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

The 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. Philadelphia-based FMC Corp. introduced Quicksilver, a herbicide that’s making a name for itself in moss control.

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

Section agronomists Bob Brane 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 aggress...
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sive aerification and verticutting pro-
grams in areas where the worst moss
occurs.

Cultural practices are vital to stop
moss from reoccurring, says Brame, di-
rector 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
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 fertiliza-
tion 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 mois-
ture 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."

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