

# Farm Links

## Proving Grounds for Profile



Tim Lacy foresaw what he considered an inevitable problem when planning for construction of the greens at FarmLinks Golf Course in Sylacauga, Ala.

Lacy, director of golf and grounds maintenance at Pursell Technologies Inc. (PTI), faced the challenge of growing bentgrass, a cool-season grass, in a mostly hot, humid climate. PTI is the builder of FarmLinks, a unique outdoor laboratory test site at Pursell Farms. There, ground temperatures can reach 80 degrees by mid-May and last into September, putting root zones in danger.

Such conditions called for a root zone mix that could hold moisture and nutrients while improving drainage and oxygen intake. So Lacy called on PROFILE agronomists to work with him to develop the ideal root zone mix. "I was impressed how PROFILE™ Porous Ceramics boosted the performance of the sand we selected. The addition of PROFILE increased drainage from 30.9" to 37.4" per hour, moisture retention increased from 11.6 to 14.8, total porosity went to 49.9% and the pH raised from 5.2 to 6.0," said Lacy.

"I thought growing bentgrass greens in the Deep South and seeding in June and July would be a nightmare and that we would have continual problems with the greens," Lacy said. "But we didn't find that to be true at all, and I think a lot of that has to do with the PROFILE/sand mix and the newer cultivars of bentgrass."

Chris Kelly of Landscapes Unlimited began constructing FarmLinks' greens one at a time in December 2001. The greens were constructed to USGA® guidelines except PROFILE replaced peat in the mix. "I chose PROFILE because peat fills pore space and you sacrifice drainage to get the moisture retention you need," said Lacy. The mix was a 12 inch layer of 85% sand and 15% PROFILE. Seeding of an A-1 and A-4 bentgrass combination followed in June, July and August.

While the greens were still in the grow-in stage in November 2002, Lacy was pleasantly surprised with how well they were already taking shape. The grow-in process for greens was at 98 percent, and frequent soil samples taken during construction continued to show that percolation rates were right on target,

that the root zone mix presented a consistent blend of PROFILE and sand resulting in an ideal balance of air and water pore space.

As a result, Lacy's concern about the future of FarmLinks' greens dwindled. He expects the success that the PROFILE/sand greens had in withstanding the hot climate to repeat itself summer after summer.

"Only time will tell if the PROFILE/sand mix is going to be better, but I'm very optimistic," Lacy said. "We had the easiest grow-in of bentgrass than at any place that I've ever seen. We just didn't have any problems."

### PROFILE vs Peat

Since 1992, PROFILE has been used in more than 100 new golf course construction projects and is used on more than 3,500 courses worldwide. But Lacy's first experience with PROFILE came at FarmLinks. In his 12 years with PTI and as the director of golf course construction and maintenance at Mississippi State University prior to that, Lacy built greens and oversaw courses that used a sand/peat mix.

A sand/peat mix meets USGA guidelines, Lacy said, but using peat can bring about problems on greens. He said peat is difficult to mix with sand, and it changes over time. Greens may become compacted, which leads to poor drainage and poor air porosity.

PROFILE, however, is an inorganic amendment that is very stable and provides an ideal balance of capillary (water) and non-capillary (air) pore space. The capillary pores hold water and the illite mineral in PROFILE provides the CEC to hold nutrients needed for root zones to remain healthy.

"PROFILE is more likely to consistently hold moisture and nutrients over time because your peat mix starts changing the minute you put it in," he said. "You're going to have problems with the consistency of your greens. PROFILE is manufactured into a ceramic and changes very little over time. One of the main reasons I went with PROFILE was because I feel like the greens we have today are going to be consistent with the

greens we'll have 5 to 10 years from now. I can't say that with a sand/peat root zone mix."

The non-capillary pores allow for proper drainage. With PROFILE, Lacy is counting on FarmLinks' greens to maintain a high percolation rate as the greens mature.

"It's been my experience that with peat the infiltration rate drastically decreases initially and over time. I understand this is going to happen naturally, but internally as the peat begins to change and organics start to build up over time, the green is going to decrease in its ability to let water pass through. As a result, you'll have to rebuild the green. What I'm banking on in 5 to 10 years is that we're not going to have that problem; we'll still have the internal infiltration rate to keep the root zone filled with air."

Lacy said the greens would be one of the many highlights of FarmLinks once construction is completed and the course opens in June of 2003. FarmLinks is designed to serve as a challenging and picturesque 18-hole championship course, but more so as a research and demonstration facility for golf course superintendents, as well as nursery managers and other professional users of fertilizers.

PTI expects about 750 of these professionals to visit the farm property each year to study fertilizers and turf products and how they are managed.

"We're trying to put together an educational experience so that when they come in and learn about our products and our partners' products, they can take some ideas back with them to their golf courses or nurseries, or whatever setting they work in," Lacy said.

The course, which measures more than 7,500 yards from the championship tees, will be opened to the public as well. The grand opening is set for June 2003.

PTI partnered on the FarmLinks project with several companies in the golf course maintenance industry, including The Toro Company, Club Car, Flowtronex and PROFILE.

In addition to using PROFILE's porous ceramic as part of a greensmix on all 18 holes, the same 85% sand 15% PROFILE ratio of mix will be used every time they topdress. PROFILE's Futerra® vegetation blankets also aided the construction project, covering 20 to 25 acres on the course. Fully bio/photodegradable, Futerra® was used on seeded sloped areas to promote germination and on fairways over bermudagrass sprigs where erosion was a problem. Futerra blankets mold to the soil surface over mounds and ridges, providing a moist environment for the seeds and sprigs. Futerra provides for exceptional germination and establishment, while virtually eliminating erosion.



## Research favors PROFILE

Lacy's decision to replace peat with PROFILE as a soil amendment was not made overnight. In fact, it took a year-and-a-half.

"How you're going to construct your greens is probably the most important long-term decision you can make on a golf course," he said. "Greens are the heart of the golf course." That's why Lacy said PTI decided to cut its cost in other areas of construction, and not with FarmLinks' greens. PROFILE costs more than using a sand/peat mix, but Lacy expects the investment to pay off in terms of consistent, healthy greens that will last a long time. If you have sod in the budget, using Futerra is a great way to save some money and get great turf establishment with no erosion.

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Word of mouth from other professionals in the turf industry first peaked Lacy's interest in PROFILE. Lacy began meticulously studying tests that had been conducted on PROFILE's porous ceramic. He attended two seminars — one on PROFILE, another on greens construction. And he interviewed several superintendents and golf course owners who had used PROFILE on their courses.

"I weighed all that in trying to come up with what I felt would be the best for bentgrass construction here in the southeast — to give it every chance possible for it to thrive — not just survive — but thrive," Lacy said. "I just felt that with all the information and research that had been conducted, plus the feedback from the superintendents, PROFILE was the best decision for us."

And Lacy adamantly sticks by that decision, as PROFILE's porous ceramic has met Lacy's expectations in every way. Test results of the zone mix showed a perfect balance of pore space for air and water (50%) compared to solid matter.

"Every test or sample we pulled throughout the construction process was right on the money," he said.

That can be largely attributed to the make-up of each PROFILE particle, which is 74% pore space and the consistent blend of PROFILE and sand used on the greens. PROFILE personnel helped Lacy find the appropriate sand particles that would best blend with the porous ceramic.

It's this make-up which enables PROFILE's porous ceramic to retain nutrients and moisture while allowing ideal drainage, which has helped the greens at FarmLinks flourish through a long, hot Alabama summer. Lacy looks forward to many more years of exceptional greens.

"I would never build another golf course without using PROFILE, and I would use more Futerra to make sure I got a great stand of grass on my fairways and slopes; that would be my recommendation to superintendents."



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