



Making fairways

One South Carolina superintendent proves converting from bentgrass to newer Bermuda varieties via a no-till system isn't just for greens.

By Brian Hollingsworth, CGCS

The development of the no-till system in recent years has helped many clubs across the country successfully convert their bentgrass or older Bermudagrass greens to newer ultradwarf Bermudagrass varieties. Observing the progress and success of this program on greens, I began to ask myself, "Why wouldn't this work on other parts of the golf course too, and save a lot of money in the process?"

Two years ago, here at Dataw Island Club in Beaufort, S.C., we were in the midst of preparing for a major golf course renovation which included re-grassing most of the playing surfaces including fairways and tees. Due

to unforeseen circumstances, that project had to be put on hold and over the next year we began considering other ways to improve the golf course at a reduced cost.

The more I thought about it, I felt strongly that no-till planting, or some variation of it, could be successfully done on fairways just as it is done with greens. The process would be less expensive than stripping or tilling all the fairways before planting. As it turns out I wasn't the only one with this idea.

Several clubs in Florida and some in the desert Southwest had been doing their own variations of no-till planting fairways for years. Additionally, Modern Turf, based in Rembert, S.C., had been fabricating their own

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no-till sprig planter for fairways in hopes of accomplishing the same goal. It was exciting to learn that other clubs had successfully converted their fairways to new grasses using no-till and that a local sod supplier was working on a machine to do it. Suddenly, it seemed like there was a real possibility that we could still get our fairways converted far more affordably.

In late summer of 2010, I was contacted by Modern Turf's Hank Kerfoot about a demonstration of their new no-till machine at Moss Creek Club in Bluffton, S.C. He explained they had been working on a machine planter capable of planting Bermudagrass sprigs directly into the existing turf canopy. Watching the new planter in action, along with several superintendents from the Hilton Head area, I have to say I came away less than impressed. The machine needed tweaking. There was little consistency in its ability to evenly apply the sprigs and in its ability to cut the sprigs in

properly through the existing turf.

Mitchell Wilkerson, CGCS of Moss Creek, agrees. "We were hopeful that we could cut in Celebration Bermuda directly into our test plots on the driving range at the demo," he says. "Unfortunately, I wasn't completely comfortable with the end product the new machine was producing."

As Modern Turf continued to work on their machine it turned out that the issues that held up the original project at Dataw Island Club had been resolved. At the same time, we were now revisiting each aspect of our renovation, as well as its cost and importance to the club, so a revised project could be formally approved for construction. I still strongly felt we needed to re-grass most, if not all, of our fairways on our Cotton Dike golf course. But we definitely needed to find the right price and process to get it done.

It was at that time that I began to speak with Modern Turf again, this time more

From left to right: a fairway on the Cotton Dike course makes the change to Celebration Bermudagrass using a no-till process. Each image shows the grow-in through an eight-week period.

seriously. They had addressed several issues with the no-till planter and had successfully performed a no-till project on an athletic field. They were ready to try the machine on a larger scale and needed the right place to do it. Modern Turf made a commitment to us that they would no-till plant our fairways with Celebration Bermudagrass and do whatever it took to get the job done, regardless of how the machine performed.

It was still a bit of a risk for me and the club but I was comfortable that Modern Turf would stand behind their word and their work.

This past April, we closed our Cotton Dike course to begin renovating our greens, bunkers, irrigation system and cart paths. The first question with regard to the no-till conversion of the fairways was how much prep work should be done in front of the planter to get the ground ready for the sprigs. Obviously, we had to kill the existing Bermudagrass. We applied two applications of

THE NUTS AND BOLTS

PRE-PLANT

- Roundup (one gal/A) + Fusilade (22 oz/A) was applied six weeks before sprig date, and three weeks before sprig date.
- Two days before sprig date we applied Roundup (one gal/A) + Ronstar FL (1.85 oz/1000).
- Applied 14-25-11 starter fertilizer at planting.

PLANTING DATES

- Our planting schedule was dependent upon our new irrigation installation progress.
- The first fairway planted was on June 30, the last fairway planted was on August 10.
- The planting progressed at about one to two fairways per day.

GROW-IN TIME

- Grow-in was very quick with the Celebration no-till.
- Based on my observation for a typical fairway, at four weeks coverage was 60 percent, at six weeks 90 percent, and by eight weeks 100 percent.

FERTILITY

- Fertility used was the initial starter supplying one pound of phosphorus, then three quarters of a pound of nitrogen per week from ammonium sulfate was applied for four weeks beginning at week three after planting.
- The fairways planted last were fertilized more to push slower growing areas at the end of the summer.

MOWING

- Fairways were mowed at one inch with a rotary rough unit for first two to three weeks.
- Height was then lowered to .650 of an inch and mowed with reel units about week four.
- Final height at the end of the summer was .550 of an inch.

TOPDRESSING

- Fairways were topdressed regularly throughout grow-in using the old greens mix and old bunker sand from our renovation.
- Most fairways had three quarters to one inch of topdressing sand in the turf canopy by completion.



No-tilling the new springs directly into the old surface ended up providing the smoothest operation, even over aerifying, verticle mowing and sweeping.

Roundup with Fusilade. Then just before planting, we made one application of Roundup with Ronstar FL.

Next, we needed to decide whether more loosening of the dead thatch and turf would be necessary to plant or would improve the planting process. After trying various methods of aerifying, vertical mowing and sweeping, on one test hole, we ran the no till machine over these areas on a dry test run. As it turned out, any of these additional steps alone or in conjunction with each other made the dead turf surface too loose for the no-till planter, and it tore them up as it cut. The easiest way turned out to be the best, and that was to just no-till the plant directly into the existing surface that had been killed with Roundup.

Now knowing what our plan would be, we were ready to begin. The fairways were sprayed out and we began to no-till plant Celebration. Needless to say, the first few fairways planted were a work in progress. Dustin Nemenz, Cotton Dike's superintendent, became concerned. "The first few fairways that we no-till planted were really a mess," he recalls. "The machine worked fine when tested earlier, but now that actual planting was underway it was really tearing up the existing turf surface. The old dead mat layer was being pulled up as the machine planted. Our sprig contact with the soil was impacted, not to mention that the fairways smoothness was being compromised."

Modern Turf adjusted the machine over the next few holes and rented a heavy duty roller to press out the damage. The process and the planting did get better as we went. Kerfoot and his team knew immediately the initial product wasn't satisfactory. "As we went along we found that the machine performed differently from hole to hole, soil type to soil type, and even



Brian Hollingsworth, CGCS, left, and Dustin Nemenz, right, on one of their no-till fairways at Dataw Island Club in Beaufort, S.C.

differently depending on the topography," he says. "We gained valuable insight as to what our machine did well and maybe some other things it didn't do so well."

Modern Turf even went so far as to hydro-sprig two fairways entirely that were severely sloped so as not to damage the mounding on those fairways. "Our machine may not be the best answer on severely sloping fairways," Kerfoot says. "However, we did learn that hand-spreading sprigs and hydro-mulching over the top works just fine."

Once planting was done and grow-in proceeded, I quickly began to realize we had a winner. The no-till process was going to work out and the new fairways looked really good. We had been fortunate that after a dry start to the summer, we had eight inches of rain in August to help with the grow-in. Recovery was further helped by the fact that there is so little traffic with the no-till method. With no sod and debris to remove from the golf course, there is none of the damage that you would normally associate with re-grassing fairways.

Of course, there is nowhere near the amount of labor involved either, and all told, I believe it's reasonable to expect that no-till fairway conversions could save as much as 50 percent compared with the cost of conventional methods.

Nemenz ended up being comfortable with the process as well. "I felt much better six weeks after the Celebration was planted and you could really start to see what the new fairways were going to look like," he says. "The grass covered very quickly and all the initial damage covered over. We used our old greens mix and old bunker sand to topdress the fairways too. Once we began doing that and pushing fertilizer to grow the grass in, the fairways really responded. They look great now."

Mitchell Wilkerson has kept a watchful eye on Dataw's fairway-planting process and progress too as Moss Creek begins serious planning to re-grass fairways as part of their upcoming renovation. "Seeing it through the entire process now and especially seeing the end result, I think that fairway no-till planting

has merit," he says. "Dataw's fairways turned out well and we have some better ideas and options now as to how we want to renovate our fairways."

As a result of our experience, I believe no-till operations on fairways will become more popular and prove to be an excellent and cost-effective way to improve fairways. We were able to replace our old mutated turfgrass that always transitioned poorly after overseeding with a newer variety in Celebration that is more aggressive and pure, too.

Most importantly, we were able to do this at a much lower cost than originally-projected while maintaining the quality end product we desired. As more sod companies look at the prospect of no-tilling fairways and more superintendents experiment with their own ideas of how to do it at their club, the process is certain to be refined. **GCI**

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