



CASE STUDY

A Change of Diet

Superintendents rethink the traditional way of fertilizing bermudagrass greens during grow-ins

By John Walsh, Contributing Editor

For the most part, fertilizing bermudagrass greens during a grow-in has been the same for many years — 1 pound of soluble nitrogen once a week for six to eight weeks. It's a lot of nitrogen and a lot of labor, but it has worked. Superintendents haven't deviated much from that formula ... until recently.

Instead of 1 pound of soluble nitrogen a week, several superintendents have used 6 pounds of Polyon per 1,000 square feet with just one application during a grow-in. They say using the slow-release fertilizer this way during a grow-in works successfully. While the method has yet to catch on, that might change soon.

The use of Polyon in this way can be credited to Jeff Higgins, Ph.D., director of agronomy for ValleyCrest Golf

Course Maintenance. He started this type of fertilizer application in 2001 when he worked at Pursell Technologies in Sylacauga, Ala. Pursell owned Polyon before the company was purchased by Agrium Advanced Technologies. When Pursell built Farmlinks Golf Course in Sylacauga, it conducted an environmental audit because there was concern about fertilizer leaching into the aquifer that ran beneath the course.

"We baselined it and monitored it during construction because of environmental concerns," Higgins says, adding that university research reveals that urea and ammonium sulfate have both exceeded contamination at the bottom of green cavities in some instances, but not contaminated groundwater.

When soluble nitrogen is applied directly to the soil, such as during a grow-in, there's no turfgrass established to take it up, so the available nitrogen is absorbed



Superintendents say they're seeing successful results by using 6 pounds of Polyon per 1,000 square feet in just one application.

into the soil — it volatilizes — or it's leached down through the soil profile. Once the turfgrass becomes established, the uptake of nitrogen can occur.

Polyon, which releases by temperature, was used to grow-in holes at Farmlinks. Higgins tested to see how much weekly nitrogen was needed and found three-eighths of a pound a week was sufficient.

"We put 6 pounds of nitrogen down in fairways, and they grew in faster than the others," he says. "Environmentally,

there's less likelihood of leaching."

Two superintendents who've executed the Polyon method successfully are Jason Regan, the certified golf course superintendent at Ocala Golf Club, and Deron Rake, the certified golf course superintendent at Okechee Golf Course. Both work in Florida for ValleyCrest and credit Higgins for the suggestion.

The renovation at Ocala began in March last year and encompassed the tee and green complexes and irrigation system. Regan planted Emerald dwarf bermudagrass, a cross between Tifdwarf and Ultradwarf, on the greens. He says Higgins told him to use Polyon during the grow-in.

"I was hesitant," Regan says. "It was my first grow-in, so I was open to other opinions."

Regan liked that Polyon wouldn't be affected much by rain and its slow-release technology meant the plant would be fed for 16 weeks.

Once the greens were ready to be planted, Regan needed to decide about how he was going to apply the fertilizer. One option was to till it 2 or 3 inches into the greens mix. But

Regan ran over the green with a mechanical bunker rake and "scratched in" the fertilizer.

"The fertilizer needs to be deep enough so it won't float away if it rains," Regan says, noting the turf grew in consistently and quickly because of the slow-release fertilizer.

Regan also applied ammonium sulfate (1 pound per 1,000 square feet) three times in 12 weeks to supplement the Polyon. He says he saved money in the long run via product and labor. The cost of Polyon for the greens (112,000 square feet) was \$2,600.

Aside from the fertilizer plan, the tim-

ing of the greens renovation was an issue. Regan planted the first seven greens July 2, the next eight greens July 16, the next four greens Aug. 7 and the last two greens Aug. 10. The course opened Oct. 21.

"I wish we would've done 11 greens at first and the last 10 in the middle of July," he says. "We lose daylight in September and October, so it's better to have all the greens planted by mid-July. The last greens we planted didn't have as much daylight, so they weren't as mature as the first 15 greens we did. They weren't quite dense enough."

At 27-hole Okechee, where Rake has a \$700,000 maintenance budget, the greens were renovated to upgrade the turf from Tifdwarf to TifEagle. The renovation, which was done in nine-hole stages, was a 30-week project (eight to nine weeks for each grow-in stage) that cost just less than \$300,000.

Like Regan, Rake discussed with Higgins several ways to renovate the greens. Ultimately, the greens were stripped and fumigated because the soil was good.

Rake fertilized the greens (comprising five acres) three different ways to see which way he liked best: One, a typical grow-in applying nitrogen on a five- to seven-day cycle to feed the greens constantly; two, tilling Polyon into soil; and three, scratching in Polyon just over the top of the surface.

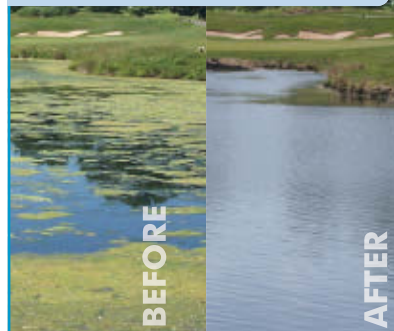
"Tilling down about 4 inches was the best because the fertilizer stayed in the soil and there was no chance of wash," he says. "There was minimal traffic on the greens and no foot traffic. Each time we tweaked it a bit more. The last nine holes were best."

The rate of Polyon was 6 pounds per 1,000 square feet. And, like Regan, Rake applied additional nitrogen a couple of times.

"I was very happy with it," he says. "We made all the deadlines. We had good turf coverage and had to do very little plugging." ■

Walsh is a contributing editor to Golfdom.

Algae Control Without Chemicals!



Join the Clubs!

"SonicSolutions is a major component of our pond management strategy. For the past several years our irrigation pond has stayed algae free. SonicSolutions has helped us obtain certification status with the Audubon Cooperative Sanctuary Program."

Matt Ceplo, Superintendent
Rockland Country Club, NY

"Within a week or two after start up, the algae in the pond died. Since then, the pond has remained algae free. It is now the cleanest of our six ponds without the use of any chemical algacides."

Michael Jr. Rohwer, Superintendent
Shadowridge Country Club, CA

"I installed the SonicSolutions units when my ponds already had algae in them. I was completely surprised how quickly they killed the algae and lowered my chlorophyll levels!"

Gonzalo Vargas
Coco Beach Golf Resort, Puerto Rico

Controls Algae With Ultrasonic Waves!

• Green Solution - No chemicals

- Low maintenance - Simple to use
- Environmentally safe
- Safe for fish, plants, or other aquatic life
- Solar available!
- Ask us about our 3-Month Rental Demo!

SonicSolutions[®] LLC
Algae Control Without Chemicals!

1-866-KO-ALGAE

(1-866-562-5423)

sonicsolutionsllc.com