Real-Life Solutions

MOSS CONTROL

Managing Moss

A new herbicide proves efficient in ridding greens of those problem clumps. **But superintendents must** also adhere to important cultural practices for moss control

BY LARRY AYLWARD

he golf course greens at Highlands Country Club are a haven for moss. The Donald Ross design is located in the mountains of western North Carolina, an area that receives about 85 inches of rain annually. Golfers love the temperate climate. But so does moss a small, soft, nonvascular plant that grows in clumps on putting greens and causes superintendents pounding headaches.

"Moss is always a battle in this climate," says Brian Stiehler, who's in his fourth year as superintendent at Highlands.

Until recently, Stiehler had to improvise to control the moss on the course's greens. He threw everything at moss but the kitchen sink, including a product he uses to wash dishes in the kitchen sink. Stiehler mixed a strange brew of Ultra Dawn dishwashing

soap, Listerine mouthwash and a wetting agent to control moss.

"It was bizarre," he says of the unconventional concoction. "We used a whole arsenal of stuff."

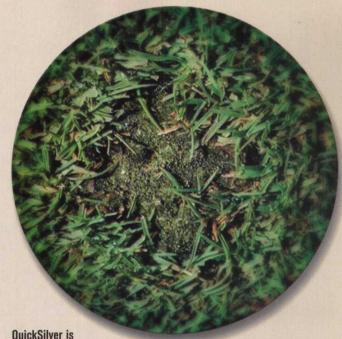
That stuff worked — to a degree. But Stiehler couldn't achieve the moss control his course's greens required.

Other superintendents have used Ultra Dawn alone or in combination with other products such as hydrogen peroxide to control moss. Still others, including Stiehler, have tried baking soda.

"The problem is that baking soda yellows the grass tremendously, and the grass takes awhile to recover," Stiehler says.

While superintendents have gained some success with these unconventional items, none are registered with the Environmental Protection Agency for moss control (although that hasn't stopped superintendents from using them). But a new product has surfaced that's registered by the EPA for moss control. Philadelphiabased FMC Corp. introduced QuickSilver, a herbicide that's making a name for itself in moss control.

During a question-andanswer session at the Ohio Turfgrass Conference & Show with several superintendents, United States Golf Association (USGA) Green



gentle on most bentgrass varieties, according to FMC Corp., manufacturer of the product.

Section agronomists Bob Brame and Keith Happ touted QuickSilver when moss control was discussed.

QuickSilver, a carfentrazone-ethyl, works by effectively inhibiting a key enzyme in moss chlorophyll production, according to FMC. Fred Yelverton, Ph.D., a turf professor at North Carolina State University, said several years of research reveals that QuickSilver "appears to be the most consistent for controlling silvery thread moss over a broad range of environmental conditions."

Moss is a year-round threat at Highlands Country Club, but it usually occurs in the summer. "We see it most on undulating greens," Stiehler says.

When Stiehler began using QuickSilver last year, he was able to place the Ultra Dawn dishwashing soap back in the kitchen cupboard. He uses QuickSilver about once a

month to keep moss in check. He usually tank mixes it with other chemicals. "I don't have a problem with moss now," Stiehler says.

Like many superintendents, Stiehler is skeptical of spraying any new herbicide on his course's greens. Nothing against QuickSilver or any new herbicide, Stiehler says, that's just the way most superintendents think when it comes to their golf courses' greens. The greens are the bread and butter of their operations, so they must be cautious.

Stiehler tested QuickSilver on moss growing on the club's croquet course, which he calls his experimental green. After a few tests, he was satisfied that the product was safe for his course's bentgrass greens. "I have a good comfort level with QuickSilver now," he says.

Stiehler says he supplements spraying with aggres-

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Cultural practices are vital to stop moss from reoccurring, says Brame, director of the USGA Green Section's North-Central region. Even if moss is eradicated, it can return like other turf diseases, especially if wet conditions that foster the disease are prevalent.

The three most-important cultural practices to keep moss in check are fertilization, cutting heights and water management.

Fertilization has to be adjusted in many cases to prevent moss, Brame says. The specific amount of minor nutrients

A green infested with silvery thread moss.

The same green, 43 days later, after two treatments of QuickSilver.



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in addition to nitrogen, phosphorus and potassium, is essential to control it.

"A deficiency in a minor nutrient could create a weakening and open the door for moss," Brame says. "So fertilization in terms of the 'total package' has to be considered."

Proper cutting height, which directly affects turf density, is also important. Greens mowed too close can cause turf thinning, and moss can take over the thin areas if the weather conditions are right.

Brame says proper management of water content in the upper soil profile is essential. Too much moisture held by organic matter and finer articles in the soil can spur moss development. Core aerification in the spring and fall, deep tining in the summer and a first-rate topdressing program will prevent moisture and hinder moss development.

But some moss is bound to break through, Brame says. That's why there's QuickSilver.

Stiehler is thankful he now has a reliable product in his toolbox for moss control.

"It's nice to know there's something out there," he says. "There was nothing for the longest time. I don't know what superintendents did 10 years ago if they had bad [moss] problems. I think that's when everybody got into making their own concoctions. But I don't think any of those have been that effective."