

MAXIMUM CONTROL

Slow-release products can enhance your turf maintenance practices — if you know how to use them

Kevin Goolsby, superintendent at Sportsman of Perdido Golf Resort in Pensacola, Fla., tried many nitrogen sources to manage his newly seeded seashore paspalum course — 22, to be exact.

It wasn't because Goolsby couldn't settle on one product. Researchers used his course as a test plot to monitor the effectiveness of a variety of nitrogen sources. As the research ended, one type of product stood out from the rest for Goolsby's course.

"You name it, we tried it," Goolsby says. "At the end of our experiments, though, we kept coming to the same conclusion: Slow-release products work best for our course."

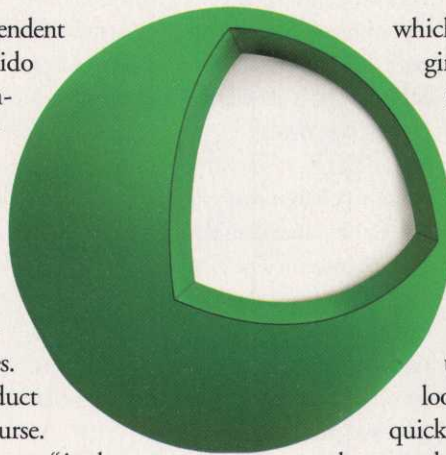
This year, Goolsby intends to use slow-release fertilizers exclusively. He says the product acts as a low-cost way of spoon-feeding his turf the nutrients it needs.

Slow-release products work differently than traditional chemicals, so you can't think about them in the same way. Proponents of slow-release products, like Goolsby, cite advantages such as lower overall environmental impact, fewer applications and longer residual impact on turf. Without proper understanding and application, however, these advantages can be lost.

How they work

Slow-release products work by releasing chemicals in small amounts over time, according to Jeff Higgins, director of market development for Pursell Technologies. Therefore, the residual effects last longer, leach less and allow for fewer applications. Temperature, moisture and microbes, combined with the thickness of the coating, are among the factors that will affect the speed with which the chemicals release, Higgins says. The exact method of release varies from product to product.

"It takes a little time to understand how they work and



which products will work best for you," Higgins says. "It all starts with educating yourself about what results you're looking for. There's probably a product out there that will get you those results."

Things you need to know

Goolsby says superintendents should pinpoint the problems they need to solve before deciding to use a slow-release product. For example, if superintendents are looking for rapid green-up from a fertilizer or quick eradication from an insecticide, slow-release products won't help them, says Rick Brandenburg, a professor of entomology at North Carolina State University. Brandenburg researched Pursell's new slow-release insecticide, *Precise* (see sidebar on page 60).

"You're not going to use a slow-release product in a rescue situation because you're not getting the full force of the product immediately," Brandenburg says. "That's why it's so important to understand what you're combating."

Once superintendents have determined what they want the products to do, they should research products carefully, says Jimmy Thomas, certified superintendent at the Hyatt Regency Hill CC in San Antonio. He recommends they pay attention to what causes the coatings to break down.

"If a product requires microbes to break down, for example, you'd better ensure the proper microbes are in your soil," Thomas says. "Otherwise, you'll be wasting your time and money."

Thomas also warns superintendents to handle slow-release products carefully. If they break the outer coatings, they'll lose their slow-release capabilities. Goolsby also says superintendents should make sure they store the products in dry places to avoid having water pierce the coating prematurely.

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Jimmy Thomas, certified superintendent at the Hyatt Regency Hill CC in San Antonio, says slow-release products provide long-term, one-application spoonfeeding.

coated fertilizers at 2 pounds per thousand square feet; in contrast, regular nitrogen-fertilizer rates are 1 pound per thousand square feet. It often takes superintendents time to understand the different ratios, Higgins says.

"It may seem like controlled-release products aren't worth the additional price up-front, but the residual effects make them more cost-effective," Higgins says. "You can get eight weeks to 10 weeks of coverage with traditional fertilizers. With slow-release products, you can get efficacy that lasts from 24 to 36 weeks."

Once you've determined the dose, it's time to calibrate your spreader appropriately to make sure you're putting down the amount you think you are, Goolsby says. "There's nothing more embarrassing than putting down a fertilizer unevenly and then seeing a tiger-stripping effect after the fact," Goolsby says.

Higgins also says first-time users often miscalculate the time it will take to see an effect because they usually see an

How to apply them

Pursell's Higgins says superintendents must also calculate their application rate accurately. The ratios are not the same as they would be for traditional products, so it's imperative that they understand how to calculate the dose.

"The reason you're putting these products on your course is to extend their efficacy, so if you're not careful with the dosing it defeats the whole purpose," Higgins says. "I've heard stories about superintendents who have problems with the products, only to discover later they've put down too much or too little product."

Superintendents should apply most



Jeff Higgins, director of market development for Pursell Technologies, says if you're not careful with dosing slow-release products, it defeats their purpose.

Controlled Release Comes to Insecticides

Pursell Technologies recently gained approval from the Environmental Protection Agency for its polymer-coated insecticide, Precise. Jeff Higgins, director of market development for the company, says the product allows superintendents more flexibility when it comes to controlling turf insects.

"Slow-release insecticides increase the residual effects of the insecticide, which means superintendents have the ability to kill pests at all stages of development," Higgins says. "It promotes lower use rates, reduces applicator exposure and offers the flexibility superintendents might not have otherwise."

Rick Brandenburg, a professor of entomology at North Carolina State University who researched the product, says controlled-release insecticides also minimize the odor associated with other insecticides.

"That's a real plus, particularly if you have to apply it to a course surrounded by houses," Brandenburg says. "Its slow-release mechanism also reduces the amount of insecticide released into the environment at one time. Those environmental concerns are shared by golfers, homeowners and superintendents."

Precise controls fire ants, mole crickets, sod webworms, cutworms, armyworms, chinch bugs and others, Higgins says. Pursell is also conducting research on its effectiveness on white grubs, he adds. The slow-release mechanism increases the efficacy from two or three weeks up to 14 weeks in some cases.

Brandenburg believes slow-release products may be the wave of the future.

"It's exciting technology," he says. "The product lines which use it are going to be expanded. It's going to be a fascinating area to watch over the next five years."

— F.A., Managing Editor

immediate turf reaction to a chemical application. There's a three- to seven-day lag period where superintendents won't see a reaction, and the tendency is to reapply too soon, Higgins says.

"You have to be patient," Higgins says. "It's the way these products are designed to release, so don't panic."

Thomas says controlled-release products provide the best value for his money.

"You get more efficacy with less labor, which saves money and allows you to allocate your crew members to other projects," Thomas says. "There's no doubt they pay for themselves in the long run." ■

For more information on controlled-release products, see these companies:

Agrotain

262-240-0870
www.agrotain.com

The Andersons

419-893-5050
www.andersonsinc.com

BEST – Simplot

800-992-6066
www.bestfertilizer.com

Bio-Plex Organics

717-653-0616

Growth Products

914-428-1316
www.growthproducts.com

Lebanon Turf Products

800-532-0090
www.lebturf.com

Lesco

800-321-5325
www.lesco.com

Milorganite

800-304-6204
www.milorganite.org

Nu-Gro

800-268-2806
www.nu-gro.com

NUTRAMAX Laboratories

410-776-4000
www.nutramaxlabs.com

ProSource One

877-350-3999
www.prosourceone.com

Pursell Technologies

800-334-8583
www.polyon.com

Simplot Turf & Horticulture

208-336-2110
www.simplot.com

Tessenderlo Kerley

602-889-8300
www.tkinet.co