

Moss symposium

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(although some still debate this). Moss is classified as a bryophyte, which have no roots, no vascular system, and reproduce vegetatively and/or by spores. Since moss is unable to translocate chemical products, this is a major problem for control measures. Moss also has the physiological ability to sustain drying out up to 80 percent for a period of two years and still not die. Each plant also has the ability to produce 50 million spores.

WHAT CAUSED THE INVASION?

Moss has become a big problem in Colorado and elsewhere in the United States for four reasons.

First, older snow mold fungicides such as PMAS and Calo-clor contained mercury that some think had a side effect control on moss. With those products now off the market, moss has taken root.

According to Matt Nelson, cultural practices have also aided moss development. Lower cutting heights, low nitrogen fertility, and the thatch/topdressing layer all contribute to moss.

"I've never had anyone tell me that they have a moss problem on collars, tees or fairways," Nelson said. "In reality, we can't cut our greens at 3/16 of an inch, but this might solve the problem."

While greens might have excellent internal drainage, the thatch/topdressing layer at the upper surface of greens is a perfect breeding ground for moss. The development of a perched water table can be attributed to thatch development and also from using a finer sand particle size than the original construction root zone mix.

Syngenta's Matt Giese raised a fourth possibility that algae is a precursor to the eventual development of moss. This has been indicated by some of the research done by Larry Stowell of Pace Consulting in California. That research was based on the use of chlorothalonil (Daconil) to control algae and to ultimately prevent moss development.

MORE RESEARCH NEEDED

While research on moss is not abundant, it is occurring. There are four sites of research at the moment: Dr. Rossi at Cornell University, Dr. Cook at Oregon State University, Dr. Yelverton at North Carolina State University and the work already mentioned at Pace Consulting.

The research data available from these sites, however, differs in its consistency. For example, Dawn dishwashing soap worked very well in the California studies, but ranked poorly in the Oregon studies. Since results vary significantly depending on site climatic conditions, this is a big stumbling block for Colorado (and other states), as there has been no work done in a climate with arid summer conditions.

Of all the control options, Dawn dishwashing soap (which is not registered) appears to be the product with the most consistent control results, and Daconil can be used as a preventive measure. New products with some promise for control are: Terracyte, Junction and a yet to be released product called No-Mas from Monterrey Chemical Company.

However, a larger research effort is needed to explore both cultural inputs and chemical controls before there will be a cure-all for moss eradication. ■

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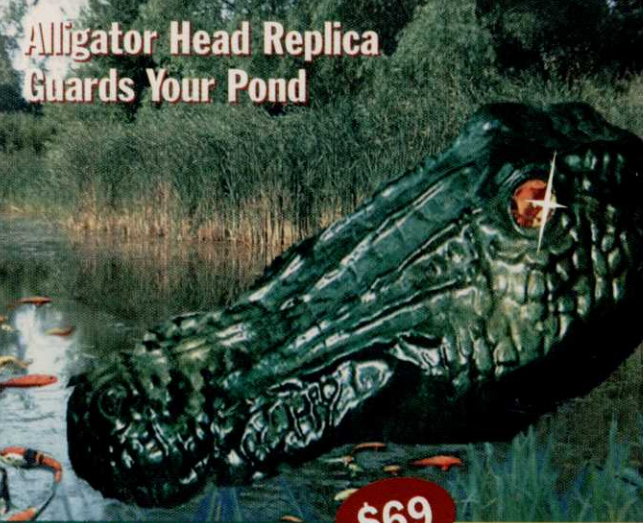
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- 6-7 *6th Annual Equipment & Engine Training Council Conference at Airport Marriott Hotel, Bloomington, Minn.* Contact: 800-228-9290.

MAY

- 6-8 *56th Annual Southeastern Turfgrass Conference at Rural Development Center in Tifton, Ga.* Contact: 229-386-3416.
- 12-16 *12th Annual ING Spring Conference in Pinehurst, N.C.* Contact: 407-328-0500.

JUNE

- 12-14 *Harvard Design School Golf Course Design and Development Institute's Clubhouse Design and Site Planning seminar, Cambridge, Mass.* Contact: 617-495-4731.
- 16-17 *Birds & Backyards Industry Expo in Madison, Wis.* Contact: 800-324-3337.
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