ON TOP OF THE WORLD
Builds Water Efficiency Into Lush Florida Landscapes

Also in This Issue:
- CEU ROUND-UP COMING TO AN EXTENSION NEAR YOU
- CATCHING UP WITH DR. TRAVIS SHADDOX

May/June 2018
VOL. 35 / NO. 4
Redefine sustainable turf management with the proprietary fertilizer that improves soil health and alleviates toxicity levels, then crosses over into your turf for better nutrient use and stress response. Learn how CrossOver’s unique formula of plant-available silicon, magnesium and calcium can benefit your turf at CrossOver-Silicon.com.
CONTENTS

Cover Story
On Top of the World Builds Water Efficiency Into Lush Florida Landscapes

UF Update
Catching Up With Dr. Travis Shaddox

Upcoming Events
CEU Round-Up Coming To an Extension Near You

9
22
26

DEPARTMENTS

President’s Message ............................................................... 4
From the Executive Director .................................................. 6
Wildlife Feature ................................................................. 24
Welcome New Members ....................................................... 25
Index of Advertisers ............................................................ 29

Cover photo and photos on pages 9, 10, 12: courtesy of On Top of the World Communities.
The many fertilizer ordinances that have popped up around the state over the previous years have all had an important part written into the legislation—education—not just for the homeowner but for the applicator as well. Education is the vital link between success and failure. The importance of education can also be found with the Continuing Education Units (CEUs) required by the state in renewal of pesticide and fertilizer applicator licenses.

Education is more than just a requirement. Allowing your employees to continue their education proves commitment in their personal and professional growth. Unfortunately, employers often put great emphasis and investment on recruiting and hiring an employee, then fail to keep the employee motivated and engaged for long-term success. Providing additional training and education improves employees’ well-being, loyalty and on-the-job performance. It prevents employees from becoming stagnant in their current positions, forcing them to look for better opportunities elsewhere. In return, you get better-trained employees who can contribute to your business’ success. Education could turn a good employee into a great employee with a high return on investment.

Continuing your own education allows your business to stay at the forefront of new and emerging trends arising from research developments, policymaking and the many new and exciting products to hit the market. It allows one-on-one interactions with the many sponsors in attendance, answering questions or soliciting feedback on product performance. Most importantly, it could lead to a money-saving or business-generating idea down the road that can have a direct effect on the bottom line. Providing professional development goals for your employees is very important and allows you to gain trust from them by maintaining goals of your own.

The Florida Turfgrass Association remains committed to providing this education for the entire green industry, not just for our members. Through the Regional Turf Seminars each spring, the CEU Round-Up in July and the Conference & Show in September, we provide ample opportunity to be your one-stop shop for all green industry related education. But we won’t stop there. Coming this year to the Conference & Show will be a business track geared toward improving more than just your turf. Topics will range from basic spreadsheet creation and utilization, to more in-depth studies on human resource management. We are excited to be able to offer a variety of education, and we appreciate any ideas or feedback you may have for improvement regarding any of our educational offerings.

**Commitment to Education**

**President’s Message**

**By Andrew J. Jorgensen, FTGA President**

**CEU Round-Up**

With the busy growing season now upon us, we realize the need to offer opportunities for education with reduced travel and time away from the job site. The CEU Round-Up on July 25 allows you and your staff a full day of education at various UF/IFAS Extension offices throughout the state. For more information and to register, visit www.FTGA.org.

**Conference & Show**

We are pleased to announce that the FTGA has partnered with the Florida Golf Course Superintendent Association for the opening reception during the 66th Annual Conference & Show at the World Golf Village Renaissance St. Augustine Resort, September 17–19. The opening reception will feature Pat Jones, publisher of *Golf Course Industry* magazine, as guest speaker. Pat brings with him many years of experience in all things green industry related and is an informative and educational speaker. This is an event you don’t want to miss, and it’s just the beginning of what promises to be an outstanding, industry educational and networking event.
IT’S NOT COMPOST

COMAND is derived from an exclusive process using precise inoculation and a unique composting method by Harvest Quest. Finely screened, mature, stable, and teeming with diverse microbiology, it is carefully prepared to be highly beneficial to plant growth. Use straight, to amend existing soils, or custom blend with sand to create topdressings or rootzone mixes. COMAND maintains attractive quality playing surfaces, saves water, reduces thatch and elicits natural disease resistance. Call or visit us online to learn more.

For COMAND sales in Florida, contact LifeSoils
352.258.9330

www.TakeCOMAND.com
From the Executive Director

By Heather Russo, Executive Director

Filling the Gap: Finding Your Next Employee or Employer

The FTGA is continually looking for ways to help its members and turfgrass professionals. We are excited to announce the addition of a new Career Center feature to our website.

EMPLOYERS

It can be difficult to find qualified and reliable workers. In the case of unexpected absences, busy periods or skills shortage, a temporary or permanent professional may be just what your company needs, and we are here to help. I hope this new tool will make it easier to find your next employee.

Go to our website at www.ftga.org. On the top navigation toolbar, select Career Center, then click the employer link to submit a job posting. The screen illustrated here will appear.

Complete the online form and submit. Once the payment is received, the posting will be active for one month; the cost is $50 for FTGA members and $100 for non-FTGA members. To extend the job posting for another month, contact our office.

CANDIDATES

Find the job that fits your industry skills and knowledge. Whether you recently lost your job or are ready to start to start new, we hope this new job board will help you land the job of your dreams. It’s easy as 1-2-3; type in your credentials and hit SEARCH. A list of current job postings will populate the screen.

I hope employers and candidates find this new tool useful.

FTGA EDUCATION OPPORTUNITIES

Education and career development go hand-in-hand. If you want to further your career or go off in a different direction, be sure to read the section in this issue on the CEU Round-Up coming up in July. The next issue of the Digest will offer a preview of the FTGA Conference & Show.
66th Annual
Conference & Show
SEPTEMBER 17–19, 2018
WORLD GOLF VILLAGE RESORT
500 S. Legacy Trail • St. Augustine, FL 32092 • 800-457-4653

More than two days of informative and exciting educational sessions brought to you by:

UF UNIVERSITY OF FLORIDA

Join us for our annual GOLF TOURNAMENT on the SLAMMER & SQUIRE GOLF COURSE!

PRESENTING SPONSORS

$125 FTGA Standard Room Rate

SAVE THE DATE
FOR MORE DETAILS OR REGISTRATION, VISIT WWW.FTGA.ORG
Horizon offers a complete selection of fertilizer and soil amendments, like Turface, PBI Gordon and Seed Research, tools like rakes, tampers and spreaders, chemicals, seed, mowers, and irrigation products from Hunter, Rain Bird and Toro. Our products are in-stock when you need them and are backed by a professional, knowledgeable sales team. We can even help you understand what your turf needs with our Turf RX service.

Call your local Horizon and schedule your delivery before the season gets in full swing.

Horizon’s got you covered no matter where you score.
Editor’s Note: Since 2007, On Top of the World has participated in the Florida Water StarSM requirements with every house it has built while maintaining turfgrass and Florida-Friendly plant material as part of the landscape. What a great example of FTGA members providing good stewardship of the environment.

By Phillip Hisey,
Commercial Landscape Superintendent,
On Top of the World Communities Inc.

The Florida Water Star program was launched ten years ago by the St. Johns River Water Management District (SJRWMD) to not only provide an opportunity for saving water indoors and outdoors in new residential and commercial construction, but also to provide recognition to program participants. The program considers showerheads, faucets, toilets, piping, landscaping and irrigation as just a few of the many components that influence water use.

On Top of the World Communities Inc. (OTOW) was instrumental in providing technical expertise in the development of the program, and we continue to partner with Florida Water Star and both the SJRWMD and Southwest Florida Water Management District (SWFWMD). When the program began, OTOW partnered with the SJRWMD to pilot many of the Florida Water Star criteria in place today. Because the use of low-volume irrigation, Florida-Friendly Landscaping™ principles and pressure-regulated heads were already implemented at OTOW, merging with Florida Water Star was a natural fit.

While OTOW is not within the SJRWMD, our cooperation with both water management districts has led to a lasting relationship that is continuously strengthening and growing. OTOW staff sit on the Florida Water Star technical advisory committee representing builders/developers to help with continued program development and to share challenges and issues from the perspective of the builder, landscape professionals and irrigation professionals.

So what is the Florida Water Star Program?

The Florida Water Star program is a voluntary certification program for new residential and commercial construction
and existing home renovations. The program encourages water efficiency in appliances, plumbing fixtures, irrigation systems and landscapes as well as water quality benefits from best management practices in landscapes. An average Florida Water Star homeowner can save up to $530 on annual utility bills and up to 48,000 gallons of water each year. The program outlines standards for a broad range of homes—from a condominium with no yard to an older home on a half-acre lot with an aging irrigation system.

Florida Water Star is not about removing turfgrass and creating “Martian” landscapes with rock and cactus. The values are conservation-oriented and incorporate the Florida-Friendly Landscaping principles, as well as installing conserving fixtures and appliances under the roof. I am confident in saying that we all know the benefits we get from turfgrass and landscape plants far exceed landscapes comprised of solely rock and cactus. To name a few, we see business and economic improvement, climate control, dust filtration, erosion control, habitat for butterflies and other species as well as and oxygen generation. While with rock you use less water, you also create a heat island, nearly eliminate erosion control potential, and filtration and oxygen production are significantly reduced.

When considering the Florida Water Star program, you need to be familiar with the prerequisites that must be met to achieve the minimum certification of “silver.” Starting with the landscape, some of the criteria include not installing invasive exotic plants, spacing plants 2.5 feet from the home, using plants specific to the site conditions—right plant, right place and installing tree species that will create enough shade to cover 30 percent of the landscape area at maturity. The main focus of the landscape criteria is plant selection and placement to help reduce over-irrigation.

Next is the irrigation criteria. There are 16 separate irrigation criteria, but most are standards that should be met by any qualified irrigation installer. Criteria such as installing a working rain sensor, using matched precipitation rates within zones, ensuring correct spray patterns to avoid overspray on concrete and even coverage. The biggest requirement that I believe catches most people is allowing only 60 percent of the irrigable area to be in high-volume irrigation (typically spray or rotor heads) or anything over 0.5 gallons per minute. This means that you need to be using drip or low-volume irrigation for landscape and shrub areas to meet the criteria or install a turfgrass that will thrive without high-volume irrigation.

To achieve Florida Water Star silver certification, the last section of the criteria is the indoor portion. Many
of these are easily accomplished for most home builders with little or no added cost. A few of these criteria include using reinforced hoses for appliance water supply lines, installing 1.28 gallon per flush toilets, installing showerheads that do not exceed 2 gallons per minute and aerators in bathroom sink faucets that do not exceed 1.5 gallons per minute. Regarding aerators and the gallons-per-minute requirement for showerheads, many manufacturers provide these options already with no additional charge. When installing showerheads, toilets and faucets, select those with the WaterSense label and the criteria will be met. Also, if homes come with a clothes washer and dishwasher, look for the Energy Star label, and they will also meet the indoor prerequisites.

As you can see, the criteria are typical of good design standards that any prudent landscape and irrigation installer should follow for optimal use and efficiency in the landscape and irrigation system. The water management districts offer some cost comparisons for installations done correctly, but in my experience the cost of installing a Florida Water Star landscape and irrigation system pay for themselves within one to two years, depending on the size of landscape and cost of water from your purveyor.

The successful landscape designs utilized here at On Top of the World are inviting, aesthetically pleasing and provide the benefits to our residents and our ecosystem. By using the Florida-Friendly Landscape principles and the Florida Water Star program criteria we are poised to reduce our water use for many years to come. Again, water-conserving landscapes do not have to be dull rock and cactus yards with little to no color. They can be inviting, natural settings using cultivars of Florida natives and sub-cultivars that provide the aesthetic appeal that we all look for and water conservation we all need to be striving for. If you are interested in learning more about the Florida Water Star program or want to look at the criteria, visit FloridaWaterStar.com. If you are interested in visiting On Top of the World Communities Inc., to see how we are achieving Florida Water Star certification, please reach out to me at philip_hisey@otowfl.com.

---

**FLORIDA-FRIENDLY LANDSCAPING QUIZ**

Contrary to what some think, Florida-Friendly Landscape is not a fancy slogan for Xeriscape. It incorporates nine guiding, common-sense principles to help homeowners conserve water and reduce pollution of water resources. How well do you know the nine principles of Florida-Friendly Landscaping? Take the quiz to find out.

**Test Your Florida-Friendly I.Q.**

1. What is the purpose of right plant, right place?
2. How should you water for maximum water efficiency?
3. Overuse of fertilizer can be bad for your yard and (on the macro level) for the ____________.
4. How many inches of mulch should you provide to help retain soil moisture, prevent erosion and suppress weeds?
5. How can you encourage wildlife to inhabit your environs?
6. In addition to overusing fertilizer, you must use them ____________.
7. What provides nutrients to the soil and reduces waste disposal when reused on the landscape by recycling?
8. What can provide nutrients to the soil and reduce waste disposal when reused on the landscape?
9. Waterfront property, whether on a river, stream, pond, bay or beach, is fragile and should be carefully protected to maintain freshwater and marine _____________.

(Answers on page 12)
Answer Key: FLORIDA-FRIENDLY LANDSCAPING QUIZ

1. To reduce the need for water, fertilizer, pesticides and pruning. Native plants are the best choice. Visit www.floridayards.org/fyplants/index.php to view a database of native plants by region. Visit http://fyn.ifas.ufl.edu/Plant_list/player.html for a tutorial on native plants.

2. Water only when necessary, not on a fixed schedule. If you create a landscape that thrives only on rain once established, you significantly reduce the need to water.

3. Environment. The object is a healthy lawn. Over-fertilizing encourages pests while under-fertilizing can endanger the health of a lawn.

4. Three inches of mulch is optimal. It not only retains moisture and suppresses weeds but also helps to moderate the soil temperature.

5. By providing plants, water and shelter. Use a variety of plants with an emphasis on native plants.

6. Responsibly. Follow city ordinances and use cultural deterrents—integrated pest management—to prevent pest infestation.

7. Yard clippings. Recycled yard waste (compost) adds valuable nutrients to the soil.


9. Ecosystems. Plant a maintenance-free zone of at least 10 feet between landscape and adjacent bodies of water.

Additional Resources:


- Visit the University of Florida at http://fyn.ifas.ufl.edu/professionals/BMP_overview.htm to learn about the UF-IFAS Florida-Friendly Landscaping™ program and Best Management Practices for lawn and landscape trainings.

We are poised to reduce our water use for many years to come.
Weeds will wish they never sprouted. Celsius® is a postemergence, warm-season turf herbicide that handles conditions many other products cannot. It has one of the broadest spectrums of control on the market and controls more than 130 weeds, including troublesome dollarweed, Virginia buttonweed, doveweed and bull paspalum. It achieves control using 25-75% less active ingredient than current postemergence herbicides and provides excellent performance on St. Augustinegrass and centipedegrass turf types.

*The Guarantee is limited to the remedy of a retreatment of your property. If this product does not perform to your satisfaction, please contact your lawn care provider for the retreatment. Lawn care companies please contact Bayer Customer Service at 1-800-331-2867 for product for the retreatment.

RESTRICTED USE PESTICIDE DUE TO TOXICITY TO AQUATIC INVERTEBRATES. For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. ALWAYS READ AND FOLLOW LABEL INSTRUCTIONS. Bayer CropScience LP, Environmental Science Division, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709. For additional product information, call toll-free 1-800-331-2867.

www.backedbybayer.com. Not all products are registered in all states. Bayer, the Bayer Cross, Armada, Celsius and Topchoice are registered trademarks of Bayer.

©2018 Bayer CropScience LP. ES-418-GLF-254-A-R1
Weeds will wish they never sprouted. Celsius® is a postemergence, warm-season turf herbicide that handles conditions many other products cannot. It has one of the broadest spectrums of control on the market and controls more than 130 weeds, including troublesome dollarweed, Virginia buttonweed, doveweed and bull paspalum. It achieves control using 25-75% less active ingredient than current postemergence herbicides and provides excellent performance on St. Augustinegrass and centipedegrass turf types.

*The Guarantee is limited to the remedy of a retreatment of your property. If this product does not perform to your satisfaction, please contact your lawn care provider for the retreatment. Lawn care companies please contact Bayer Customer Service at 1-800-331-2867 for product for the retreatment.

RESTRICTED USE PESTICIDE DUE TO TOXICITY TO AQUATIC INVERTEBRATES. For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator’s certification. ALWAYS READ AND FOLLOW LABEL INSTRUCTIONS. Bayer CropScience LP, Environmental Science Division, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709. For additional product information, call toll-free 1-800-331-2867. www.backedbybayer.com. Not all products are registered in all states. Bayer, the Bayer Cross, Armada, Celsius and Topchoice are registered trademarks of Bayer.

©2018 Bayer CropScience LP. ES-418-GLF-254-A-R1

Features

- Reduced risk of significant phytotoxicity at high temperatures
- Achieves control using 25-75% less active ingredient than current postemergence herbicides
- Provides excellent performance on St. Augustinegrass and centipedegrass turf types
- Proven control in bermudagrass and zoysiagrass
- Easy-to-use wettable granule formulation
Communication and Trust:

A Recipe for Growth

At 5:30 am, Craig Devereaux, Lawn Route Manager for Turfmaster Lawn Services, opens up shop, loads up the trucks and starts his day. Craig is in a similar perspective when it comes to serving its customers, they take care of you. Turfmaster has a similar perspective when it comes to serving its customers, they take care of you. Turfmaster has

Turfmaster opened back in 1991, it was owned by Mark Hughes – a longtime business partner who had the technical aspects of the business and a vision of taking care of Turfmaster Lawn Services.

"That's the history of Turfmaster Lawn Services." Craig is a consistent user of Armada® fungicide, Bayer's broad-spectrum fungicide. He is particularly impressed with Topchoice – Bayer's postemergence herbicide. "Topchoice has been very good to us. When I get a complaint, my first thought isn't about the product. It's the technician who was on the route and didn't do the job. That's the training that was taught during the first day. Our technicians understand that when you take care of your customers, they take care of you. Turfmaster has

In Craig’s words, “That’s the history of Turfmaster Lawn Services.” Bayer has been very, very good to us. They stand behind their products, and they’re there for us.”

— Craig Devereaux

Craig would agree.

Craig understands that when you take care of your customers, they take care of you. Turfmaster has

According to Craig, Turfmaster used to only apply postemergence herbicides in the winter, because we use seasonal components to any relationship. Bayer has been very, very good to us. They stand behind their products, and they’re there for us.”

— Craig Devereaux

Craig is a consistent user of Armada® fungicide, Bayer’s broad-spectrum fungicide. He is particularly impressed with Topchoice – Bayer’s postemergence herbicide. “Topchoice has been very good to us. When I get a complaint, my first thought isn’t about the product. It’s the technician who was on the route and didn’t do the job. That’s the training that was taught during the first day. Our technicians understand that when you take care of your customers, they take care of you. Turfmaster has

In Craig’s words, “That’s the history of Turfmaster Lawn Services.” Bayer has been very, very good to us. They stand behind their products, and they’re there for us.”

— Craig Devereaux

Craig would agree.

Craig understands that when you take care of your customers, they take care of you. Turfmaster has

According to Craig, Turfmaster used to only apply postemergence herbicides in the winter, because we use seasonal components to any relationship. Bayer has been very, very good to us. They stand behind their products, and they’re there for us.”

— Craig Devereaux

Craig is a consistent user of Armada® fungicide, Bayer’s broad-spectrum fungicide. He is particularly impressed with Topchoice – Bayer’s postemergence herbicide. “Topchoice has been very good to us. When I get a complaint, my first thought isn’t about the product. It’s the technician who was on the route and didn’t do the job. That’s the training that was taught during the first day. Our technicians understand that when you take care of your customers, they take care of you. Turfmaster has

In Craig’s words, “That’s the history of Turfmaster Lawn Services.” Bayer has been very, very good to us. They stand behind their products, and they’re there for us.”

— Craig Devereaux

Craig would agree.

Craig understands that when you take care of your customers, they take care of you. Turfmaster has

According to Craig, Turfmaster used to only apply postemergence herbicides in the winter, because we use seasonal components to any relationship. Bayer has been very, very good to us. They stand behind their products, and they’re there for us.”

— Craig Devereaux

Craig is a consistent user of Armada® fungicide, Bayer’s broad-spectrum fungicide. He is particularly impressed with Topchoice – Bayer’s postemergence her
Your Success   
Our Science

Weeds will wish they never sprouted.

Celsius® is a postemergence, warm-season turf herbicide that handles conditions many other products cannot. It has one of the broadest spectrums of control on the market and controls more than 130 weeds, including troublesome dollarweed, Virginia buttonweed, doveweed and bull paspalum. It achieves control using 25-75% less active ingredient than current postemergence herbicides and provides excellent performance on St. Augustinegrass and centipedegrass turf types.

Features

// Reduced risk of significant phytotoxicity at high temperatures
// Achieves control using 25-75% less active ingredient than current postemergence herbicides
// Provides excellent performance on St. Augustinegrass and centipedegrass turf types
// Proven control in bermudagrass and zoysiagrass
// Easy-to-use wettable granule formulation
FLORIDA’S FIVE WATER MANAGEMENT DISTRICTS are charged with overseeing the water supply, water quality, flood protection and floodplain management, and natural systems. Regulations control water consumption, well construction and environmental resource permitting. To find your water management district, look for your county below and visit its website for news and more information.

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
https://www.nwfwater.com/
- Counties: Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson (western half), Leon, Liberty, Okaloosa, Santa Rosa, Wakulla, Walton & Washington

SUWANNEE RIVER WATER MANAGEMENT DISTRICT
http://www.mysuwanneeriver.com/
- Counties: Columbia, Dixie, Gilchrist, Hamilton, Lafayette, Madison, Suwannee, Taylor, Union and portions of Alachua, Baker, Bradford, Jefferson & Levy

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
http://www.sjrwmd.com/
- Counties: Brevard, Clay, Duval, Flagler, Indian River, Nassau, Seminole, St. Johns, Volusia, and portions of Alachua, Baker, Bradford, Lake, Marion, Okeechobee, Orange, Osceola & Putnam

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
http://www.swfwmd.state.fl.us/
- Counties: Citrus, DeSoto, Hardee, Hernando, Hillsborough, Manatee, Pasco, Pinellas, Sarasota, Sumter, and portions of Charlotte, Highlands, Lake, Levy, Marion & Polk

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
https://www.sfwmd.gov/
- Counties: Broward, Collier, Dade, Glades, Hendry, Lee, Martin, Monroe, Palm Beach, St. Lucie, and portions of Charlotte, Highlands, Okeechobee, Orange, Osceola & Polk

For information on the Florida Water Star program, visit www.floridawaterstar.com.
The University of Florida leads the way in evidence-based turfgrass management, and Dr. Travis Shaddox has played a role in the transition to this medically based model. He may be relatively new to the University of Florida horticulture faculty, but he’s a disruptor, one who thinks outside the box if he even acknowledges there is a box. That’s the kind of change that disruptors such as Bill Gates and Elon Musk have brought to their respective fields—monumental changes that affect our everyday world.

**FTGA:** What, exactly, is evidence-based science, and how did it come to turfgrass management?

**Dr. Shaddox:** My wife is an oral surgeon, and one night at dinner, we were talking about evidence-based medicine. In order to remain accredited to issue dental licenses, the University of Florida College of Dentistry is required to follow an evidence-based model. That’s when the light bulb went off, and I thought, “Why couldn’t we apply an evidence-based approach to turfgrass management?”

Evidence-based practices are based on solid science and pre-defined guidelines. They rely upon a sequence of agreed-upon protocols that are the standard of care in the medical world. The model is built upon a three-legged stool consisting of 1) the best-available evidence, 2) clinical (field) experience and 3) the end user’s preference.

Perhaps the concept is more easily understood using a medical example. If a patient has cancer, multiple treatments may be available. Suppose chemotherapy is the top choice, but the patient adamantly opposes it. Then, the doctor moves down the list of accepted treatments until the patient (end user) settles on one of them.

The same applies in turfgrass science. By choosing an evidence-based solution that is practical and cost-effective for the end user instead of imposing only the best available solution, you still achieve results, and the customer (end user) is happy.

In the past few years, the University of Florida has become one of the leaders in evidence-based turfgrass management, and the model makes sense. It still leads to a science-based solution, but it has the added benefit of customer satisfaction. It is a win/win.

**FTGA:** What emerging trends do you see in turfgrass nutrients, trends that have emerged since the Urban Warm-Season Turfgrass Fertilization and Irrigation Best Management Practices to Minimize Nutrient Leaching Project?

**Dr. Shaddox:** We see a few trends forming. Some are still in the formative stages and are not conclusive.

For years, we have investigated potential negative consequences of turfgrass in our landscapes and the overwhelming amount of evidence indicates that healthy turfgrass managed according to the University of Florida, Institute of Food and Agricultural Sciences (UF/IFAS) recommendations results in little to no environmental risk. Moving forward, UF/IFAS research will be investigating the benefits that turfgrass provides to our landscapes. For
example, when comparing fallow plots (soil with no turfgrass) to plots with fertilized turfgrass, we might expect more N and P leaching to occur from the fertilized, turfgrass plots. We initiated a study last year and, preliminarily, we are finding that fertilized turfgrass is resulting in less N and P leaching than that which occurs from bare soil. In other words, fertilized turfgrass is leaching less N and P than that which occurs naturally.

Other studies are underway on Bermudagrass to determine the minimum level of N required to achieve acceptable results—not optimal results, but acceptable results. For example, a championship golf course and a residential lawn don’t have the same aesthetic requirements, so the minimum acceptable level of fertilization differs. Furthermore, seasonal requirements may vary, and poor soil vs. good soil would also factor in when assessing minimum acceptable standards.

Lastly, soil and tissue testing are going to drastically change in the near future. Currently, soil test interpretations are not based upon turfgrass response to applied elements and, therefore, using soil tests to manage nutrient applications to turfgrass is essentially useless (except when adjusting pH or remediating Na or bicarbonate effected soils). I know that may not sit well with some people, but UF/IFAS is not the only institution making this statement and the movement within the scientific community is growing. The direction that science is leading us is to determine the minimum amount of nutrients in the soil that also results in acceptable turfgrass. Turfgrass managers should attempt to maintain soil nutrients slightly above that level. This level has been referred to as sufficiency level of available nutrients or, more recently, the minimum levels of sustainable nutrition.

The concept of maintaining nutrients above a minimum threshold brings me to my last topic—tissue testing. An exciting development is a new tissue testing method that only UF is using. It involves the development of reference ranges, again a medical reference that uses the exact same methodology to determine the nutritional ranges of healthy human beings. As one approaches the lower percentile of a healthy population, that variable becomes concerning. By sampling ‘Palmetto’ St. Augustinegrass thousands of times, we have developed a reference range that we know came from healthy turfgrass. In other words, we know that no additional nutrients are required. When comparing the reference range to existing ranges in textbooks, many nutrients are lower, much lower than all other currently acceptable recommendations.

Finally, the Florida Turf Digest wishes to announce that Dr. Travis Shaddox has accepted a research and extension position at the University of Kentucky. He begins his new post July 1. We extend best wishes in his new position.
Wildlife Photo Feature

Olde Florida Golf Club, where the deer roam freely on the driving range.

Photo courtesy of Darren Davis, CGCS.
**FLORIDA TURFGRASS ASSOCIATION**

**WELCOME NEW MEMBERS!**

We extend a hearty welcome to our new members, and we look forward to seeing you at one the FTGA events. In the meantime, we hope you enjoy the Florida Turf Digest and other member benefits.

<table>
<thead>
<tr>
<th>Name</th>
<th>Company/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chuck Baker</td>
<td>ONEGOLF INC</td>
</tr>
<tr>
<td>Robin Barber</td>
<td>All Pro Land Care of Tallahassee</td>
</tr>
<tr>
<td>Mike Barrow</td>
<td>GulfScapes Landscape Management of SW Florida</td>
</tr>
<tr>
<td>Lee Bloomcamp</td>
<td>Syngenta Professional Products</td>
</tr>
<tr>
<td>Daniel Buckingham</td>
<td>COMPO Expert</td>
</tr>
<tr>
<td>Tom Crockett</td>
<td></td>
</tr>
<tr>
<td>Adam Ellison</td>
<td>Grasslands Golf &amp; Country Club</td>
</tr>
<tr>
<td>Sam Funderburk</td>
<td>Chattahoochee Turf</td>
</tr>
<tr>
<td>Brian Haines</td>
<td>Westchester Country Club</td>
</tr>
<tr>
<td>Wesley Hamm</td>
<td>Aquatrols Corporation</td>
</tr>
<tr>
<td>Richard Hughes</td>
<td>Grasslands Golf &amp; Country Club</td>
</tr>
<tr>
<td>Dr. Jason Kruse</td>
<td>University of Florida</td>
</tr>
<tr>
<td>Lyn Lafferty</td>
<td>Johnston Brothers Farm</td>
</tr>
<tr>
<td>Jim Lewey</td>
<td>Green Grass Farms LLC</td>
</tr>
<tr>
<td>Jason Mathis</td>
<td>Florida Farm Bureau Federation</td>
</tr>
<tr>
<td>Ray Murphy</td>
<td>Ewing Irrigation</td>
</tr>
<tr>
<td>Robin Osceola</td>
<td>The Seminole Tribe of Florida</td>
</tr>
<tr>
<td>Samuel Pryor</td>
<td>Indian River County Board of County Commissioners</td>
</tr>
<tr>
<td>Grantly Ricketts</td>
<td>Osceola County Extension</td>
</tr>
<tr>
<td>Wesley Rowe</td>
<td>Naples National Golf Club</td>
</tr>
<tr>
<td>James Schad</td>
<td>Turtle Creek Club</td>
</tr>
<tr>
<td>James Sprankle</td>
<td>The Loxahatchee Club</td>
</tr>
<tr>
<td>Eileen Ward</td>
<td>Greensward of Marco Inc.</td>
</tr>
<tr>
<td>Tom Wiegele</td>
<td>PNC Equipment Finance</td>
</tr>
<tr>
<td>Harold Wilhelm</td>
<td>Select Source LLC</td>
</tr>
</tbody>
</table>

---

**PROTECT YOUR ENGINE WITH GENUINE KUBOTA OIL AND FILTERS**

Contact your local Kubota Reman experts:

**Southeastern Power Products**

Pompano Beach | Florida  
(954) 979-5899  
parts@southeasternpower.com

---

**ATTENDEE INFORMATION**

Watch the mail for the FTGA 66th Annual Conference & Show attendees brochure!
IFAS/FTGA CEU Round-Up 2018

Coming to an Extension Near You

The University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) and the FTGA will present the CEU Round-Up July 25, 2018, from 8:30 a.m. – 4:00 p.m. EDT at multiple locations across the state. For industry professionals looking for the simplest way to earn hard-to-attain CEUs, the Round-Up offers attendees the opportunity to earn up to six CEUs across 14 different license categories. 14 different license categories, FNGLA and GCSAA CEUs.

The event will be simulcast from the University of Florida, Gainesville to IFAS Extension offices across the state.

IFAS/FTGA CEU ROUND-UP 2018
Agenda and Courses

<table>
<thead>
<tr>
<th>TIME (EDT)</th>
<th>TOPIC</th>
<th>SPEAKER</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30–9:00</td>
<td>Registration and introduction</td>
<td></td>
</tr>
<tr>
<td>9:00–9:50</td>
<td>Water: The Smallest Factor that Makes the Greatest Difference</td>
<td>Dr. Fred Fishel</td>
</tr>
<tr>
<td>10:00–10:50</td>
<td>Biological Control of Cogongrass: Progress &amp; Perspectives</td>
<td>Dr. Jim Cuda</td>
</tr>
<tr>
<td>11:00–11:50</td>
<td>Pesticide Spill Management &amp; Cleanup</td>
<td>Mr. Paul Mitola</td>
</tr>
<tr>
<td>11:50–1:00</td>
<td>Lunch (provided)</td>
<td></td>
</tr>
<tr>
<td>1:00–1:50</td>
<td>IPM in Aquatics, Natural Areas &amp; Right-of-Way</td>
<td>Dr. Lyn Gettys</td>
</tr>
<tr>
<td>2:00–2:50</td>
<td>Old World Climbing Fern Management: New Tools to Tackle This Troublesome Fern</td>
<td>Dr. Stephen Enloe</td>
</tr>
<tr>
<td>3:00–3:50</td>
<td>Invasive Pathways for Invasive Aquatic Species: Case Studies From Florida</td>
<td>Dr. Lyn Gettys</td>
</tr>
<tr>
<td>3:50–4:00</td>
<td>Closing and CEU Distribution</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>AVAILABLE CEUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited Lawn &amp; Ornamental</td>
<td>1</td>
</tr>
<tr>
<td>Limited Commercial Landscape Maint.</td>
<td>1</td>
</tr>
<tr>
<td>Commercial Lawn &amp; Ornamental</td>
<td>1</td>
</tr>
<tr>
<td>Private Applicator Ag Pest Control</td>
<td>4</td>
</tr>
<tr>
<td>487 CORE</td>
<td>2</td>
</tr>
<tr>
<td>Ag Row Crop Pest Control</td>
<td>3</td>
</tr>
<tr>
<td>Ag Tree Crop Pest Control</td>
<td>3</td>
</tr>
<tr>
<td>Aquatic Pest Control</td>
<td>4</td>
</tr>
<tr>
<td>Demonstration &amp; Research</td>
<td>4</td>
</tr>
<tr>
<td>482 CORE</td>
<td>2</td>
</tr>
<tr>
<td>Natural Areas Weed Mgmt.</td>
<td>4</td>
</tr>
<tr>
<td>Ornamental &amp; Turf Pest Control</td>
<td>3</td>
</tr>
<tr>
<td>Regulatory Pest Control</td>
<td>4</td>
</tr>
<tr>
<td>Right-of-Way Pest Control</td>
<td>2</td>
</tr>
<tr>
<td>Maximum Approved FDACS CEUs</td>
<td>6</td>
</tr>
</tbody>
</table>
REGISTRATION

Register early to take advantage of the lower-cost, pre-registration prices (see below). Note: Pre-registration ends Friday, July 20, 2018. Beginning Saturday, July 21, 2018, on-site charges apply.

Visit the FTGA website at www.ftga.org to download a list of participating locations, or contact your local Extension Office and ask them to offer the CEU Round-Up 2018.

To register online or download additional registration forms, visit www.ftga.org. To register by fax, fill out the form at the end of the article and fax it to (863) 688-9610 or scan it and email it to Marcia@FTGA.org.

Note: off-site registration closes July 20, 2018, and on-site pricing applies beginning July 21, 2018.

- UF/IFAS Employees: $15.00 pre-registration | $25.00 on-site
- Municipal Employees: $30.00 pre-registration | $45.00 on-site
- Industry Professionals: $50.00 pre-registration | $75.00 on-site

CANCELLATIONS

Cancellations must be made 10 business days prior to event (by July 15) and are subjected to a 25% cancellation fee. Cancellations made less than nine calendar days (July 16) prior to the event will not be provided a refund; only employee substitutions will be granted. Refunds will not be granted for not attending.

REGISTRATION FORM ON PAGE 28
## REGISTRATION INFORMATION

<table>
<thead>
<tr>
<th>COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSINESS ADDRESS</td>
</tr>
<tr>
<td>CITY, ST, ZIP</td>
</tr>
<tr>
<td>PHONE</td>
</tr>
<tr>
<td>EMAIL</td>
</tr>
</tbody>
</table>

### LIST UP TO 10 ATTENDEES

<table>
<thead>
<tr>
<th>PRINT FIRST AND LAST NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: Jane Doe</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IFAS COUNTY EXTENSION OFFICE (do not indicate the city)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: Collier Co. Ext.</td>
</tr>
</tbody>
</table>

1. [ ]
2. [ ]
3. [ ]
4. [ ]
5. [ ]
6. [ ]
7. [ ]
8. [ ]
9. [ ]
10. [ ]

### PRICING INFORMATION (PER ATTENDEE)

<table>
<thead>
<tr>
<th>UF/IFAS EMPLOYEE</th>
<th>MUNICIPAL EMPLOYEES</th>
<th>INDUSTRY PROFESSIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>$15 pre-registration</td>
<td>$30 pre-registration</td>
<td>$50 pre-registration</td>
</tr>
<tr>
<td>$25 on-site</td>
<td>$45 on-site</td>
<td>$75 on-site</td>
</tr>
</tbody>
</table>

### PAYMENT INFORMATION

ENTER ONE (1) FORM OF PAYMENT BELOW

PHONE REGISTRATIONS ARE NOT PERMITTED

Make check payable to: Florida Turfgrass Association

PAYMENT MUST BE MADE PRIOR TO EVENT

OUTSTANDING INVOICES WILL NOT BE ALLOWED INTO CLASS UNLESS PAYMENT IS SENT WITH ATTENDEE

<table>
<thead>
<tr>
<th>CHECK NO.</th>
<th>AMOUNT INCLUDED</th>
<th>CREDIT CARD NO.</th>
<th>CHARGE AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CARD TYPE</th>
<th>AMEX</th>
<th>Visa</th>
<th>MasterCard</th>
<th>Discover</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPIRATION DATE</th>
<th>SECURITY CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CANCELLATION POLICY

Cancellations made 10+ calendar days (July 15) prior to event will be granted and will incur a 25% cancellation fee.

Cancellations made less than 9 calendar days (July 16) prior to the event will not be provided a refund; only employee substitutions will be granted.

Refunds will not be granted for not attending.

### CONTACT INFORMATION

MAIL 3500 S. Florida Ave. Ste. 7 | LAKELAND, FL 33803
PHONE (863) 688-9413 (phone registrations are not permitted)
FAX (863) 688-9610
EMAIL Marcia@FTGA.org
ONLINE REGISTRATION www.FTGA.org

### REGISTRATION CLOSES:

JULY 20, 2018

on-site pricing goes in effect on 7/21/18
Index of Advertisers

Bayer........................................ center spread
https://www.backedbybayer.com/
lawn-and-landscape-management

Blackwater Air Imagery ...............30
www.blackwateruas.com

Florida Gateway College...............23
www.fg.edu

Harsco Minerals ...inside front cover
www.crossover-soil.com

Horizon Distributors Inc...............8
www.horizononline.com

Life Soils ......................................5
www.takecomand.com

PBI–Gordon Corporation ..back cover
www.pbigordonturf.com

Pike Creek Turf Inc.....................29
www.pikecreekturf.com

Quali-Pro ................... inside back cover
www.cisiprotraining.com

Quality Turf LC.........................29
www.qualityturf.com

S.E. Power Products/Kabota ..........25
www.southeasternpower.com

Certified Tifway 419 • Certified Latitude 36
Certified Celebration • Certified Tif-Dwarf
All Available in Sod or Sprigs

Golf & Athletic Field Turf Installation & Renovation
1450 S. Park Road, Plant City, FL 33566
Phone: 813-634-3326
Fax: 813-642-0646

Servicing the State of Florida Since 1982

FLORIDA TURFGRASS ASSOCIATION www.ftga.org
Reserve your space now for the 66th ANNUAL CONFERENCE SPECIAL EDITION ISSUE

This is the official Conference Program–Advertisers that are exhibitors in the Industry Networking Event can now have their booth number added on to their ad for no additional charge.

DISCOUNTED SAVINGS IF RESERVED BY JULY 1ST

For more information, contact:
Emily Cox, Media Operations Manager
Emily@ftga.org • (863) 688-9413
Find Your Inner Pro.
Get Exclusive Training “on-the-go.”

LAST CHANCE TO FINISH

Watch them all for a $50 Gift Card!

NEGATE® 37WG | STROBE® 50WG | FAHRENHEIT™ | ENCLAVE®
NIMITZ® PRO G | TAURUS® TRIO G | TODAL | SEDGEMASTER | DITHIOPYR 2L

Apply the latest trends in the field.
Watch anytime, anywhere.
Instant $ when completed!

Quali-Pro is a registered trademark of the Adama Group Company. All registered products are registered trademarks of Control Solutions, Inc. Contact your local distributor or Quali-Pro representative for more information. Products may not be registered in all states, please check the Quali-Pro website for registration information.

@quali_pro .qualipro
NO ONE CAN PUTT WHILE PYTHED.

Segway® Fungicide SC sinks Pythium disease!

Missing a two-foot putt is maddening, but seeing Pythium destroy healthy turf can drive you over the edge. Stop it with Segway® Fungicide SC.

Segway delivers outstanding protection against Pythium disease, including root dysfunction, blight, damping-off, and root rot. Segway lasts up to 28 days, and has no known cross-resistance with existing fungicides, making it ideal for your rotation program.

We can’t help you with your putting, but we can help you stop Pythium: Segway.

PBIGordonTurf.com