BANKING ON EARLY-SEASON DOLLAR SPOT C

Superintendents find success and save money by spraying earlier

Caught between a rock and a budget crunch, golf course superintendents from low-end daily-fees to high-end private layouts are looking for ways to save money without reducing the quality of their turfgrass.

For some, the answer comes in their methods of battling the pervasive dollar spot disease that doesn't require a change in their favorite product or the rate of application. All that is modified is the timing. Across the country in regions that see dollar spot, roughly 50 percent of superintendents are now applying fungicides in either early spring or, for some, in late fall. The result for many is a better control of the disease with fewer applications.

Jay Mathews, the longtime superintendent at Grove City (Penn.) Country Club, first tried early-season control after hearing about it at a field day sponsored by The Ohio State University. Since that time, Mathews has been putting down two fungicide applications in early April. Not

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ONTROL

More superintendents are finding that it pays to spray in the spring to control dollar spot.

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only has he found that control is even better than when he previously only sprayed during the summer, but his course requires fewer chemicals. He estimates his savings at $20,000 a year.

In conjunction with the new way of battling the disease, Mathews has also changed the way his turf receives nitrogen. "We've had crazy summers with too many variables with our slow-release fertilizers," he says.

As a result, 79 percent of his nitrogen applications are in ready-available form and 21 percent are slow-release products. He makes nitrogen applications once a month.

Mike Boehm, professor and chair of the plant pathology department The Ohio State University, says researchers stumbled across the possibility of a spring or fall application controlling dollar spot back in 1999. The department was rotating turf plots for disease trials and some received no fungicide applications in order to prevent carryover from one study to the next. It was then that Boehm and others realized that plots that didn't receive chemical applications didn't show signs of dollar spot.

"That's the way research happens," Boehm says. "If you keep your eyes open, you might see something."

At the same time, says Boehm, turfgrass researcher Joe Vargas at Michigan State University saw the same results with early-season applications of chlorothalonil-based products. Soon, leading researchers such as Rutgers University's Bruce Clarke, Purdue University's Rick Latin and Penn State University's John Kaminski were conducting their own experiments.

By 2005, several fungicide manufacturers were taking part in the research. Their products had an impact. "This isn't chemical-company specific," Boehm says.

What is specific to make the program work, though, is for superintendents to have a handle on five areas of information. Boehm said knowing the historical trends for heat, humidity and precipitation as well as the fertilization status of the turf and the frequency of plant growth regulators use is vital.

The goal is to determine when the pathogen is active and doing damage to the plant, not when the plant shows the damage, Boehm says.

"If you know when it interacts with the host, you're better equipped to manage the pathogen," he adds.

Mathews describes it this way: "It's a lot easier to control a 5-year-old child than a 25-year-old child."

All the research has not determined why applying fungicides in fall and spring is so effective. Boehm said some postulate that the timing inhibits the "waking up" of the disease or possibly, in the case of the fall application, makes it less winter hardy.

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"Somehow, we're affecting how the fungus works with the grass plant," Boehm says.

When conditions are right for dollar spot to emerge, the temperature is between 68 degrees Fahrenheit and 86 degrees F, according to Boehm. But it can still survive, and might be doing the most damage, at temperatures below 68.

"It doesn't like it less than 42 degrees," Boehm says. "We're not sure what it's doing between 42 and 68 degrees, but the chance is it's growing."

Boehm says the optimum time to put down the initial spring application is soon after fairways have been mowed for the second time. Fall applications probably work just as well as spring ones, but it's more difficult to know when to apply.

"It's easy to predict when you're going to break dormancy," he says. "It's difficult to predict when you're going dormant."

Whatever the reasons for the success, more and more superintendents are buying into the early-application method.

Dennis DeSanctis, a territory manager for Syngenta Professional Products in the Northeast, estimates that about 50 percent of his customers now put down a spring application.

"It's been a trend going on for the last five years," DeSanctis adds, adding a reason for this is "more and more resistance issues" shown by dollar spot, the most troublesome disease on cool-season turf.

Boehm says he's happy superintendents are trying the method and monitoring the results rather than just listening to the "sage on the stage," as he refers to himself and others who lecture at education seminars. "It just validates all the work we're doing," he adds.

Many superintendents, however, are sticking with the method of frequent summertime spraying. In Pennsylvania, Mathews says he's touting the program and has let others know he's saving money and controlling the disease better than ever. But those superintendents still don't change.

"They haven't bought into it because they have the budgets," Mathew says of many of his brethren at courses with money. But Mathews says he has been questioned about it more in recent years as budgets have been cut. Mathews also admits that making the switch can cause consternation.

"It's a little scary," he says.

There are some superintendents, like Mike Stachowicz at Dedham (Mass.) Country and Polo Club, who experimented with the spring application and missed out on the desired results.

"It didn't seem to help me when I needed it most," he says, although he admits he remains intrigued by the early spraying regime and may experiment with it again.

For those looking to see if the spring or fall application will help their courses, Boehm suggests this strategy: First, determine which fairways are most affected by dollar spot and choose one for the experiment. Second, cover a 4-foot by 4-foot section at the end of the fairway nearest the tee, with 2 feet on either side of the midpoint so that an unsprayed control zone is created. Next, spray half the fairway in early spring, again covering the 4-foot by 4-foot-section.

From there, the superintendent should follow his or her normal spray regimen, remembering to cover the control area. On the second application, don't apply to an area one boom width in from the end of the fairway nearest the tee. On each subsequent spray, move in one more boom width. As a result, the chemical will not have been applied four boom lengths in from the tee end of the fairway by the fourth application.

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The final step is when dollar spot does hit, starting at the green end, the superintendent should drive down the middle of the fairway to look for symptoms of the disease, noting when he sees the beginning of satisfactory control, Boehm says.

The superintendent should also look to see if there's less dollar spot on the side of the fairway that received the spring application. Also, at the end of the fairway nearest the tee, he or she should check to see if the pathogen is still being controlled in the area that received fewer applications than normal.

Often times, superintendents will realize, even if they don't want to switch to putting down a fungicide in the spring, that they can still get away with fewer applications, Boehm says.

Early-season applications to control dollar spot could have a far-reaching impact on golf course maintenance as a whole.

"Understanding the biology and ecology of the fungi is key to moving IPM on golf courses to a whole new level," Boehm adds. ■

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