

Whetting Their Appetite

Superintendents increase surfactant use as water concerns heighten and products improve

By John Walsh,
Contributing Editor

The impact that water use has on golf course management continues to ripple through superintendents' maintenance practices.

Golf course superintendents use more wetting agents now than they did just five years ago, and there's no question it stems from a desire to use water more efficiently. Superintendents are using surfactants in multiple conditions, other than when it's dry because they help balance water and air in the soil by moving water down through the profile.

"The biggest reason superintendents use more wetting agents is because the cost of water and labor has increased and the amount of available labor has decreased," says certified golf course superintendent Don Sutton, sales manager for

AmegA Sciences. "There's not as much hand-watering occurring because of improved wetting agent performance."

The positive trend for soil surfactants also is a result of superintendents' continued understanding that managing water is becoming more important. Wetting agents help irrigation efficiency by using less water.

Superintendents also use wetting agents in conjunction with fungicides to treat fairy ring and patch diseases, says Don Spier, vice president of the turf and horticulture business for Precision Laboratories. There's also an increased use of wetting agents with insecticides to make sure pesticides get to where they need to be, Spier notes.

Some superintendents apply wetting agents in the fall to help move water through the soil profile in the spring to dry out the surface from rain and snow.

"It's more difficult to manage turf in wet conditions than in dry conditions," says Andy Moore, director of marketing and business development for Aquatrols.

Surfactant use in wet conditions
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Terminology

The words **wetting agent** and **surfactant** are interchangeable, although surfactant is used more nowadays because superintendents can do more with them than just wet a dry spot. Technically, surfactant is a broader term that can include emulsifiers, adjuvants and penetrants.

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often changes a superintendent's opinion about them. Another example: A superintendent managing a flat course with drainage problems saw positive results in the spring after applying a wetting agent in the fall. He was able to open the course sooner than he did when he didn't use surfactants.

"If we improve how water moves through the soil, we're also helping superintendents fertilize more efficiently," Sutton adds.

Saving water and energy

Surfactants can save water, energy and money if used regularly throughout the growing season. However, there will be differences year to year based on rainfall, Moore says.

"Superintendents can see a marked difference — a 20- to 40-percent reduction in irrigation," he says. "You can keep more of the golf course watered because you're stretching water's use further."

Sutton cites a superintendent in Delaware, Ohio, who had never used wetting agents. He was hand-watering six hours a day (two workers, three hours each) for 90 days. The following year, he used wetting agents (applied monthly) and only hand-watered twice. "It was a huge labor savings," Sutton says.

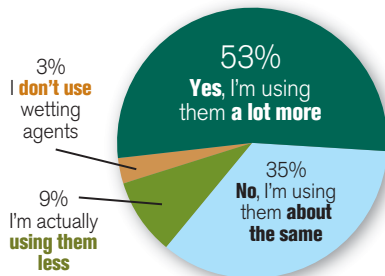
Because the cost of water isn't going to be cheaper and it's being restricted in some areas of the country with more restrictions on the way, more superintendents will look to see how wetting agents can be incorporated into their programs. Another factor contributing to more wetting agent use is the green movement, which is forcing superintendents to analyze their water use more closely.

The market will continue to see wetting agent use grow as water becomes a bigger issue than it is now, Spier says, adding that there will be more players in the market with products. "It's all driven by water restrictions," he says.

The most common use of wetting agents is on greens, but some superin-

More Wetting Agents, Please

According to the Golf Course Superintendents Association of America, 92 percent of superintendents use soil wetting agents to conserve water. **We asked superintendents: Are you using soil wetting agents differently than you did five years ago?**



Source: Based on a Golfdom survey of 473 superintendents.

tendents are extending their use to tees and fairways depending on budgets and philosophies. Most are applying them monthly during the most stressful times of the year, working them into the spray rotation, Moore says.

Superintendents want greens to be as uniform as possible. They can use various wetting agents for each situation and spend \$1,000 to \$10,000 a year. A typical greens program costs between \$2,000 and \$3,000 a year with Southern courses spending more because of the longer season, Moore says.

"Through market research, we're seeing more use on fairways which translates to course-wide," Moore says, adding there's an increasing number of superintendents who are using surfactants course-wide through irrigation systems. "Our products focused on that area have had growth the past 10 years."

Says Spier: "Thirty to 40 percent of our customers are using soil surfactants in the fairways in addition to the greens. Five years ago it was 10 to 15 percent."

Moore says there's more wetting agent use in the West but not so much in the South because budgets are more limited than in the Midwest and Northeast, where there's a higher concentration of private clubs. However, the Southern market has grown, mainly because the season is longer.

Sutton says about half of Amega Sciences' customers are treating fairways

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with surfactants. “The benefits of wetting agents might dictate more use in fairways,” he says.

Addressing skepticism

Even though wetting-agent use has increased, superintendents had to overcome (some are still overcoming) skepticism about their effectiveness. Sutton began using wetting agents in 1995 as an assistant superintendent when there were only a few products on the market.

“The older products had a potential to burn the turf,” he says. “Some superintendents had bad experiences. Wetting agents became more popular because of improvement in performance, reduced phytotoxicity and better understanding of their benefits.”

Skepticism still exists because of the confusion and differences among the many products on the market.

Can you guess which side of turf received a dose of wetting agents and which didn't?

“Unfortunately, a lot of products don't have the research to back up their claims,” Moore says. “This creates confusion in the field.”

Despite that skepticism, about 92 percent of superintendents say they use wetting agents, according to a survey by the Golf Course Superintendents Association of America.

Spier says superintendents are less suspicious of wetting agents because some companies constantly conduct wetting-agent trials to validate them. But some confusion still exists because there are so many surfactants, and superintendents end up using products that perform differently.

Moore says Aquatrols helps superintendents understand what's in the jug

without getting into the detailed molecular structures of the products, explaining the differences between chemistries so they're better-educated buyers.

“[Superintendents] should ask for enough clear information so they know what they're buying and what the differences are between the products,” he says.

Superintendents should also know the water quality at their courses and how it affects soil structure and conditions, Sutton says. Wetting agents play a part in that.

“I didn't pay enough attention to water quality when I was a superintendent,” he says. “But more superintendents should pay close attention to it. It's an important part of the whole picture, and wetting agents are part of the bigger picture of water quality and how it affects soil structure.”

Better tools exist for researchers to monitor soil to determine volumetric moisture content. In the past, technology such as time-domain reflectometry wasn't available to paint a clear picture of what wetting agents would do in soils.

“We can answer questions better about how they're performing and can measure how these products perform better,” Sutton says. “These type of tests allow a superintendent to pick a moisture percentage range and choose a wetting agent to meet that moisture rate.”

Surfactants' new chemistries allow superintendents to use them as a foundational tool.

“Water will work better for them,” Moore says. “Wetting agents are an integral part of superintendents' turfgrass management programs and less of a problem-solving tool. However, this is an evolution, and we still have a long way to go.” ■

Walsh, a contributing editor to Golfdom, resides in Cleveland.



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