• **South Africa Golf Course Superintendents Association.** Founded in the 1950s primarily for Johannesburg-area superintendents, the association has expanded into a truly national organization.

Superintendents have traditionally been retired tradesmen from the mining companies that frequently own the country's golf courses. So education, or the lack of it, has been very important.

The South Africans have leaned heavily for their expertise on visits by American professors who have conducted South Africa Golf Association-sponsored seminars. The GCSAA recently certified the first South African superintendent.

College programs are geared to agriculture, *Continued on page 49*

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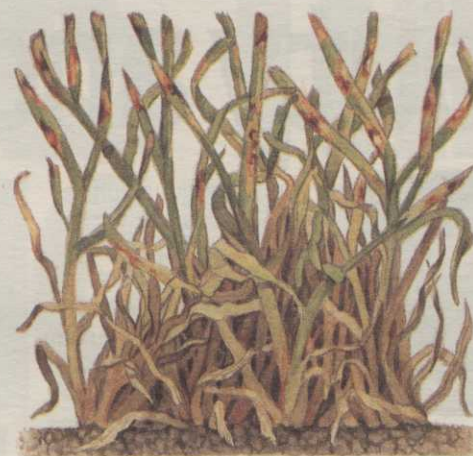
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