

# Wetting agents gaining in importance as

By Mark Leslie

Wetting agents — a little-used creature of the marketplace for two decades — are suddenly and unequivocally in the forefront of golf course maintenance as pressure mounts on superintendents to reduce use of water and chemicals.

"Everybody's making them now. With pressure on pesticide and water use, we're going to have to find other ways to grow grass. Wetting agents help," said one superintendent in the Northeast, who is dabbling with extensive use of the products for the first time. "Very few people in our area have a wetting agent program now, but I think you'll see a lot on seasonal programs in the future."

Wetting agents are surfactants, meaning they increase the spreading and penetrating power of water by lowering surface tension.

Their benefits are many. Because they help water penetrate the ground surface and get to the root zone, they also:

- greatly enhance effectiveness of liquid pesticides or fertilizer being applied;
- help prevent wilt and localized dry spots;
- allow reductions in water and chemical use;
- help reduce compaction; and
- stop dew from forming for many days.

Mike Saffel, a research technician working with Dr. Paul Rieke at Michigan State University on wetting agent research, said there are actually three classes of products — surfactants and adjuvants (which are formulated to be used with chemical applications) and wetting agents (which are developed more to improve soil moisture and to help water penetrate the ground).

"Because of the increased number of sand-based greens, which are prone to dry spots, we'll see more use of wetting agents. The majority of people are applying them just on greens. That's the main focus," Saffel said.

## CHECK IRRIGATION FIRST

U.S. Golf Association Green Section National Director Jim Snow forewarns superintendents: "Many times you use a wetting agent when you could solve the problem by fixing your irrigation system's coverage... That's more true in the North or East, where irrigation systems aren't as sophisticated or as finely tuned as they are in the West. In the West, where you don't have rain for months, you find out very quickly where your irrigation is poor. In the East you may never find that out. So when you do have a dry spell or a cutback in water, you think about treating with wetting agents.

"In the Northeast irrigation coverage is poor, relatively speaking. Yes, every area gets some water, but some areas get twice or three times as much as another spot. I've told a lot of clubs to check out their irrigation, and they've found out it was bad and they resolved the problem by changing

the heads, or nozzles, or correcting pressure problems or line deficiencies."

Saffel said management practices are critical to how well the product works. "If they overwater, the wetting agent benefits will be negated," he said.

Superintendent Tim Hiers of John's Island Club in Vero Beach, Fla., added that courses with good water quality may not need wetting agents at all. While soft water will penetrate the ground surface well, he said hard water does not. Wetting agents "allow that water to cut right through."

## TEST RESULTS

Saffel said Michigan State's tests have been "very variable. Sometimes we'll get obvious results, sometimes not... We know they take dew off. We know sometimes they increase soil moisture. We know they do increase the effectiveness of some herbicides. But we don't know their soil action and what we

can expect as long-term benefits."

He said extensive phytotoxic and soil moisture measurements have been taken, and results will be available this fall.

While he had not seen the positive results of University of Georgia tested done on Roots, Inc.'s NoburN, Saffel said the wetting agents MSU has tested can burn the turf if applied at the highest rates, even if they are watered into the ground immediately. "Avoid watering on a hot day," he said.

## GOOD REPORTS

That said, many are singing the praises of wetting agents.

Superintendent Jim Diorio of Purpoodock Club in Cape Elizabeth, Maine, said: "I'm getting a lot better water penetration now, after using wetting agents, aerating and deep-tine aerating. We're getting less and less puddling."

Diorio, who started this treatment program five years ago, uses a hose applicator to hit localized dry

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## Misinformation in market, says company official

The marketplace is filled with "tremendous misinformation" regarding application rates of wetting agents, according to one manufacturer.

"People are making exaggerated claims because — they can," said Ray Kimmel of Parkway Research in Houston, Texas, noting that the industry is not government-regulated.

Yet Kimmel opposes regulation which, he said, would mean "lesser quality from fewer people, and the price would go way up. (With registration) you start having registration costs and inspections and all the other things that drive up the prices of pesticides and herbicides to astronomical proportions."

Superintendent Jim Diorio of Purpoodock Club in Cape Elizabeth, Maine, said: "Normally, the higher the percentage of active ingredient in a product the less you have to use to do the job. And manufacturers are using all sorts of active ingredients."

Kimmel agreed. "There's very little way to measure effectiveness of wetting agents. So in our mind the best way to judge is by active ingredient," he said.

He said most wetting agents use similar raw materials. Most are non-ionic surfactant materials.

However, he said: "Everyone is in a big scramble to beef up their active ingredient (AI) total, so they are counting alcohol. That is misleading. Alcohol has no beneficial effect."

Meanwhile, U.S. Golf Association Green Section National Director Jim Snow warned that superintendents should consider more than percentage of active ingredient in choosing a wetting agent.

"It is true that as far as the buy is concerned, you use less product with a higher active ingredient. And that product may be better. On the other hand, the formulation is important and maybe other products work better even though their AI is not as high."

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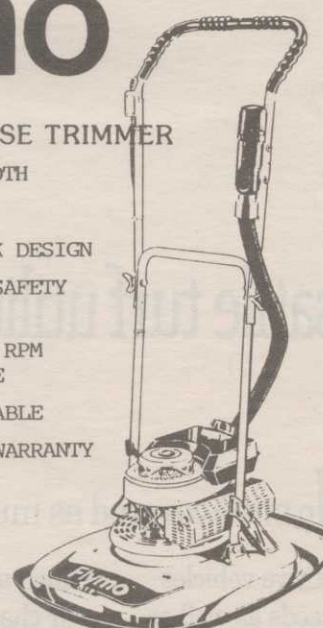
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