

# Ultradwarf Management

Believe it or not, we are rapidly completing a decade of ultradwarf turf management. And no sooner are some superintendents getting comfortable in the new routines and requirements for this variety than seashore paspalum breaks onto the scene. While these newer grasses earn their spots in the sun, there



Rick Tatum

are still multitudes of courses growing the former standard, TifDwarf.

With the choices available now, it is hard to call any of those three varieties a “standard” for the industry. Golf course superintendents who are fighting greens with mutation and/or contamination spots must decide whether to remain a TifDwarf user

or to change to one of the new varieties. The key word is “change,” and it *will* be change, so be prepared to deal with and live with the requirements of these newer grasses.

Our topic is ultradwarf management for this section, but you can also take a look at some of the pros and cons of using paspalum in the Industry News section. Meanwhile, read what three of your peers have learned about these grasses. I interviewed Rick Tatum from the Grey Oaks Country Club in Naples, and Ken Glover at the Windsor Club in Vero Beach and Tim Cann of Harbour Ridge in Palm City. They have some interesting perspectives on what it takes to manage ultradwarfs.

## Mr. Ultradwarf – Rick Tatum

I was looking for some victims, I mean volunteers, to do interviews for this article and Rick Tatum graciously gave up his barstool at the Naples Beach Hotel Tiki Bar to share his ultradwarf experiences. It turns out that Tatum has scored the proverbial “hat trick” having grown-in and managed three varieties: FloraDwarf, Champion and TifEagle.

He has nine years’ experience with ultradwarfs so his opinions and observations regarding their management have some credibility. Join me on the wild ride that is Tatum’s take on ultradwarf management. It began when I asked the seemingly simple question, “What variety do you manage?”

Tatum began, “Well, I’ve done three. I started with FloraDwarf at the Forest Country Club,

then I grew-in two courses at Shadow Wood planted in Champion, and currently I’m managing 54 holes of TifEagle on the Grey Oaks Palm, Pine and Estuary courses.”

“I think Champion has the best playing surface of all the ultradwarfs and oddly enough it closely resembles FloraDwarf in appearance. We had a green at The Forest that was 50-50 FloraDwarf and Champion and no one, not even the experts, could tell with the naked eye. But the problem with Champion in the summer here is that it is a 24/7 job — almost like growing bentgrass in South Florida.

“What is true about all of them is that if you make one mistake in over-fertilizing them, you may find yourself scalping greens. Then you’re dead. GR1000’s are great mowers but if the grass is too fluffy, they will dig in and scalp. On our TifEagle greens, we apply granular fertilizer (15-0-15) only after aerification in May or June to help the turf recover and we only aerify once, but we use a slightly different technique. We punch in two directions with a Toro 643 and 5/8” tines. We go 12 to 6 on the first pass and we make our second pass in the 11:30 to 5:30 direction. What I have found out is that by altering the direction by this small amount, the second pass misses most of the first holes and we end up removing more thatch material which is, after all, the

whole point to aerifying. By changing directions 90 degrees (9 to 3) or 45 degrees (10 to 4) to the first pass, you end up hitting a lot of the same holes and defeat the goal of maximum thatch removal.

“Along with the granular fertilizer we usually apply an insecticide since the worms seem to like to use the freshly punched holes to make their burrows. Full recovery usually takes two to two-and-a-half weeks. And the timing is critical as well. We go as early as we can in the growing season because when the stormy, late-summer weather picks up, the cloudy days make for slow recovery from any stress on the turf.

“If you lose control of your clippings yield, which is one of my signals, you’re done. It can affect thatch production and greens speed. I also use tissue sampling as a barometer to make sure my nutrient levels stay in line. I have learned to correlate the sample values with the appearance and performance of the grass. We tend to keep them leaner in the summer (4.0) so they don’t thatch up so fast and in the winter we monitor them at (4.7) while 4-6 is the recommendation overall ideal. We feed them with 2-5 gallons of Gary’s Green depending on tissue-sample numbers and may add some soluble N as needed. I learned this regimen on the Champion and it has worked well for me on the TifEagle.”



TifEagle ultradwarf on No. 18 green at Loblolly Pines G. C. in Hobe Sound.

What unfolded next was what I consider the sage advice of someone who has been there and done that.

Tatum is passionate about the golf industry, his job at Grey Oaks and his role as a superintendent. Essentially, he says that managing these new grasses takes a new approach that becomes prescription management directed at each green and what it needs. Performing the identical regimen on all 18 greens no longer applies. Each green has to be evaluated and handled individually for successful performance.

“Knock wood – I haven’t lost a square inch of TifEagle so far in five years at Grey Oaks. We have shade issues on a couple of greens and so we manage them differently. Everything you do on ultradwarfs is “as needed.” Take verticutting for example. You can’t get locked into verticutting every green once a week just because that’s “the program.” We have some greens we verticut “harder” than others and some that we only verticut portions of. Those two shady greens may not get verticut at all sometimes. The same goes for fertility. Two greens get more than others. Some greens we mow with Flex mowers and some with GR1000’s.

“Comparing nitrogen levels, I used to put 26 lbs. of nitrogen on TifDwarf per year. Now I only apply 9 lbs. of nitrogen per year on TifEagle. We maintain a 1-2 ratio of nitrogen to potassium and proper calcium levels are also important. We apply Gary’s Green on a 7-10 day schedule or about 2-4 gallons which yields around 1/8 lb of nitrogen. We will alternate Sul-Po-Mag and 0-0-28. We also apply liquid calcium carbonate to help improve our cation exchange capacity.”

We use Primo on the greens because we have to. The expectations of our members, and the competition to have the “best” greens drive up the ante. No more slow greens allowed. Done properly you can have good greens rolling 10-11 every day by balancing Primo and nitrogen applications. However, I don’t think Primo performs as well on Champion. There is more grass per square inch and the Primo tends to make it rigid and reduces ball speed. Our height of cut right now (mid May) is .095, but you really don’t need to go below .100. In fact some of this height-of-cut talk is bogus when you factor in type of mower, bedknife setting and micrometer calibration. One man’s .090 is another man’s .100.

“The reality is that most average-handicap golfers can’t really handle fast greens. You have to know your clientele and give them what they want and you can do it with double cutting, rolling, managing the fertilizer and verticutting; whatever it takes. It is a challenge to satisfy everyone when the average handicap is 25, but we certainly pull out all the stops

for the member/guest tournaments and other special event requirements.

“A superintendent is generally his own worst critic and knows when the greens aren’t up to snuff. He doesn’t need people nitpicking conditions. Sometimes you have to filter out the noise and figure out what it is they really want. The biggest challenge for us is keeping three entirely different golf courses playing consistently with one another so our members can have a seamless experience across the property.

“I’ve talked about low heights of cut and fast greens, but just as important is never going above .130. That’s the magic number, guiding light, whatever. I think if you go above .130 you will be battling them coming back down. You may think you are doing the grass a favor, but not really as far as conditioning goes. If you have to take them to .140 to .150 to survive, then something is wrong. To get back down to .110 and a good, smooth green speed is going to be a long, hard road when you let that biomass thicken up.

“I never look hard at the roots. It doesn’t matter. The game is played on the top. Sometimes people can get caught up chasing the roots and lose the top and that’s when they can get into trouble. It’s a fine line. The same thing goes for trying to ‘change the soil.’ I’m just not going to do that. If you are applying water with a pH of 8 with every irrigation, that is going to be a limiting factor. Focus on the performance and appearance of the playing surface and what you can do every day to make it as good as you can.

“We try to keep the greens between .120 and .110 in the summer to keep thatch levels lower. In addition we groom and verticut as needed, but only when the grass is growing aggressively. We do not lock ourselves into a one-size-fits-all regimen of so many times per week or month. In the summer when the weather is favorable and the grass is growing we do average a verticut every one-two weeks, but it depends on the plant, not the calendar. In the winter, I monitor the weather forecast very closely and lightly groom or verticut when the conditions are favorable.

“Top dressing is another good tool for managing the thatch. The dry, green, bagged sand is necessary in the winter and you can give them a nice dusting, but I fear over-use of the finer bagged sand could cause layering, which is a no-no on the greens profile. In the summer we use Terra-Toppers and spread No. 305 DOT sand as needed when the grass is growing aggressively. Whenever we are top dressing, we are also opening up the turf with verticutting or spiking to help get the sand into that dense turf.

“Opening up this turf is critical since the grass is so dense it can even repel water. In the winter with all the traffic, we aerify with a Hydroject month-

ly to keep breaking up that organic layer. We monitor that layer and try to keep it between 5/8 – 3/4 inches thick.

“I know there is a lot of talk about disease on ultradwarf, but my first-hand experience is some outbreaks of *helminthosporium* (leaf spot). We spray Heritage once a year for leaf spot, and if some algae pops up we treat with Fore. I can only think that if there are disease problems, they are resulting from other stresses like fertility levels, water quality, thatch, etc.”

What I learned from this interview with Rick was that ultradwarf greens need to be managed individually and the old one-size-fits-all programs just won’t work anymore.

## Tim Cann, CGCS Answers a Florida Green Questionnaire

Tim couldn’t do the live interview in Naples, but he volunteered to submit answers to a questionnaire on ultradwarf management. I’ve known Tim since he had bentgrass greens seeded into TifDwarf at the Reserve Golf Club. He’s been at Harbour Ridge GC for sometime and recently he’s joined the gowing ranks of



Tim Cann, CGCS

TifEagle managers.

**FG: What ultradwarf varieties are you managing and how long have you worked with it?**

We have TifEagle on 36 holes. The Golden Marsh course was planted in 2001 and the River Ridge course was planted in 2003.

**FG: Knowing that you were going to go to change to a new grass what did you do to prepare?**

Prior to planting, I visited Jupiter Island where Rob Kloska had test plots, Johns Island West and courses in Naples to play on the Champion variety as well. I did attend some seminars after planting. There is a learning curve to understanding the growth and management characteristics of ultradwarfs.

**FG: What are some of the basic differences that you have noticed?**

In general I think TifDwarf is a little

more forgiving than TifEagle. TifDwarf will respond to TLC (tender loving care) while TifEagle can be slower to respond. The key is to not allow the TifEagle to get weak.

I find TifEagle tends to be shorter rooted than TifDwarf and it develops a fibrous mat (thatch, biomass) quickly. We hollow-tine (aerify) a minimum of three times in the summer to manage the mat. Sisis- or Graden-type verticut units are necessary.

Fertility requirements can be different. TifEagle fertilized to TifDwarf levels can overgrow quickly and aggravate thatch problems. The secret is finding out a fertility program that works for your location.

**FG: What are some of advantages of TifEagle that you have noticed?**

Well it definitely tolerates shorter heights of cut. It is a monostand with cool-weather tolerance that we don't feel we have to overseed. With no overseed it has greater density than TifDwarf and is currently very popular among our players.

**FG: If there are pros there must be some cons. What are they?**

As I mentioned before, it seems to be less tolerant to stress. It is a thatch producer which requires constant or special attention. Low mowing can be a problem when the turf is over fertilized. It does require more topdressing with dry sand for the winter applications. We are rolling and double cutting as often as possible to maintain desired greens speeds.

**FG: Give me a quick rundown of your programs.**

Mowing: HOC .110-.125 with Flex 21 hand mowers. Wintertime: single mowing and rolling while it is cool. Summer: frequent double mowing and rolling as often as crew is available. Rolling: as often as possible, can be daily

Verticutting: Weekly during the growing season in two directions typically at zero or 1/32-1/16 depth, brushing with the Flex attachment when topdressing won't be disturbed also helps.

Topdressing: Dry silo-stored sand and spread with hand spreaders in the winter and regular topdressing spread with a Terra -Topper in the summer.

Aerification: Three times minimum. This year 5/8-inch tines in May; 3/8-inch in July and 1/2-inch in August. Hydroject four times in the winter: December, January, February, March. Spiking only during the growing months as necessary.

Fertility: Light nitrogen granular

applications in the winter with 2 lbs. potassium and weekly foliar sprays. Increased nitrogen in the summer when we need to recover from renovation and 4 lbs. potassium with foliar as needed. 36 lbs. potassium and 8 lbs. nitrogen per year.

Growth regulators - Primo: Have used them on TifEagle with good response with higher nitrogen applications. Began at 1oz rate and increased to as high as 3 oz rate.

Pest control: Disease is the number-one

problem. Perhaps the higher potassium applications will help control disease outbreak. Separate rotational applications of Daconil ZN and Clearys 3336 have been in our program.

Advice: Almost everyone who is renovating is doing so because of contamination problems. It's great to get an ultradwarf and maintain a monostand. I would promote the use of these grasses with the understanding there will be a learning curve and extra time, labor and expense dealing with it.



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## Ken Glover Takes a Different Approach at Windsor Club

Ken is at the Windsor Club in Vero Beach. They have TifEagle greens, but this is Ken's third ultradwarf course and he knew thatch control was the key to success, so he tried a different approach and he feels that it paid off in the end. Previously he had two courses with FloraDwarf and he knew that ultradwarf grasses comprised a different breed compared with TifDwarf.

"Grow-ins are stressful. You have a finite window to get the course up and operating quickly. Typically we push the grass hard to get it to fill in and cover to make opening day. But since I knew that ultradwarfs were aggressive thatch producers, I wanted to nip future problems in the bud, so I did something different that did extend the grow-in time a little but I think helped me get a head start on managing the TifEagle biomass. I grew it in "organically" and did not use any synthetic nitrogen on the greens and that decision is reaping benefits now. I use Soil Sanctuary and apply only 4-5 lbs of nitrogen per year. Potassium and calcium also are important parts of the program. Right now I'm also dealing with sodium issues brought on by the two hurricanes of last September.

"We've been mowing at .090 or since January. I do use Primo, but mainly when we aerify to help heal the holes. We put it out a few days before we punch the holes so it helps push the grass and speeds up recovery. In the winter we just mow to achieve desired greens speeds. Traditionally we are a low-play golf course in the summer, but we get lots of play in a short time in season and it is not always possible to double cut. I hate to put a spray tank on the greens unless absolutely necessary, but you do what you have to do. Still, I prefer to manage green speeds with the mowers and not Primo."

"Vero Beach is a competitive area with members belonging to several area clubs so there are always comparisons being made. That's what drives some of the programs we have to do to meet expectations. It can get a little crazy. But I have to say right now that, after four years, the greens have improved each year. Our height of cut is generally between .110 when we overseed and down to .100 — whatever the greens will take to give the desired results.

At this point Ken offered an observation that is probably on the minds of superintendents everywhere especially if there is pressure to change

to one of the newer grasses.

He said, "TifEagle is a good darn good grass, but I'm not sure it is for every course. The TifEagle greens we played today at Naples Grande were as good as any bentgrass greens I've ever played. They were great. Managing ultradwarf greens to that caliber is basically following a bentgrass playbook. And yes you do have to micromanage ultradwarf greens. If the superintendent — or more importantly, the membership — doesn't really understand the level of management that will be required to produce the desired product, then you may have some disappointed people.

"If my club and my job depended on a good overseeding program to be successful and deliver the desired results in season, then I would sure like to have a good TifDwarf surface to man-



Ken Glover

age. Or if water quality was a serious consideration, then I would have to be looking at one of the seashore paspalum varieties. I think you have to very seriously consider the qualities and requirements of all three of these grass types before jumping on a popularity bandwagon. Location, performance requirements and management resources all need to be factored in when deciding which grass to use.

"I verticut our TifEagle greens often. In the winter it's more of a grooming depth because you don't want to get aggressive with this turf unless it is actively growing so it can recover. Since it is so dense we added 30 percent more blades to our verticut reels. There are more aggressive machines, but I am never doing corrective verticutting; always only grooming depth. I have to use triplexes to verticut or groom our greens. The attachments on the walk mowers create a gap between the groomer and the reel and they will cause scalping."

Ken wasn't sitting in on Rick's interview, so his next comment really drove home the concept of individual greens management.

"We take a prescription approach to our greens-management program. We have two greens surrounded by trees, so we have to treat them separately and do only what they can tolerate. For instance, No. 7 green is my nutrient barometer, when it starts looking hungry then they all basically need feeding.

"I have definitely seen some weird things happen on the TifEagle. There have been

some blotchy patches from time to time. I've had tests run but they come back with a smorgasbord of pathogens and no one definitive cause. I think it is a reaction to a particular stress factor which gives one of the pathogens that are always present a chance to get a foothold, so managing stress factors is key to avoiding diseases.

"Toward that end, I am a big believer in using a Hydroject and I contract out 10 procedures a year. We deep-tine aerify in May and September now, thanks to the sodium levels from the hurricanes last year, and then use the Hydroject the other months. We also topdress regularly and in season — October through May — we use dry, bagged sand. There is virtually no waste and very little mower damage, so the extra cost for the sand is justified by the lack of repairs and replacement to reel parts. And you have to topdress to help control the thatch, so it's worth the cost.

"I mentioned earlier that I didn't like to put a spray rig on the greens unless absolutely necessary. I would love to use a spray hawk for accuracy but that means also using a hose man and we might spray one to two times every week to ten days depending on what's going on with our nutrient or pest-management programs. But the labor market is very tight post-hurricane and finding qualified people to handle such an important function is difficult much less the labor cost itself. We apply Green Way, foliar minors, amino acids, humic acid, urea after aerifying and a 12-0-20, which is a great product, two weeks before the member/guest tournament.

"I change cups six days a week. This is my quiet time to evaluate the course during set up and really look at the course and evaluate turf needs and diagnose problem areas. The hurricanes last September threw a lot of programs out the window as we have had to deal with high sodium levels.

"We do overseed here because we are on that temperature-dividing line from Tampa to Vero Beach that arbitrarily divides north and south Florida, and I like the insurance of having some cool-season grass growing when it gets cooler. We throw down a little bentgrass and it does what it is supposed to. Because we overseed, we do have to plan our fall renovation early enough so the holes are healed up. Aerification is the most traumatic thing we do to TifEagle and I use a roller a lot to smooth them out and firm them up. There's nothing worse than walking on a freshly punched green and get that mushy feeling underfoot."

So Ken believes that the ultradwarfs are good grasses and do take extra care, but they aren't necessarily the only choice depending on your particular situation or location.



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# Sometimes Being a Drag Can Be a Good Thing

By Darren Davis

Recently my assistant, Brett Howell, approached me with an idea that resulted in the design of a terrific new tool. The tool is a “drag” that, when pulled behind a utility vehicle, does a terrific job of breaking up aerification cores. In addition to its intended use, we have found that it’s excellent at breaking up clippings after mowing, and also removing early morning dew from turf. The tool is the subject of this Super Tip. However, in order to give credit where credit is due, I need to provide you with some background information that led to the design of this new tool.

A few years back I was in search of a tool that would be used to remove early morning dew on the golf course, thus providing a finishing touch for tournaments and special events. As we are always busy on the morning of a special event, I desired something that could be operated by one person and pulled with any utility vehicle. My search led to the purchase of a “Dew Draggin’” from Miltona, which performed exactly as promised in the company’s catalog. The 25-foot wide “Dew Draggin’” is made of PVC and rope and effectively removes early morning dew over large areas in a short period of time.

Then when aerification season arrived, we began investigating alternative methods to break up aerification cores in fairways. We desired something that was less damaging to the turf than a steel drag mat and did not tie up a tractor. Our goal was to break up the cores so the thatch could be removed more quickly by our Rak-o-vac, or blower. So, we hooked up the “Dew Draggin’” and gave it a try. However, we quickly realized why breaking up aerification cores was not an advertised feature of the “Dew



*Top: This heavy-duty, yet simple-to-construct, drag not only eliminates dew for special early morning events it also busts up aerification cores during renovation. Photo by Darren Davis*

*Inset: Four 1/2-inch bolts through the 1-1/2-inch electrical conduit pipe connect swivels to the 5/16-inch chain which does the actual dragging on the turf. Photo by Darren Davis.*

Draggin’.” Unfortunately, the tool was not aggressive enough to be effective.

We liked the concept of pulling something behind a utility vehicle for this task, and we liked the design of the “Dew Draggin’.” This is what originated the development of our new “drag” which essentially is a beefed-up, homemade mini “Dew Draggin’.” The tool we designed is made of metal and chain, instead of PVC and rope. The new tool is very effective at its intended use of loosening up aerification cores, and, like the “Dew Draggin’,” it is excellent at breaking up clippings and removing early morning dew.

The tool is made from a 10-foot piece of medium-strength metal pipe. The pipe we chose is 1-1/2-inch electrical metal tubing (EMT). We found the thickness of the metal to be durable, but significantly lighter weight than

galvanized pipe. Attached to the pipe is a 22-foot section of 5/16-inch coil chain.

The chain is the part of the tool that touches the ground, and does the actual work. In order to get the necessary “movement” of the chain when pulled across turf, the chain is attached to two, 3/8-inch swivels. These swivels are then affixed to the metal pipe with two, 4-inch eye bolts.

The final step was to attach a pull harness to the metal pipe so it can be fastened to — and pulled by — a utility vehicle. The harness is an 8-foot section of 5/16-inch coil chain that is bolted to the pipe 3 feet from each end (4 feet apart), and is attached to the pipe by two, 4-inch eye bolts.

My equipment manager was able to construct the drag in less than an hour, and excluding labor, the total cost was \$115.15.