

Less Is More

**Improved fungicide
features new formulation
that enhances effectiveness
of active ingredient
against turf disease**

BY PETER BLAIS

The recent introduction of Cleary Chemical's 3336 Plus fungicide, an improved version of traditional Cleary 3336 that has long been an effective treatment against numerous turf diseases ranging from dollar spot to brown patch, comes at a fortunate time for superintendents and Cleary.

According to Cleary officials, the company began developing 3336 Plus in 2001, two years before the Environmental Protection Agency (EPA) completed a Re-registration Eligibility Decision (RED) leading to the federal agency's recent order for users to scale back use of the product's active ingredient, thiophanate-methyl.

The new flowable takes advantage of Cleary's

patent-pending Cleartec Activation Technology (CAT), a formulation change that enhances the effectiveness of the active ingredient in traditional Cleary 3336.

"We are getting better performance with less active material," said Director of New Business Don Breeze, noting the company would have developed and launched 3336 Plus with or without EPA's late-2004 order to reduce thiophanate-methyl use. "The government has mandated through the re-registration process that we use less thiophanate-methyl. With this new product, the superintendent still maintains many of the tools that were available [before the EPA decision]."

Thiophanate-methyl is the last remaining com-

The Issue

Because of increased EPA regulations, pesticide users must scale back their use of some products and their active ingredients.

The Solution

New products that enhance the effectiveness of the active ingredient without using more of it but providing better penetration of it.

pound EPA allows for golf course use in the mode-of-action group called enzimidazoles, chemicals that are particularly adept at fighting such diseases as dollar spot, brown patch, anthracnose, summer patch, gray leaf spot and pink snow mold, explains Cleary's Director of Product Development Richard Fletcher.

Traditional 3336, on the market since April 1970, is a popular part of many golf course fungicide rotations. Looking to differentiate

3336 Plus, Cleary introduced CAT into the 3336 material and renamed the product 3336 Plus.

"We have a strong brand in the 3336 name," Breeze said. "That's one of the reasons we did not change 3336 Plus to a new name."

CAT is a formulation change to Cleary 3336 that allows the use of less active ingredient while providing better penetration of the chemical into both the fungus and plant. The result is that 3336 Plus remains effective up to 50 percent longer against turf diseases than traditional Cleary 3336 while releasing less thiophanate-methyl into the environment, Breeze and Fletcher say.

"The reduced amount of thiophanate-methyl in 3336 Plus allows the superintendent to spray twice as often with this product, and still meet the [revised] EPA guidelines regarding maximum use, when compared to the revised EPA label for 3336 and or generic thiophanate methyl-based products," Breeze says.

Cleary 3336 Plus, currently available on a limited basis, will have a full-blown launch this fall and be widely available in 2006. The product will likely sell at a slight premium compared to traditional Cleary 3336 or generic thiophanate-methyl-based products because of the limited amount initially available.

"But since it will last longer, the cost per day of control will ultimately save

the golf course superintendent money," Fletcher says.

Eric Carlson, the superintendent the last 11 years at Lake Mohawk Golf Club in Sparta, N.J., used the new product last August on his bentgrass/*Poa annua* fairways to primarily control dollar spot.

"It worked real well," he says. "I got four weeks of control. If you use the same rates and get an extra week, that could be a whole application saved over the course of the year. I intend to make it part of my fungicide rotation."

Joe Livingston, certified superintendent of River Crest Country Club in Fort Worth, Texas, has used tra-

ditional 3336 in the past as the foundation of his summer disease-control program to manage pythium, brown patch and a variety of summer bentgrass diseases on his greens.

"I switched to 3336 Plus this year because of the added efficacy of the product," he says. "Limiting the amount of active ingredient is definitely a good thing. The 3336 Plus allows me to lower the application rate a bit and get the same disease control. It's easy to use, mixes well and the lower rate is very helpful."

Lee Simms, superintendent of Great Hope Country Club in Westover, Md., says he tried the new prod-

uct on three bentgrass fairways during the summer of 2004. Historically, the course has been lucky to get 14 to 21 days of coverage from its dollar spot-control fungicides.

"With the 3336 Plus we were getting close to 28 days," he says. "It lengthened our dollar spot control by at least a full week. ... We were looking for some brown patch control and 3336 Plus gave us good control on that, too."

Clovernook Country Club superintendent Bob Shetter noted that 3336 Plus provided effective control of various turf diseases at his Cincinnati course, but for a shorter period.

Shetter reported 16 days of brown patch control on fairways and three weeks on tees this July.

The course labored under above-average temperature conditions during that mid-summer stretch, leading Shetter to believe he might be better off using the new formulation as a late-season or early-season spray when temperatures and humidity levels are slightly lower.

"If it had been a typical summer, I would have likely gotten the coverage time they expected," he says. ■

Peter Blais is a freelance writer from Monmouth, Maine.

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