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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.

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 representa-tives of a dozen such organizations during February's Golf Course Superintendents Association of America conference in Orlando, Fla., in February.

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.

Toro aerator a breakthrough

BY MARK LESLIE
The Toro Company has unveiled a revolution-ary machine that aerates greens without disturbing the surface and interrupting play.

Hawaii lengthens wait

The Honolulu City Council passed an ordinance in late February requiring courses on farmland to go through the lengthy annual review process.

International superintendents share views

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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-
Toro

**Conference Report**

Toro's Hydroject 3000

Concerns of this conflict. Now aeration and heavy play can both occur on the same day.

Citing a trend toward more-frequent aeration, 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.

"Turfcare 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 hydrotastic drive means no gears to shift, and it has very few parts to replace.

Powered by a 24 HP Onan engine, it travels at 4 mph.

Toro Commercial Division General Manager John Sanfranceski 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.

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**Int'l Supers**

Continued from page 46

Society. JSA's membership has increased eight-fold to 900 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).

The 125 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 1960s 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 Americans professors who have conducted South Africa Golf Association-sponsored seminars. The GCSSA recently certified the first South African superintendent.

College programs are geared to agriculture, Continued on page 49

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**Preventing Turf Diseases**

**SUMMER PATCH**

Appears as small patches of light green turf, but may fade within hours to straw color. Prevent disease with Banner fungicide at 4 oz./1000 sq. ft before fungus becomes active, usually before soil temperature reaches 70°

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