

**G**UELPH, Ontario, Canada — The Canadian Golf Superintendents Association (CGSA) has begun exploratory talks with the University of Guelph that would make the Toronto-based school Canada's leading institution to train undergraduates to become golf course superintendents and provide in-service training programs for the country's existing superintendents, according to CGSA Executive Director Vince Gillis.

CGSA also met in mid-May with Canadian

## Canadian GCS, UGuelph talk training

government officials to discuss the marketing of the National Occupational Standards for Golf Course Superintendents endorsed earlier this year by the CGSA. The goal is to make course operators, managers and ultimately golfers more aware of the value of a quality superintendent.

A national validation process regarding the occupational standards was com-

pleted in mid-December involving national representatives from the CGSA and delegates from all regions of Canada along with input from Human Resources Canada, educators, golf course owners, Canadian Society of Club Managers and other employer representatives. Seven regional focus groups were conducted during the fall of 1997.

The new standards will define the role

and responsibilities of the various people who work for and with golf superintendents in order to ensure hiring standards are in place to assist golf course operators. With established standards, CGSA will have a greater impact on the curriculum utilized in the various colleges and universities that prepare people for a career path in turfgrass management. A certification program will likely be developed based on the new standards.

CGSA sees its key role as ensuring that

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## Roots, microbes studied at UBC

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know what's happening below the ground, how we can measure it and is there anything we can do about it to get better results above the ground," Holl said.

Soil, he explained, consists of living organisms — i.e. roots, algae, fungi, bacteria and actinomycetes. Bacteria and fungi are the most common constituents. Healthy soil averages 110 pounds of bacteria and 330 pounds of fungi per 1,000 square feet. These microbes function in a complex, interactive ecosystem that benefits root development.

But sand, the major component of putting surfaces, is not a good medium for growing microbes. Sand drains well and is compaction tolerant, but is a "crummy" place to grow microbes, Holl said. Microbes want water and sand doesn't hold water.

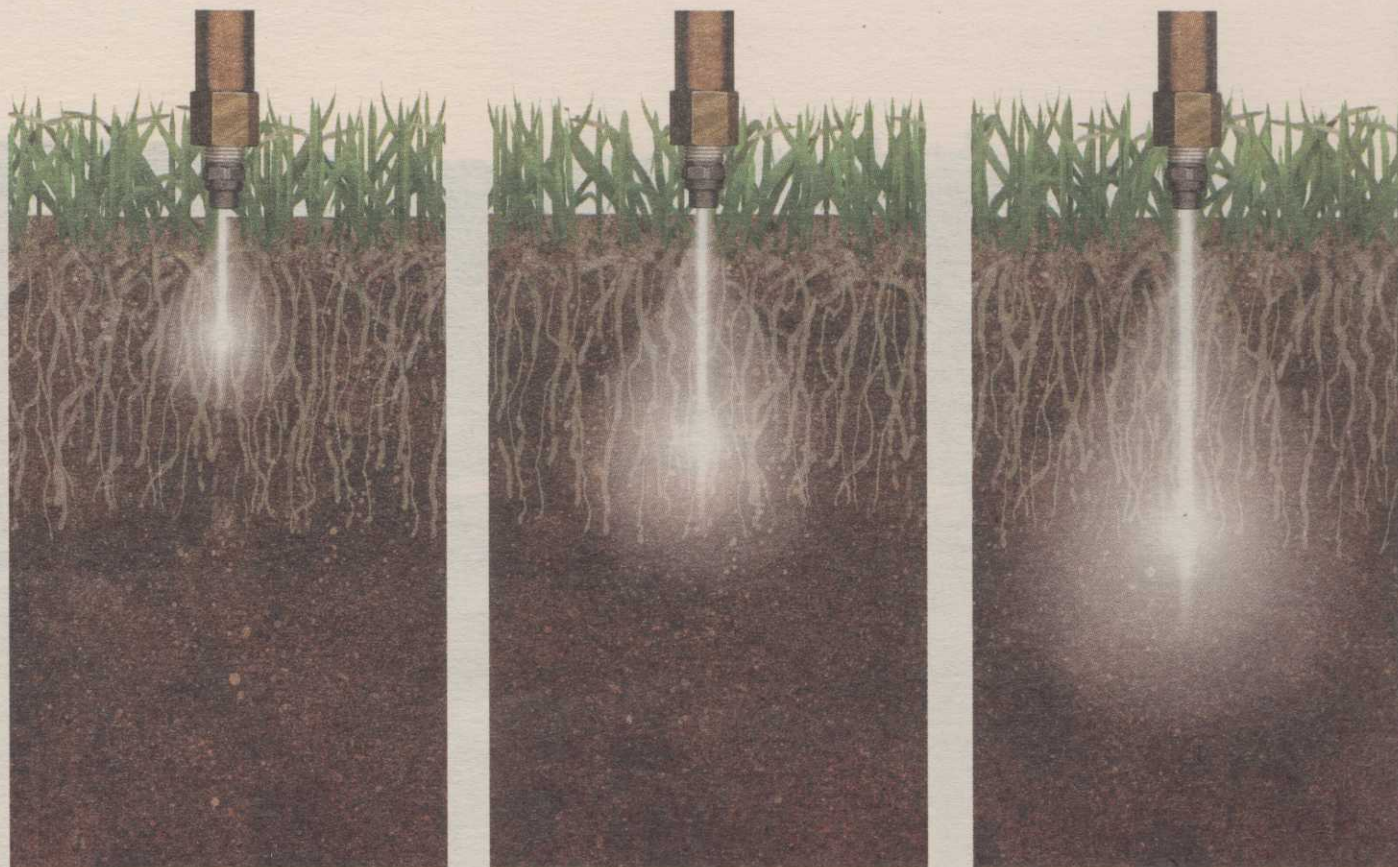
Holl reasoned that by studying microbe levels in various greens, he might discover why some greens do well while others suffer. So he asked three superintendents to select a good green (one that does well all times of year), a bad green (one that gets in trouble when stressed) and a control green at their courses.

Holl studied samples from the greens using computerized plate readers. "We anticipated we'd find differences in terms of groups of substrates, and we did," he reported. "But we also discovered something surprising. Carbohydrates and organic acids were the two substrates most readily available. They were used most widely during the winter and during stress periods [particularly July]. The easy substrates were used heavily when stress was present.

"The second thing that surprised us was the presence of many peculiar substrates. It looks like some of those nucleic acids and sugar phosphates vary during certain times, between good greens and bad greens, and between particular times of the year."

While it is possible to finger-

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## UGuelph adds second session to open room for more students

GUELPH, Ontario, Canada — The University of Guelph Turf Managers Short Course held every February has just become a bit more accessible.

To meet the heavy demand for the concentrated course, the University of Guelph has added a second session in the fall of 1998 from Nov. 16 through Dec. 11.

Registration is now open for both the fall and the winter offerings.

The course, offered for the past 30 years, has been a challenge to get into for the last two decades. Last Nov. 10, registration opened at noon for the February 1998 offering. The 50 spots filled within four minutes.

"The line-up was like waiting for concert tickets," said manager Peggy Nagle.

"Students started lining up at the door at 2 a.m. By 11 a.m., there were 60 people in line waiting to register. At the stroke of noon, our phone lines and fax lines went crazy with calls from across Canada."

The intensive four-week program is

in such high demand because of the quality of teaching and the marketability of its graduates, Nagle said.

For more information on the Turf Managers Short Course or to register, contact the University of Guelph, Office of Open Learning at 519-767-5000; facsimile 519-767-1114; e-mail to info@open.uoguelph.ca.

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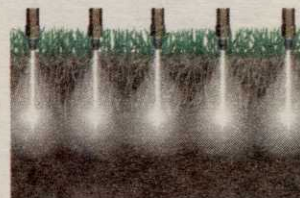


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## CGSA, UGuelph talk training

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course operators have access to the best possible pool of talent to manage their courses. It plays another vital role, that of ensuring the preservation of the environment through the responsible use of all products required to maintain fine golf conditions. National standards will raise the awareness of the industry and the general public as to exactly what a golf superintendent does.

Canada's professional golf superintendents are anxious to clearly demonstrate the role they play in today's golf industry. Superintendents on average have 12 staff during the peak season. With approximately 2,000 Canadian courses, that represents 24,000 people employed to accommodate the 70 million rounds played each year in Canada.

## Roots & microbes

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print a green based on its microbial components, it's still questionable whether the contents correlate with the way the turf looks or whether there are any specific markers that indicate whether a superintendent should be practicing a specific maintenance regimen.

In general, Holl said, sand-based or amended sand greens, especially if they are new, are a waste land for microbial habitat. Anything superintendents can do in terms of management that will enhance the development of micro habitats in a green will be an advantage.

Organic fertilizer proponents have always claimed their products stimulate microbial populations, Holl said. "We have some evidence that is true," he said. "So we're looking at organic versus inorganic fertilizers to see if there is a difference in microbial action."

"We're also looking at the idea that microbial populations can be stimulated by external sources and superimposing carbohydrate-based fertilizers on the soil surface to provide microbes with food that can carry out activities to develop healthy root systems."