

# Golf Course Trades

Golf Superintendent's Monthly Buying Guide

## Restoring the “Old Style” Essence of Donald Ross at a Historic Golf Course

What is This, the  
**Symptom** or  
the Problem?

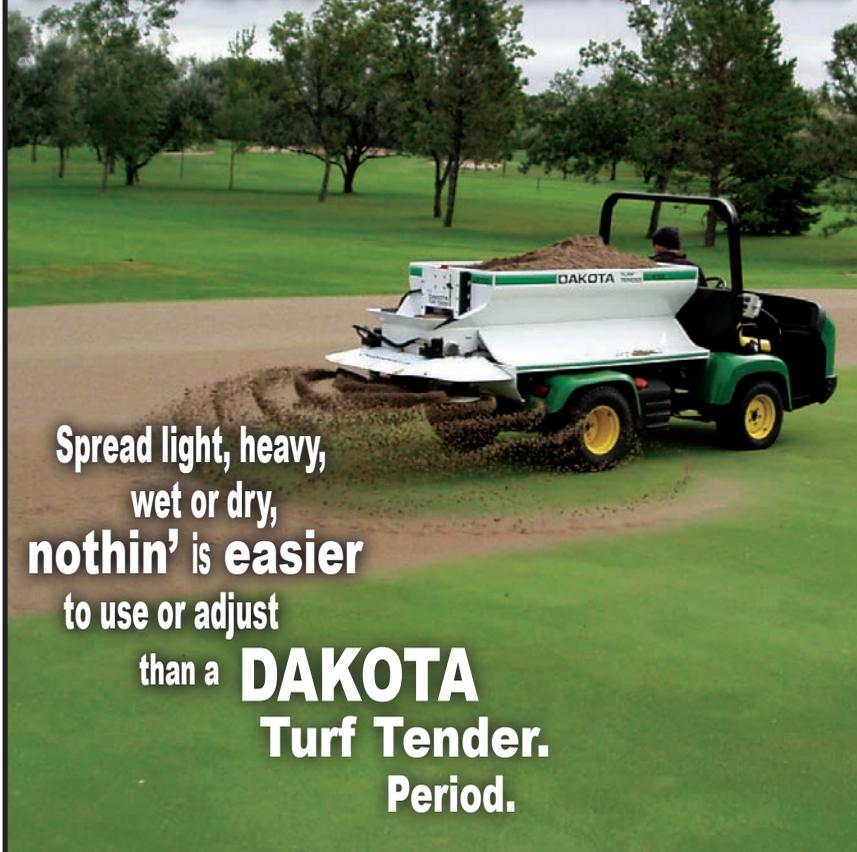
John Deere Golf  
Announces **Expansion** of  
PrecisionCut Fairway Mowers

*Photo: Brian Silva Shaker Hills Country Club,  
Harvard Massachusetts*

**BONUS** Intestines of the Earth: Earthworm Management Update

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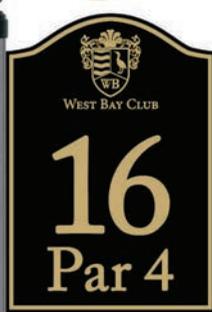


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**2015 Toro Workman HDX-Auto Gas**  
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**2012 Smithco Tournament Ultra**  
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2013 Cushman SprayTec (400 hrs) **\$18,000**



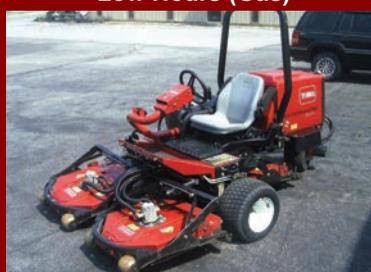
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By Linda Parker

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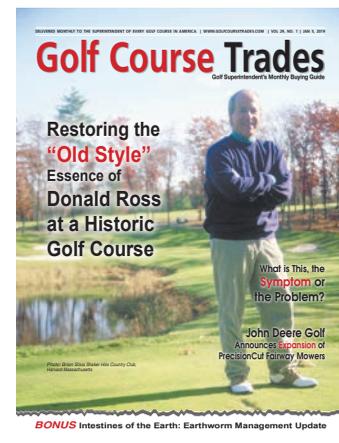


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The photo that appeared on the cover of our November issue, is the Floridian National Golf Club in Palm City, Florida.



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# Restoring the “Old Style” Essence of Donald Ross at a Historic Golf Course

By Linda Parker

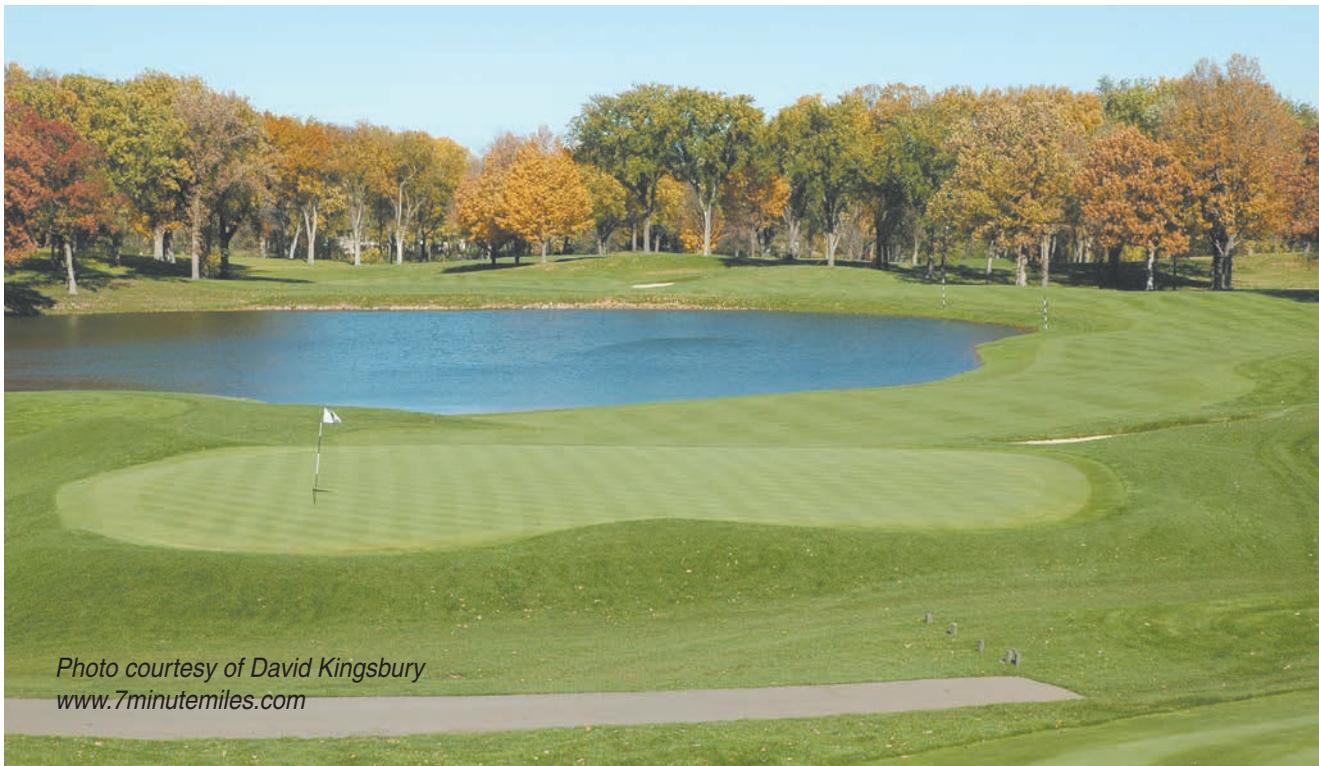


Photo courtesy of David Kingsbury  
www.7minutemiles.com

In 1909, a group of Minnesota businessmen and golfers chipped in a thousand dollars apiece to buy one option each on sixty-six acres of farmland, southwest of Minneapolis. Over the next two years, the acreage, described by the Minneapolis Morning Tribune as “a veritable land of heart’s desire,” would be shaped and sculpted by Scottish golf professional and architect Willie Watson into the eighteen-hole course at Interlachen Country Club.



Photo: Brian Silva Shaker Hills Country Club, Harvard Massachusetts

In 1920, Interlachen Country Club hired architect Donald Ross to further improve course design in hopes of attracting golf’s most prestigious events. Having already hosted numerous state amateur tournaments as well as the 1914 Western Open, Interlachen was well positioned to attract the 1930 U.S. Open.

Over the years, reshaped by time and use, the course at Interlachen evolved. As it changed, the imprint of Donald Ross’ touch began to fade. Aspects of his signature design style slipped quietly away.

Recognizing the changes, the decision was made at Interlachen prior to hosting the 2008 U.S. Women’s Open, to undertake a bunker renovation project. Course management turned to Brian Silva, an architect respected for his own design as well as his skill in restoring the nuances of a Donald Ross course while maintaining playability for the modern game.

Silva’s father worked in golf

course construction for numerous architects. As he shaped golf courses, he also may have shaped his son’s future.

Starting as a greenkeeper at Woodland Country Club (Newton, MA) while still in high school, Silva then enrolled in UMass Amherst and earned an associate degree in Turf Management from the Stockbridge School of Agriculture, a bachelor’s degree in Landscape Architecture and a master’s degree in Plant and Soil Sciences. In addition to teaching turf management courses, he worked for a short time as a USGA Green Section agronomist. In 1983, he joined Geoffrey Cornish, renowned architect and golf historian, before later launching his own firm.

Lowkey and unpretentious by nature, Silva has generously shared the following insights about his work at Interlachen Country Club.

“At first, the major interest in the project revolved around improving the playing conditions of the bunkers. Over time, the floors of many bunkers had become v-shaped to such an extent that

it was difficult to get a club on the ball that had come to rest in the bottom of the “V”.

For a number of years, though, I had been trying to interest the course in renovating their bunkers for another reason, this being so that the bunkers appeared more in keeping with bunkers typical to their vintage in the history of golf course design in America.

In the first two or three decades of the 20th Century, the greats of the Golden Era of course design had detailed their bunkers in a fashion many find unique today. This is especially true of their fairway bunkers. Plan after plan showed that architects like Donald Ross presented a majority of their fairway bunkers perpendicular to the line of play on a hole. Set up in this manner, these bunkers were wider from side to side and fairly narrow from the tee to green ‘sides’ of the bunkers.

When the Interlachen bunkers had last been renovated in the late 1980s, the vast majority of the fairway bunkers had been detailed in the more contemporary fashion, with the bunkers longer from tee to green and parallel to the line of play on a golf hole. This made the fairway bunkers far more playable than those set up perpendicular to the line of play but certainly less authentic in terms of Interlachen’s design history. The decision was made to renovate the bunkers in a fashion more in keeping with the club’s Ross design.

Interestingly enough, a good percentage of the fairway bunkers could be salvaged merely by twisting their axis 90 degrees such that the bunkers changed from parallel to the line of play to perpendicular to the line of play. The impact on the course’s aesthetics and strategy were dramatic.

The bunkers now looked as though they were fully integrated into the layout as fairways shifted this way and that as they approached a bunker, moved to the play side of the bunker and then shifted back to create a landing area past the bunker. The risk and reward strategy of the Ross design was brought back to the forefront. Players had to think their way through a round. Without question, the fairway bunkers set up perpendicular to the line of play exacted a greater penalty to an

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## "DryJecting" Greens Two Directions...



The DryJect folks are back at Highlands CC and we are going the greens 2 directions. This is a great tool to add to our aeration program. Unfortunately, it does not replace traditional core aeration but is an excellent process to incorporate more sand into the root zone and firm the greens. We DryJect 3x a year at HCC in addition to core aeration and Graden verticutting. With USGA greens that are over 20 years old, it is important that we remain very aggressive on our maintenance programs so they continue to drain and perc like new greens. We got a nice break in the weather. Tomorrow, heavy rains and wind are expected. We will work into the dark to finish this today. From the blog of Brian J. Stiehler, CGCS, MG <https://highlandscgolfmaintenance.blogspot.com/> ■



Soil Technologies Corp. has introduced their Liquid Aeration program for lawns, sports fields, and golf courses.



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Traverse City Golf & Country Club Renovation Update 8 Green Surface Finished - 9 Green Site Prep - Pool Site Prep



We finished the sod transfer from 9 green to 8 green, collar and approach on Friday. Some of the rolled up approach sod from four weeks ago really turned yellow but I think it will look great by late May. Bunker slope sod is next followed by bunker sand install.



A nice look at the new putting surface on the right side.



We removed all of the existing grass and skimmed off the topsoil on Thursday and Friday. This Tuesday starts the construction of the new 9th green.

From the blog of Steve Hammon Traverse City Golf & Country Club <http://tcgccgrounds.blogspot.com/> ■



# Country Club

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2014 Toro 1750 sprayer \$18750



2016 Toro 5510 D 550 hrs MINT \$36500



2016 Toro workman HDXD with cab \$19750 others available



2014 Jacobsen R311T w/cab/a/c/ 800 hrs \$34500



2014 Jacobsen LF 570 4 wheel drive 4hrs \$39750



2016 Toro propass 200 tow behind wireless topdresser \$12500



2011 Toro 5510D \$16500



Planet Air HD50 Aerator Like New \$8500/trifecta \$15500



2013/2014 Toro 4500D \$27750/\$29750



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### The Legendary Lily Pad Shot

No discussion of Interlachen Country Club is complete without paying homage to Bobby Jones' legendary Lily Pad Shot on the course's ninth hole. The "my-ball-walked-on-water" moment occurred during the second round of the 1930 U.S. Open as Jones attempted to reach the par-5 hole in two.

He later shared with the press that he was starting his down-swing when he caught a glimpse in his peripheral vision of two young girls dashing onto the fairway. He flinched, and it seemed that his ball was destined for the water. Instead, it is said to have taken an unlikely bounce off a lily pad and landed safely across the pond.

Making this improbable event even more historic is the backstory. Jones had already claimed the 1930 British Amateur (at that time a Major) on The Old Course at St. Andrews and The Open at Royal Liverpool Club at Hoylake. Winning the U.S. Open would be the third victory in his pursuit of a Grand Slam.

After what Jones described as a "tedious Atlantic crossing" and an "inevitably exhausting" hero's welcome in New York to celebrate his wins in Europe, he arrived at Interlachen with only a few days to practice. Challenging all the competitors were record-setting high temperatures and

extreme humidity, conditions so miserable that after one round, Jones' sweat-soaked necktie defied unknotting and had to be cut off with a knife.

In his book, *Golf is My Game*, (©1959. Chatto & Windus Ltd., London) Jones gives a slightly different account of the famous shot. "I half-topped the shot," he wrote, "so that the ball skipped a few times over the surface of the water before it hopped up into the grass on the bank of the lake."

Regardless of whether Bobby Jones' ball bounced off a lily pad or skipped across the water like a stone, the result was historic. The birdie four he made on that hole put him one step closer to a two-shot win that he claimed by birdying his final hole of the final round. Later that year, he secured his Grand Slam victory with a U.S. Amateur win (also then a Major) at Merion.

And as the team at Interlachen will confirm, this miraculous shot has inspired decades of golfers to lose countless golf balls in the water on the ninth, as they attempt to recreate the legendary Lily Pad Shot.

errant shot but there was always fairway short, long and to the 'inside' of the bunker for folks to make their way from the tee to the green."

During a practice round press conference before the 2008 U.S. Women's Open, the USGA's Mike Davis summarized the renovation work saying, "At Interlachen, you are looking at a Donald Ross golf course. They did fairly extensive restoration work a few years ago by Brian Silva and we happen to think they absolutely hit a home run with it. The bunkers look very much Donald Ross. Greens were taken out to their original sizes and shapes. And the project also took a look at a number of teeing grounds to bring a few drive zones back into play. It's a marvelous test - it's an old style."

Recommended reading: *From Fields to Fairways: Classic Golf*

Clubs of Minnesota. This insightful book, published in 2012 by the University of Minnesota Press, by author Rick Shefchik, devotes a full chapter to the intriguing history of Interlachen Country Club. ■

*Linda Parker has been writing professionally since the 1980s. With clients in finance, sports, technology, change enablement, resorts and nonprofit global initiatives, Linda helps organizations communicate their stories in meaningful ways to the people they most want to reach. She has authored, ghostwritten or contributed to more than a dozen nonfiction books. Linda is a member of the Authors Guild and the Golf Writers Association of America. You can connect with her at Linda@GlindaCreative.com*

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# Intestines of the Earth: Earthworm Management Update

By Ben McGraw, Ph.D

Reprinted with permission from Dr. Ben McGraw  
first printed in the Winter issue of Pennsylvania Turfgrass (PTU052)



It is difficult to tell whether Aristotle was speaking favorably of earthworms when he dubbed them “the intestines of the earth.” What we can be sure of is that he never managed fine turfgrass in the presence of heavy earthworm populations.

In most crop systems, earthworms are considered beneficial organisms since they aerate the soil, bust thatch layers, decompose organic matter and eject nutrient-rich fecal matter (“casts”) to the surface when tunneling. However, the casts can be the bane of many turfgrass managers’ existence — they muddy the surface, damage mower reels and cause general thinning of the turf. Damage can be especially severe in spring and fall in areas where turf is grown on native soils. Managing these invasive organisms is made difficult by the lack of control options and earthworms’ ability to quickly reproduce.

Unfortunately, there are no insecticide compounds registered in the United States and Canada for controlling earthworms. Some superintendents seek to indirectly reduce castings when targeting other pests by selecting pesticides that negatively affect earthworms. The fungicide thiophanate-methyl (e.g., Cleary’s 3336) and the insecticide

carbaryl (e.g., Sevin) are most commonly used in this manner.

Several studies have investigated the effects of cultural practices on reducing castings in turfgrass settings. Generally, earthworms prefer moist, cool conditions, with near-neutral pH. Frequent sand topdressing, removing clippings and applying acidifying fertilizers have been investigated in several university studies. Sand topdressing has produced the most promising results of the three, although soil modification requires frequent or consistent applications and is cost prohibitive to many operations to perform on large areas.

### Saponin-based fertilizers

Turfgrass managers have recently turned to using saponin-based fertilizers to culturally control earthworm populations. Saponins are naturally occurring compounds found in a wide variety of plant species. Materials possessing saponins readily form a soapy foam when added to water

and shaken. Applying saponin-based materials to soils after rain or irrigation expels earthworms from the soil, causing them to desiccate and die.

Using saponins to control earthworms is not a new idea, as it was once a popular means of suppressing casts on putting surfaces in the United Kingdom in the early 1900s. The proliferation of golf

courses in the interior of the U.K. began with the expansion of the British railway system. Courses moved from traditional “links” land with sandy soils to areas with heavy soils or greater percentages of fines. These soils were dominated by earthworms, and managing them on greens was a challenge. An ingenious superintendent named Peter Lees was the first to concoct his own saponin product (ground mowrah meal) to control earthworms and apply it to his putting surfaces. Saponins replaced harsh mercury-based products and were regularly used for several decades.

Control with saponins fell out of favor, however, in the 1950s when many chemical pesticides became publically available. Many of these pesticides, including DDT and chlordane, were broad-spectrum in activity, and it is reported that they provided earthworm suppression for several years! It was not until after these products were phased out that earthworm populations rebounded in many turfgrass sites and alternatives were sought.

The first modern saponin-fertilizer product (Early Bird by Ocean Organics) was developed in the mid-2000s. Early Bird, a by-product of tea manufacturing, has been shown to effectively expel earthworms





from the soil and reduce castings over several weeks. Recently, another saponin-based fertilizer, RhizoAide (Griggs Brothers, owned by Brandt Consolidated) has come onto the market and is available for use in turf. Our laboratory has been assessing the efficacy of these products and attempting to find optimal field rates.

### Our research

Earthworms are especially challenging to control due to their biology. They are hermaphrodites (possessing both male and female sexual organs), although they require a mate to produce eggs. Eggs are deposited in pearl-shaped capsules or "cocoon" throughout the year. This stage is relatively impervious to chemical or saponin control. Therefore, applying a short-residual product may kill only adults and juveniles but leaves a portion of the population unaffected.

We have observed how populations are able to rebound quickly even with effective products. In 2015, single applications of RhizoAide (4, 6 or 8 lbs./1,000 ft<sup>2</sup>) were compared to the granular formulation of Early Bird (6 lbs./1,000 ft<sup>2</sup>). All rates and products provided ~ 70% or higher control compared to the untreated checks 7 days after treatment (DAT). Two rates of RhizoAide provided 50% control of castings after 21 DAT, which suggests limited residual activity.

In spring 2016, we sought to determine if sequential applications of RhizoAide could provide more lasting suppression. RhizoAide (4 or 6 lbs./1,000 ft<sup>2</sup>) was applied monthly to plots on a golf course fairway in either 2 or 3 sequential applications. All treatments produced strong statistical differences by 28 DAT. Treatments receiving 6 lbs./1,000 ft<sup>2</sup> reduced castings by 49% to 70% (average 61%), which was similar to

Early Bird (60% reductions). After the second month, castings in the 6 + 6 lbs./1,000 ft<sup>2</sup> RhizoAide treatments had been further reduced (80%), although this was not significantly different from treatments receiving 6 + 4 lbs./1,000 ft<sup>2</sup>. The single application of Early Bird at 0 DAT provided 80% cast reductions at 55 DAT.

Finally, by the end of the trial (90 DAT), three applications of RhizoAide at 6 lbs./1,000 ft<sup>2</sup> provided the greatest numerical reductions compared to the controls (90%). No differences were detected between the Early Bird treatment (84%) and RhizoAide applications. RhizoAide applications that received 6 lbs./1,000 ft<sup>2</sup> at the start of the trial had generally the highest numerical reductions (> 80% control).

Although more testing is needed, it appears that the first application's rate may be the most important in "culling" reproducing adults. It is possible that rates of subsequent applications may be reduced to clean up the newly formed adults that were not initially controlled when in the juvenile state or were present in cocoons at the time of first application.

### Summary

Controlling earthworms, much like insects, requires a thorough understanding of their behavior and biology. We will continue to look for solutions for turfgrass managers. Currently, we are conducting trials to determine if late fall applications provide greater control of populations than with the traditional spring applications. ■

Ben McGraw, Ph.D., is an Associate Professor of Turfgrass Entomology, at Penn State University

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# What is This, the **Symptom** or the Problem?

By Brian Duffy



**D**uring this past year I've written about getting your War Wagon ready for those breakdown calls out on the golf course.

It would be great to hear that the topic prompted some of you out there to build your own version of a war wagon as to be better prepared so the next breakdown call is less stressful and more manageable.

Moving along I scratched the surface of engine trouble shooting with The Mower Down articles. Equipment Managers and Technicians are under a lot of pressure daily to be problem solv-

ers and quite often super heroes, saving equipment operators and their mower in distress. Or should I say the Superintendents in distress?

On an almost daily basis we encounter many of these common distress calls from our equipment operators. "My mower won't start, I have flat tire or my mower won't cut and I am stuck!" Quite often the breakdown call comes when we are in the middle of an urgent



repair. At least the call, gives us chance to get out of the shop for a breather and an opportunity to view how well our equipment is cutting.

Having spent my entire adult career in the golf industry I quickly learned from the beginning that on either the routine or the not so routine days there is never enough time to get all done. When it boils down to equipment repair and maintenance there is plenty of job security as I have never run out of work to do.

The lack of enough time is like the monkey we can't get off our back. We need to manage time as much as possible. Our time is used in so many ways each day it is hard to keep track of it all. The topic this month is stopping and taking a look at symptoms and problems.

Repair time can be saved through a better understanding of what is happening to cause the current breakdown or failure. Are you trying to repair the symptom? Or are you finding the problem and making the proper repair?

Something as simple as a flat tire on a mower sitting in the main-

tenance building can become time consuming and in its own way complex. A flat tire can be addressed in a few different ways. Air up the tire and send the operator on their way, or simply repair or replace the tire. In an effort to get the operator and mower on their way we opted put air in the tire. An hour later the call may come in on the radio for a flat tire on the same mower. A result, just putting air in the tire only masked the symptom of the flat but did not resolve the problem. At least if we are prepared with our war wagon, we can to head out and replace the flat tire with a good spare used tire wheel assembly, with a plan of replacing the flat tire with a new one later in the day.

Fast forward to tomorrow and once again the same mower now with a new tire in place has gone flat again. What has happened? It was assumed the old tire had a hole in it and needed to be replaced. Time and money was expended to replace the old tire with a new one and that ended up as only a repair of the symptom and did not resolve the problem again. At this point the used spare tire and wheel were reinstalled, and this left us scratching our heads as the mower headed out the door. What is the next step to stop this flat tire from becoming a mini series of events? It very obvious what the symptom is, the tire is going flat. The bead area of the rim was even wire brushed and cleaned as part of the new tire installation. So now laying at your feet on the floor before you is a brand new tire on the rim and it is flat. Now what? The actual problem has not been found. The only thing accomplished was spending time and money throwing repairs at flat tire and not really knowing what was is the cause of the flat. What should have been done in the first place? What has gone wrong? The problem or it can be called the root of the problem has not been addressed. Now you are going to grimace and shake your head ah, yes this has happened to me too.

Let's go back to the beginning of when we first had a flat tire before us. Rather than making an assumption that there is a hole in the tire and replacing it, how about troubleshooting the flat and finding the source of the symptom. How



do we find the source without just replacing the tire? With tire repair that is easy and it the first step in finding why the tire has gone flat. Every shop should have a water tub to place a tire into to look for air bubble indicating a leak. In this case, the air bubbles are coming from a leaking valve in the valve stem. Aha! A two dollar part has caused all this aggravation. If only this was done in the first place. The final step now is to replace

an attempt to make a symptom disappear. So think about that dead battery you're going to have tomorrow morning. Don't automatically assume the battery is bad until you do a little troubleshooting first.

My email box is always open so please keep the questions, ideas and suggestion coming my way to Brian Duffy at mxk92@yahoo.com. ■



the faulty tire valve and once again change the tire and wheel on the mower. With the valve stem replaced test the tire in water again for leaks. In the end the problem was found and the symptom eliminated.

The story gets a little dramatic and drawn out but, the point is to make you think about what the actual problem is amidst the symptoms.

We don't want to fall into the trap of being just a parts changer in

*Brian Duffy's career spans thirty five plus years in the golf industry. With a diverse background of working on golf courses and turning wrenches on all types of equipment. Plus teaching Golf Course Equipment Mechanics and progressing into turf equipment sales and service. For any questions, comment or ideas contact me at mxk92@yahoo.com*




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# John Deere Golf Announces **Expansion** of PrecisionCut Fairway Mowers with the 6080A, 6500A and 6700A Models

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Building upon the success of the 8000A E-Cut™ Hybrid Fairway mower and its popular three-wheel platform, turf professionals will soon have additional fairway mower options with the John Deere 6080A, 6500A and 6700A PrecisionCut™ Fairway Mowers. The 6080A, 6500A and 6700A Models leverage all of the fairway mower technologies from the John Deere award-winning A Model family of Fairway, Rough and Trim & Surrounds Mowers. These new A Models were designed out of a customer need for improved budget control while still delivering a fairway mower truly designed for the rigors of fairway applications.

“With tight operating budgets and increasing labor costs, our customers needed a cost-effective solution to get the job done,” said Brad Aldridge, product manager, John Deere Golf. “With this in mind, we challenged ourselves to design a machine that boosts productivity and maintains quality of cut while keeping costs down, and we’ve done that with the 6080A, 6500A and 6700A Models.”

These three new models are true fairway workhorses with a powerful 24.7 HP (18.4 kW) diesel engine, three-wheel smooth tire configurations, and premium performance and comfort features.

Operators will immediately notice that these three models fall in line with existing John Deere A Models demonstrating exceptional cut quality, even on hills, thanks to standard LoadMatch™. The innovative eHydro transmission eliminates linkages between the pedals and the hydrostatic pump. All models feature hydraulic mow circuits, and provide all-day mowing with various width-of-cut options:

- 6080A PrecisionCut Fairway Mower – 18-inch (45.72-centimeter) QA5 cutting units provide an 80-inch (2.032-meter) width of cut
- 6500A PrecisionCut Fairway Mower – 22-inch (55.88-centimeter) QA5 cutting units provide a 100-inch (2.54-meter) width of cut
- 6700A PrecisionCut Fairway Mower – 22-inch (55.88-centimeter) QA7 cutting units provide a 100-inch (2.54-meter) width of cut



Additionally, an eight mph (12.9 kph) mowing speed allows operators to mow more area in less time.

As with all A Model machines, the 6080A, 6500A and 6700A Models also feature the innovative TechControl Display with password-protected supervisory controls. TechControl allows turf managers or technicians to input a wealth of commands, including mow speed, turn speed, transport speed, and service timers, while also providing on-board service diagnostics – giving them complete control over cut quality and performance.

The 6080A, 6500A and 6700A Models also provide several features aimed at increasing machine and operator uptime, including internal hydraulic wet disk brakes that eliminate linkage adjustments and grease points in the brake system, along with a traction drive system requiring only one fluid type for maintenance. Finally, operators will appreciate the comfortable operator station with Command Arm mounted controls that adjust with the seat.

The 6080A, 6500A and 6700A Models provide an outstanding quality of cut in undulating terrain thanks to a rear-attaching yoke on the cutting unit. The trusted A Model Fairway Mower platform provides strength and durability. Combined with the standard GRIP all-wheel drive traction system, these additions climb hills easier without the worries of high side tire slippage.

The 6080A, 6500A and 6700A Models will each be available in 2019. For more information about the John Deere award-winning A Model family of Fairway, Rough and Trim & Surrounds Mowers, contact your local John Deere Golf distributor or visit [www.JohnDeere.com/Golf](http://www.JohnDeere.com/Golf) for the latest news and product information. ■



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- New close box system to protect drive chains from dirt and debris, equipped with automatic tightener to provide ease of operation with minimum care.
- Lights are standard feature on both models.

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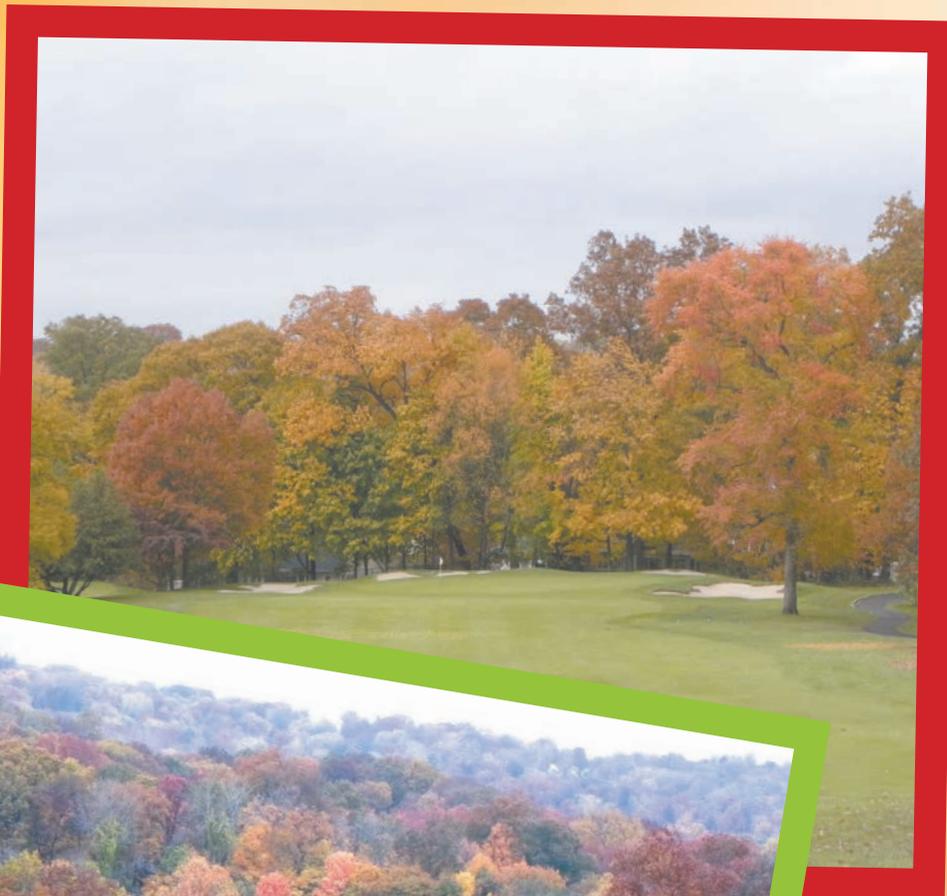
# Leaf Season Has Arrived:

Didn't it seem like the leaves stayed on the trees longer this year? Didn't it seem like they stayed green longer? It seemed like they just turned to those brilliant yellows and red just yesterday and now with last night's rains and today's winds they are dropping in a hurry.

Needless to say we spend most of our time trying to keep the course "leaf free". At times (like today) you just have to realize that there is not much we can do. They are falling faster and blowing around so much that it is impossible to keep up.

I took a few pictures to capture the fall beauty. I hope you had a chance to get out and play a few holes to enjoy the fall color.

From the blog of Matthew Ceplo.  
<http://rocklandcountryclub.blogspot.com/>



# NEWS

## From Around the Industry

For More News, Visit [GolfCourseTrades.com](http://GolfCourseTrades.com)

### Syngenta Introduces Provaunt WDG Insecticide With Enhanced Mixing For Turf Pest Control



Provaunt® WDG insecticide delivers powerful protection against ABW, crane flies, mole crickets, armyworms and more. Water-dispersible granule formulation offers enhanced mixing and compatibility. Stops feeding within minutes with mortality typically occurring within 48 hours.

To deliver proven, long-lasting control of turf's most damaging insects, Syngenta is introducing Provaunt® WDG insecticide for the turf market. Provaunt WDG is an enhanced formulation of Provaunt insecticide that defends turf against common target pests like European crane fly, annual bluegrass weevil (ABW), turf caterpillars (armyworms, cutworms and sod webworms) and mole crickets.

"The improved water dispersible granule goes into a solution more readily, making the mixing process more efficient for controlling key insect pests," said Stephanie Schwenke, turf market manager for Syngenta. "In addition to enhanced mixing, we have also seen improved compatibility with other products."

Powered by the active ingredient indoxacarb, Provaunt WDG can stop feeding within minutes, rapidly reducing feeding damage. Once introduced, mortality of targeted pests typically occurs within 24-48 hours. Additionally, Provaunt WDG is rainfast within two hours of application.

"Provaunt WDG provides 90 days of mole cricket control and is supported through the Mole Cricket Assurance Program from Syngenta," said Lane Tredway, Ph.D., technical services manager at Syngenta. "Research has also proved Provaunt WDG is an integral part of the WeevilTrak Optimum Control Strategy for season-long control of ABW and resistance management."

Provaunt WDG is currently available within the ABW Solution Pallet and will be available for individual sale through the GreenTrust® 365 Program.

To learn more about controlling turf insect damage with Provaunt WDG, visit [GreenCastOnline.com/Provaunt-WDG](http://GreenCastOnline.com/Provaunt-WDG). ■

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# MAREDO

## *Innovators in Turf Maintenance*

For over 15 years Maredo is innovating the Turf Industry. Maredo was founded in 2001 by Dutch engineer Marinus Reincke. After a long career in the Turf Industry as the chief engineer for Verti-Drain, Marinus decided to start the company Maredo and launch a multifunctional pedestrian machine. After a couple years of worldwide promotion of the so called 'PT-series' machines (PowerTools) the sales took off and Maredo started growing. The PT series machines were unique in its kind as one base machine could be used for aeration, overseeding, edge-cutting / mowing, verticutting or even synthetic turf cleaning.

### ***GreensmowerTools***

In 2006 the 'GT-series' GreensmowerTools machines were introduced. In Maredo's focus to develop unique and one-of-a-kind machines they succeeded with the GT series. The introduction of the GT series meant that superintendents could now use their triple-greensmowers for more than just mowing. Their Toro, Jacobsen, John Deere and Baroness machines can be used for aeration, overseeding, hollow coring, verticutting, grooming and rolling once the Maredo GT heads are connected to their greensmower.



GT410 VibeSpike-Seeder

### ***MachineTools – behind a tractor***

In 2013 the Maredo 'MT- series' (Machine-Tools) machines was introduced. The Maredo MT series machines are designed to attach behind a (compact) tractor. One MT machine holds three MT 'heads' which

are mounted to the central MFrame. The MFrame is a free suspended frame. The three MT heads are floating units and will follow the contours of the terrain. Thanks to the flexible design of the MFrame the operator can make curves while using the machine. The flexibility of the MT machine together with the possibility of interchanging MT heads on one central frame makes the Maredo MT a unique machine which is very different to the competition.



MT200 Flex-Verticutter

### ***Worldwide network***

Maredo's headquarters and main office are based in Leersum, The Netherlands. Started as a one-man company Maredo now has grown to a family company with multiple employees. Maredo nowadays export their products to over 30 countries spread all over the world. In these countries Maredo sells their products through distributors and /or importers to guarantee optimal support.

### ***Maredo's promise***

Maredo's strapline, Innovators in Turf Maintenance, is a promise to the whole turfgrass industry. Maredo strongly believes in innovation and holds a strong focus on designing sustainable machines which can improve the quality and efficiency of turf-grass maintenance.

Take the Maredo GT230 HiSpeed-Corer heads for example. These HiSpeed-Corer heads for triple-greensmowers fitted with hollow tines will remove huge amounts of

organic matter with minimal surface disruption. The produced holes will heal in 1 – 2 days. If you would compare this to regular verticutting using the GT230 is way more efficient and less harming for the greens. Golf players won't notice the HiSpeed-Corer units have been used on the greens.



GT230 HiSpeed-Corer



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# NEWS

## From Around the Industry

For More News, Visit [GolfCourseTrades.com](http://GolfCourseTrades.com)

### ClubCorp Enhances Offerings With Launch of ClubLife Management



Dedicated Management Services Division Will Be Led by Industry Senior Executives

ClubCorp – The World Leader in Private Clubs® – today announced the introduction of ClubLife Management, a comprehensive management services division for private clubs, destination resorts and premier daily-fee golf courses. ClubLife Management establishes a new paradigm in third-party management uniquely poised to leverage ClubCorp's unmatched reciprocal club network of more than 300 clubs, supplier purchasing power, innovation, and continual enhancement to the member experience. Industry veteran Doug Hellman has been named Senior Vice President to oversee ClubLife Management and expand the division. In addition, Seth Churi joins the company as Senior Vice President, Operations.

"We are excited to sponsor this premier management services company. With the addition of the leadership team for ClubLife Management and the years of experience they bring, combined with ClubCorp's assets and resources, we bring a powerful combination to the marketplace that can really benefit club owners," said David Pillsbury, ClubCorp CEO. "As the sponsor, we also are committed to rapid growth in this important segment of the industry."

Doug Hellman, former senior vice president business development

of a leading management services company brings more than 30 years of experience in business development and management services, team building, thought leadership and client relations to his leadership role at ClubLife Management. Seth Churi brings extensive club management and operations experience as a former executive with Sequoia Golf, and, most recently, cofounder and executive of Redwood Six, a full-service private club management company that was acquired by ClubCorp in 2018.

"ClubLife Management is instantly, by virtue of our sponsor, leadership team and lifestyle-centric approach to operations, a premier provider in the management services industry," said Doug Hellman, Senior Vice President, ClubLife Management. "I am looking forward to rapidly growing ClubLife Management with the backing of the world leader in private clubs. Our ability to leverage significant infrastructure and systems, coupled with our unsurpassed member reciprocity program truly sets ClubLife Management apart in the management services space." ■

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# Golf Course Trades

## COMPANY SPOTLIGHT



## Greenleaf Technologies



Greenleaf Technologies has been a leader in nozzle development for over 20 years. With the introduction of the TurboDrop® Venturi nozzle in 1993, a breakthrough product was born. Developed initially for Agriculture, the TurboDrop nozzle found a home on a few pioneering golf courses looking for drift control without the need for shrouds, boom covers, or additives that can alter the performance of the chemicals being applied, while also providing excellent coverage and penetration. Interest in the nozzles spread by word of mouth due to the results that superintendents were achieving. Taking note of this development Greenleaf Technologies dove head first into the industry, building a dealer network, joining industry groups, and making appearances at major tradeshows to build a solid and loyal customer base with a history of success. Most golf courses using TurboDrop nozzles

use them for every application; fairways, greens, tees and rough

A key moment in Greenleaf's history occurred with the development of the TurboDrop Asymmetric DualFan™ nozzle, introduced in 2011. This is an evolution of the air injected twin fan, a Greenleaf innovation developed in 2005. The Asymmetric DualFan nozzle is built on top of the TurboDrop's solid drift control foundation, and increases coverage dramatically over traditional single fan nozzles. With this nozzle, the spray patterns are oriented 10° forward and 50° rearward, to allow for greater variations in boom height. Between 12" and 22" from the turf, the Asymmetric DualFan nozzle has less than 5% variability in spray distribution across the boom length, preventing the striping effect often seen when booms get too close or too far away from the spray target. When spraying a (mostly) vertical spray target such as turf grass, it can be difficult to get coverage on the "back side" of the leaf blade. With single fan nozzles, most of the spray ends up on the front side of the leaf (the side that the sprayer is moving toward). With a TurboDrop Asymmetric DualFan nozzle, spraying both forward and rearward, much better coverage is achieved on the back side. : These gains in coverage have made the Asymmetric DualFan the nozzle of choice when spraying colorants, the consistent and even application of colorant being critical to the final result.

The TurboDrop Asymmetric DualFan designed specifically for turf is the TDAD. It provides the "two sided" coverage for growth regulators, contact fungicides and other coverage critical applications. The modular design allows for the pattern tip on front or rear to be easily replaced, or changed out for different applica-

tions. All Greenleaf Technologies' nozzles are available in a variety of sizes, with either a poly (TDAD) or ceramic metering orifice (TDCAD). Choosing the ceramic orifice will double or triple the lifespan of the nozzle.

New this year for the golf market is the TurboDrop Asymmetric Full Ceramic DualFan Nozzle (TDAT). The TDAT produces slightly coarser droplets than the TDAD, providing even more drift control protection. While this is an important distinction, the key change is the wear life of the nozzle. While the TDAD is a very durable nozzle, the TDAT is designed to last roughly three times as long. This long life is due to the advanced full ceramic design, where not only is the metering orifice ceramic, so is the pattern tip. Having all wear surfaces built out of this ultra durable material means not only a longer wear life, but a more hours of operation inside of the calibrated sweet spot of performance.



Over the years Greenleaf Technologies' success has been built upon the foundations of technology and science, and those forces have been the deciding factor in bringing its products to market. Greenleaf's TurboDrop nozzles incorporate innovations such as air injection for reduced drift, and multiple attack angles for on-target leaf backside coverage. These are wrapped in material science breakthroughs

like Polyacetal nozzle bodies and ceramic wear surfaces. These modern materials are forged into modular designs for ease of maintenance and unrivaled flexibility. The modern nozzles from Greenleaf bear little resemblance to the old brass and stainless units that were the standard of last century. Building from a strong technology standpoint Greenleaf offers the best tools for the job with its lineup of nozzles for the golf industry.



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# NEWS

## From Around the Industry

For More News, Visit [GolfCourseTrades.com](http://GolfCourseTrades.com)

### Glenn Quattlebaum Joins Turf Connections as Sales Manager



Turf Connections, the Carolinas' premier producer of quality turfgrass sod and sprigs, announces the addition of longtime turf industry professional, Glenn Quattlebaum, to the staff as Sales Manager.

Quattlebaum brings more than 35 years of golf and turf industry sales experience in the Carolinas and the Southeast to the Sales Manager position. Quattlebaum earned a B.A. in Biology from Erskine College. Based in Manning, SC, Quattlebaum serves turfgrass customers throughout the Southeast in the home building, landscape, sports turf and golf course industries.

"We have recently expanded our production to include two North Carolina locations in Marshville and High Shoals. I have personally known Glenn for more than a decade. We are thrilled to have him on our team. His integrity and knowledge are aligned with our company mission and will be

of great benefit to our customers," said Marc Marsh, president of Turf Connections.

Turf Connections currently has four sod farm locations, two in North Carolina and two farms in South Carolina, where high-quality bermudagrass, zoysiagrass, and fescue sod and sprigs are grown. The company offers delivery and installation services. For more information visit Turf Connections on the web at [www.turfconnections.com](http://www.turfconnections.com) ■

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