

By TERRY BUCHEN

SHARON CENTER, Ohio— Research and subsequent answers to turfgrass problems are not always resolved by universities. A great example of networking information has occurred from superintendents, U.S. Golf Association (USGA) agronomists and university scientists nationwide who got together to beat moss.

Chairing the database net-

The Boss of the Moss — A group solution

working information was D. Frank Dobie, general manager and superintendent at The Sharon Golf Club here. Dobie wrote an article in September 1996 in *Northern Ohio Turfgrass News* about using a combination of Subdue 2E, wetting agent and spreader sticker, and the data-

base was formed soon thereafter when many superintendents expressed interested in doing further experimentation.

"The most effective method and material in terms of moss kill and safety to *Poa annua* and bentgrass was Dawn dish-washing detergent," said Dobie. Four ounces of Ultra Dawn were mixed in 1 gallon of water. The

solution was spot-sprayed with a backpack or hand sprayer, thoroughly soaking each spot of moss. The best results were achieved when air temperatures were between 55 and 80 degrees on days with full sunlight.

The moss turned an orange-brown within 24 hours, with no injury to the surrounding turf,

Dobie reported.

"We know that moss starts from spores. So, it is important to attack the moss plant before the moss flowers in order to interrupt this part of the life cycle," Dobie said. "We believe the Dawn dehydrates the moss plant, resulting in its death."

"We do not know how long the spores will continue to germinate, so clean-up treatments may be necessary for several years," he added. "We also do not know what conditions, cultural practices and discontinued pesticides may have allowed moss to become a problem in recent years. These are questions that could be answered by university testing."

Michael Hambach, superintendent at Stoneleigh Golf & Country Club in Winchester, Va., suggested using Dawn to Stanley Zontek, director of the USGA Green Section's Mid-Atlantic Region. Keith Happ, USGA agronomist who shares an office with Zontek, further researched the chemistry of Dawn and found that it contains cryptocide, which controls spores. That is most likely the reason for the formula for success. Cryptocide desiccates the moss and also kills the spores, which keeps the moss from reoccurring, Dobie said.

"Eighteen superintendents from eight states participated, and we discovered many interesting things as a group," he said. "Moss occurred under a wide variety of conditions. It did not matter if the greens were USGA-spec or soil greens. The grass types varied from *Poa annua* to Penncross, Pennlinks, South German, Washington, A4 and G2. The very dense turf of the G2 was not a deterrent. Heights of cut were from 1/8 to 5/32 inch. Thatch thicknesses were from 1/16 to 3/4 inch. pH's ranged from 6.0 to 8.0. Most greens had good drainage. But if the thatch was kept moist, moss seemed to be more prevalent. All had moss in full sun."

He added that annual nitrogen feedings ranged from 2 pounds to 7 pounds per thousand square feet. Years that moss was first seen were from 1985 to 1996. Years that greens were constructed varied from 1919 to 1993. Sources of top dressing were from eight suppliers. Some top dressing had peat and some was straight sand, he said.

Several superintendents reported that mercury-based fungicides had no effect on the moss or the spores. Most consider treatments with iron sulfate and/or ammonium sulfate to be ineffective. DeMoss killed moss but was too damaging to the surrounding turf, Dobie said. If only one green



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GOLF COURSE NEWS

Cal Poly Pomona plans 'living lab' course

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conceptual development plan, which was approved by the Cal Poly Pomona Campus Planning Committee. The plan deals with the various aspects of the project, including market feasibility, financial analysis, environmental resource analysis, design, alternatives, cost estimates and implementation strategy.

The facility will encompass a 340-acre parcel that sits on a hill offering views of the valley and surrounding mountains. Two hundred acres are impacted by the landfill and the remaining acreage was severely affected by grazing and agricultural use. The original concept was to build a nine-hole course over the closed landfill. New plans are to blend 18 holes through the entire site, offering the opportunity to revegetate the property with natural plant materials and encourage the return of wildlife to the area.

The landfill itself is due for closure in July 1999. The Sanitary Districts will be responsible for capping the landfill with 3 feet of clay and monitoring the site for leachate and methane releases for the next 30 years in accordance with EPA regulations. The landfill already produced an ample supply of methane gas that is collected and converted into electricity. All of the landfill's energy needs are generated on site and the excess power is sold to the SoCal Edison power grid.

"The operation of a self-sustaining site such as this is a very positive approach to dealing with waste," Barnes said. "The methane that will be generated by the landfill, even after closure, will be collected and used in an even more efficient manner for the operation of the golf course and its facilities."

Golf course architect Cal Olsen will assist in the course design. One of Olsen's recent projects, Coyote Hills Golf Course, reclaimed an oil-production site operated by Unical Petroleum.

The hope is to begin

construction in 1999, with nine holes and clubhouse ready in the spring of 2000.

Students from the various schools at the university will be directly involved in construction, revegetation and operation of the course.

For students in biological sciences, it is a chance to be

directly involved with recreation of open space and wildlife habitat while managing a closed landfill.

The need for a golf course seems obvious in the growing area of Pomona. The two courses in the area average 100,000 rounds and the analysis estimates that the Cal Poly

course could generate 70,000 to 85,000 rounds annually.

Barnes is beginning the difficult task of obtaining approvals. Public hearings have begun and concerns about golf construction are being heard. The debate becomes more intricate with a landfill course — a topic about which the public is not well educated.

"There is the feeling from some that golf simply is bad and

that the site should be turned into open space," Barnes said. "We are willing to discuss specific concerns about the project, but we hope we can not be bogged down dealing with broad generalizations that have been addressed many times before."

"Our goal is to create a quality golf course that will benefit the university as well as the community and the environment."

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Beating moss

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had moss, it was spread to other greens within a few years, probably by mowing equipment.

All superintendents considered moss a serious problem. All who used the Dawn treatment in 1997 considered it the best method of control.

"We will continue to correspond with the 'Moss Men' in search of some more answers," Dobie said.