The Other 70 Percent of the Golf Course

Roughing It

Multi-gang rotary rough mower used at the Johns Island Club. Photo by Joel Jackson.

According to GCSAA's figures for land use at an 18-hole course; roughs, woods and water hazards make up about 70 percent of a course's total area that is "under maintenance." That's a fact that escapes most people when they talk about the inputs of chemicals, fertilizer, water and labor on a golf course. We spend the most time and money on the greens, tee, and fairways which comprise about 27 percent of the golf course area.

As environmental concerns heighten and budgets tighten, the roughs have become the place of choice to make changes in how we view them. More and more designers are treating rough areas between greens and tees as natural areas with minimal maintenance requirements, and existing courses are finding areas where they can convert previously mowed, fertilized and irrigated turf into native plantings to reduce costs and create more habitat.

For the roughs in play, the trend toward rotary mowers is gaining favor as a labor saver. Two of your peers, Chuck Calhoun and Buddy Keene share their thoughts on roughs from a trend perspective to practical operations.

The Evolution of Rough Maintenance

In the ongoing quest to provide the best possible playing conditions for today's golfers, throughout the course there have been many changes. In addition to new types of turf, advances in equipment technology may in fact influence how we manage one area of the golf course that not long ago received little or no attention: "the rough."

There are significant contrasts in today's maintenance practices versus the practices of just a few years ago. I can only relay my own experiences. However, I do recall in the early 70s that the "rough" was just that.

Webster's Dictionary describes "rough" as "jagged, scratchy, crude, incomplete, severe, unpolished, uneven, irregular, and bumpy" and many other terms that, if they were to exist today at any golf course, would surely send the superintendent packing.

A lot of superintendents like the mulching aspect of the rotary mowers which chops up leaves and even pine cones saving labor. They also wade through tall roughs after missing a couple of mowings due to wet conditions. Photo by Joel Jackson.

Chuck Calhoun, Superintendent Johns Island South Course. Photo by Joel Jackson.

Prior to the practice of wall-to-wall irrigation, in most instances with only rainfall for irrigation, the "rough" consisted of whatever would grow and could sustain itself. In the tropics of Florida, that could be almost anything since pre-emergent treatments were new and unreliable and might leave you with a less-than-desirable playing surface.

The gear-driven reel units of this era worked excellently on turf, but unless the reels were kept extremely sharp, they would not cut the varied grasses that nature produced. Even then, the rugged terrain and native growth would dull the units very quickly.

We had to use pull-behind rotary units that were generally designed for pasture and roadsides which didn't really matter, as most often the "rough" had a more-than-passing resemblance to the aforementioned areas. These mowers were usually single-deck units, PTO driven with maybe two

would cut anything, it was very time-consuming and often took more than a week to get around the course just once.

With the 80s and 90s, the practice of wall-to-wall irrigation became much more common and with it the areas of turf to be maintained increased dramatically. The large, gang-reel mower, with gear drive and hydraulic power, could not only cut these expanded areas of fine turf, but could get the job done in a timely fashion.

By now the investment in these areas once considered to be "rough," became merely an area of fairway with a slightly higher cut. Such high visibility and attention now needed the same management approach used on other areas of the course, aerification, fertilization and pest control in the "rough" had become the norm.

Now in the early 21st century has come the introduction of the new age of the rotary mower. These units, now with multi-gang capabilities, ease of maintenance, and superior cutting abilities have started many of us to rethink some of our options in maintaining the "rough."

The tremendous success of programs such as the Audubon International Signature Cooperative Sanctuary Program have propelled many courses to take a strong look at alternative grasses and plantings in the "rough," as well as other areas of the course. With the advent of our new equipment options and the abilities they have we may indeed be going "Back to the Future" in maintaining the "rough."

By Chuck Calhoun

Roughing It at the Gainesville Golf & Country Club

We use a combination of reel and rotary mowers to cut our 70 acres of rough. Our arsenal consists of two Toro five-gang reel mowers, one John Deere three-reel trim mower, one Progressive Trideck rotary mower and one Jacobsen 72-inch, out-front rotary mower.

Historically we used the five-gang units to mow the bulk of the roughs and it took about a week. In 1998 we began hosting a Nike and later Buy.com Tour events and we were required to overseed the course wall to wall. Because the overseeded roughs needed to be maintained at four-plus inches we purchased the TriDeck Rotary to achieve that height requirement specified by the PGA Tour.

Today we no longer host the tour event and we needed to justify having this mower in our inventory.

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We began mowing our bermuda roughs with the TriDeck and found that it was very efficient and productive cutting our previous mowing time in half. It comes in very handy during the rainy season because we have very heavy soils and it may not be possible to mow for several days and it's easy to get behind. When the course dries out, we go out with the rotary and gradually take the grass back down without scalping.

It is also very efficient at mulching up pine cones, pine needles and leaves. Wow, what a labor saver that is, and the rotary costs less to maintain mechanically than the reel mowers.

The only negative thing we have experienced with the rotary is a higher noise level because of the high-speed blades. Scalping is not an issue because we still use the five-gang and three-gang mowers to mow and trim around the greens and tee slopes, bunker mounds and landscape beds. The reel-type mowers are also used to mow out the walk paths from tee to fairway and the intermediate cut around the fairways.

Last but not least, the 72-inch, out-front rotary is used to trim around the trees to put a finishing touch on the rough-mowing program. We maintain a height of cut about 1.5" inches because that's the height preferred by most of the members.

All of the rough we maintain now is in play so there are no plans to eliminate any of it. We have numerous native and natural areas on our course, which are enhanced by our proximity to the Paynes Prairie State Preserve.

We fertilize the rough two or three times annually depending on rainfall. If we fertilize too much, we could wind up in the hay business pretty quickly. While heavy clay soils can become too wet to mow sometimes, the slow-percolating soil helps prevent leaching of nutrients and our fertilizer applications last longer and can result in savings.

Our biggest insect problem in the roughs are mole crickets and sod webworms. Our budget is more adequate than it used to be, which allows for more control options like Chipco Choice, Merit and some mole cricket baits for spot-treating hot spots. These products work very well for us. Fire ants used to be a problem but we broadcast fire ant bait products twice a year at label rates and we have pretty much put out their fire.

The course is over 40 years old and the shade from our grand old trees and compaction in high-traffic areas can create some weed problems. We found by applying Ronstar and Barricade pre-emergent herbicides in the spring and fall, we can get effective control of goosegrass, crabgrass, Poa annua, and volunteer ryegrass. All post-emergent work is done by spot-treating large weed patches with a boom sprayer and small scattered clumps with 2-gallon and 14-gallon portable sprayers.

Buddy Keene used a combination of reel and rotary mowers in his roughs. Photo by Joel Jackson.

Our roughs consist mostly of Ormond bermudagrass, which is dinosaur by today's standards. We have to be careful with the herbicide rates because the Ormond is more sensitive to some of the products. It is also slow to come out of dormancy in the spring and slower to recover from cultural practices like aerification and verticutting, so we are careful not to beat it up too badly. However, once the weather warms up, it grows aggressively like any other bermuda and keeps us "roughing it" all summer.

Super Tips

Shedding Some Light on Several Situations

Darren J. Davis

When James P. Whalen, golf course superintendent at Calusa Pines Golf Club in Naples, accepted his current position at this nationally ranked club, he quickly realized he was "in the dark"... in the dark on some of his greens that is. Whalen, a graduate of Lake City Community College, has been employed at Calusa Pines since July of 2003. His prior employment includes stints at a few other well known clubs - Olde Florida Golf Club and Augusta National Golf Club.

When Whalen was hired, he was informed of a few greens that had been a challenge the previous season. After analyzing the situation he swiftly came to the conclusion that excessive shade created by several very tall, stately pines was the culprit, and the specimen trees would continue to pose a problem in the future.

Since removal was not an option, he went in search of other possible solutions. That's when Whalen turned to his equipment manager, John Patterson. According to Whalen, Patterson, an employee of the club since 2001, is his "go-to" guy. With their two heads put together, it did not take long for a light bulb to go on. The solution was grow lights mounted on portable towers.

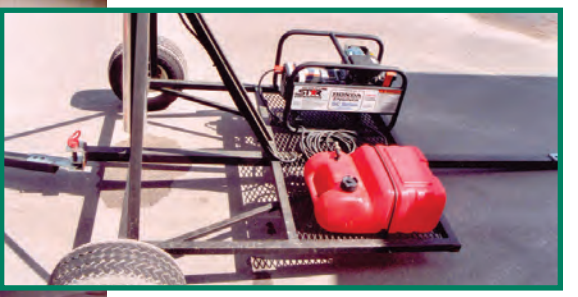
The grow lights were purchased from Precision for just under $600 and are attached to an aluminum pole that can be raised up to 12 feet. The pole assembly is affixed to a 4x4 trailer, also constructed by Patterson. On the bed of the trailer is mounted a 2700-watt generator purchased from

The grow lights are attached to an aluminum pole that can be raised up to 12 feet.

Northern Tool and Equipment Company for approximately $500. The fuel for the generator is supplied by a 6-gallon marine fuel tank also mounted on the bed. The metal for the trailer and pole was purchased locally for approximately $300, bringing the total cost of the portable grow light towers to around $1,400.

For one-person transfer, Patterson also installed hitches to the back of the trailers so that they can be towed in tandem. Whalen preferred the portable, trailer mounted units to "fixed" units as they provide flexibility to move if other areas develop the need for additional artificial sunlight.

Whalen said he anticipates using the light towers from mid-November until March 1 each year. The light towers are placed near the shaded greens after golf play is finished and just prior to sundown each day. Although pleased with the results



The lights are powered by a 2700-watt generator with fuel supplied by a 6-gallon marine fuel tank, both mounted on the bed of the trailer.

to date, he is the first to point out that the grow lights are not a cure-all; they are just one of the tools in his arsenal. He also credits his success this year on the trouble areas to an intensive hand-watering regimen, limiting overhead irrigation use to an occasional deep irrigation associated with a granular fertilizer application. He feels that his foliar spoon-feeding program also played a role in keeping those shady areas healthy.

Whalen found additional uses for the lights that helped justify the expense. In winter - his busiest golfing period - the trailers can be pulled behind a utility vehicle with a greens mower trailer towed behind the light tower, allowing employees to get a jump on play by mowing a few greens before the sun rises. The towers have also been used to provide light for repairing late-night irrigation blow-outs. Whalen says he's sure other uses will arise.