Protecting Pollinators and Ourselves in Turfgrass Pest Management

If You Pay Attention, Weeds Will Tell You When to Control Them!

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Meet Your Executive Committee and Board of Directors
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Focus on Weeds
If You Pay Attention, Weeds Will Tell You When to Control Them!

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Cover photo courtesy of Nick Sabatino

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President’s Message

By Bill Kistler, FTGA President

The Spirit of Giving

I hope everyone enjoyed a holiday season full of joy, goodwill and giving. It strikes me as odd that we concentrate on these aspects for only a few weeks each year when they ought to be a part of our everyday lives.

While I was caught up in the holiday spirit, I thought about how we, as members of the Florida Turfgrass Association, could give back to our industry in a simple, yet meaningful, way. As you know, Foundation (FTRF) is the FTGA’s philanthropic arm.

The foundation funds grants for vital turfgrass research projects, among them:
- 2007–2009—Economic Impact Research Project
- 2008—USDA Project by Pete Snyder
- 2016—Mobile Web Application for Geolocating Fertilizer Ordinance Jurisdictions by Dr. J. Bryan Unruh

The FTRF also endows scholarships for undergraduate and graduate students currently enrolled in turfgrass science programs at the University of Florida or Florida Gateway College. These young adults are preparing for a career in the green industry, and the FTRF helps to defray the cost of their tuition and books. Scholarships include:
- Col. Frank Ward Memorial Scholarship
- Ralph White Scholarship
- Bill Entwistle Sr. Scholarship
- Max J. McQuade Memorial Scholarship
- James L. Blackledge Memorial Scholarship
- Hans & Otto Schmeisser Memorial Scholarship

The FTGA funds the FTRF through member contributions, raffles at the Turf Seminars, fundraisers at the Conference & Show and member contributions.

Each year, Interlachen Country Club, in cooperation with the Central Florida Golf Course Superintendents Association, holds a golf tournament with proceeds donated to the FTRF. Stuart Leventhal, FTGA member and Wreath of Grass recipient, spearheads the annual effort. The tournament has raised more than $105,000 for the FTRF.

These fundraisers as well and individual and company donations allow the foundation to continue to fund important research on behalf of members of the entire industry as well as helping to supply graduates with a bright future in the turf sciences.

This year, the association has set a goal of raising $10,000 in donations. When renewing through YourMembership, consider making a tax-deductible donation to the FTRF. If you have already renewed, you can donate online by selecting the donate button or sending a check to the office.

So, let’s start the new year in the spirit of giving. Let’s get off our grass to contribute to the foundation so it can continue to fund critical research, which in turn, helps the billion-dollar industry that provides our livelihoods. I want to offer my sincere thanks to everyone who has contributed to this worthwhile cause.

Here’s wishing each of you and your families a healthy, happy and prosperous 2017.

Thank you to 2016 FTRF contributors:
- Greg Normal Golf Course Design
- Jan Bel Jan Golf Course Design
- Legends Golf & Country Club
- Mongoven Mapping & GIS Services
- Saddlebrook Resorts Inc.
- TPC at Tampa Bay
- TruGreen

(Continued on page 4)
A survey was distributed to a select group of members for their insight on what they find valuable and what they would like to see in the Digest. The editorial committee continually solicits new ideas to keep the interest of our vested members. As ad sales increase, we plan to introduce recurring features in the magazine—“Marketplace,” wildlife and environmental photos and featured member profiles.

Since the FTGA now self-publishes the Digest, we needed a salesperson. I am excited to welcome Emily Cox, who was hired in November as the media operations manager. Her main responsibility is working with the advertisers, as well as securing new sponsors/exhibitors for the turf seminars and annual conference and show. The FTGA has a great team working diligently to produce a high-quality magazine and to enhance its content and appearance. I would like to thank MJ Plaster, editor, and Eileen Schechner, graphic designer, for all their behind-the-scenes work. We have been researching layouts to stay on top of current trends and visual effects that we hope you will enjoy.

Get to know your board. The FTGA board of directors is our first member profile, featured on page 12. It is important for you to know who manages and oversees your association and represents your concerns in the industry. As we follow the GI-BMPs, there are still many environmental challenges that we face collectively. When an issue arises, contact a board member in your industry segment so we can combine efforts to resolve it. I look forward to working with each of the board members this year, and I thank them for their leadership and dedication to the association and the turfgrass industry.

The FTGA kicks off the first quarter of 2017 with the Turf Seminars. These educational events are extremely popular and require large facilities. We have found three new locations to better suit our audience—Miami Springs, Port St. Lucie and Estero. Each seminar offers up-to-date educational topics and an array of CEUs offered from the FDACS, GCSAA, FNGLA and CCA. For class CEU details, visit the FTGA website under Events/Turf Seminars.

Mark your calendar for the 65th Annual Conference & Show, to be held at Innisbrook Resort and Golf Club, September 25–27, 2017. I welcome all members of the association to contact me with suggestions and information for “Marketplace,” a featured member, or a wildlife and/or environmental photo for publication.

I hope you had a nice holiday season, and here’s wishing you a happy and prosperous 2017.

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“Skaro,” a Florida alligator, at Olde Florida Golf Club.
Photo Submitted by and courtesy of Darren J. Davis, CGCS; Golf Course Superintendent; Naples, Florida.
Cover Story

Protecting Pollinators and Ourselves in Turf Pest Management
Turfgrass insect management in the U.S. is predominantly insecticide driven. This is because insecticides can provide rapid results, address problems frequently created by our highly manipulated landscapes, and are easy to understand as a management tool. Insecticides are critical to landscape pest management because they equip us with tools to manage damaging pests and protect the plants that beautify our landscapes, filter our air and water and cool urban areas. However, these tools do not come without risks to people, businesses and the environment.

By definition, insecticides kill insects. Bees, butterflies and nearly 1 million animal species that live on the planet are insects. However, less than 1 percent of insects on earth are considered pests, the target of insecticides. Many of the others are beneficial in one way or another. Therefore, it is essential that all pest managers be informed of the non-target risks associated with using insecticides. Although commercial pesticide applicators are required to obtain a pesticide applicators license, they do not always understand these risks. This is because the risks are quickly becoming more complicated.

Urban land is rapidly increasing, more people are living in cities, and they care more about their surrounding environment. This means turfgrass management is also growing, but an associated “risk” is that people are watching everywhere, which means pest control operators cannot cut corners. In 2013, a couple of veteran pest control operators in Oregon made an illegal insecticide application to flowering linden trees, which killed hundreds of thousands of bumble bees in a retail store parking lot. Those applicators lost their licenses, jobs and paid the price.

By now all applicators should be aware of label changes and restrictions made to these insecticides related to pollinator protection. Most neonicotinoid-containing products have a pollinator protection box on the label that highlights specific instructions with language such as, “Minimize exposure to bees and other pollinators” or “Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting..."
the treatment area.” This is the law and it is protecting pollinators and applicators from the associated risks of application. You cannot apply the products to plants if pollinators are visiting even if you are treating turf and they are visiting the weeds in the turf. This may mean using alternative chemistries, application methods or management strategies.

Changes to neonicotinoid use are also coming to homeowner products. Both Home Depot and Lowe’s are phasing out neonicotinoid products on their shelves by 2018 and 2019, respectively, and some common brands are ending their production of neonicotinoid-containing products.

**How can you reduce risk?**

Simply put, practice integrated pest management (IPM). Identify and monitor for pests. Utilize multiple management strategies such as mechanical, cultural and biological control to reduce pests in the landscape. Minimize potential insecticide drift and be aware of flowering plants in the landscape. Use products that are selective for the target pest and relatively non-toxic to beneficial insects. Pest managers running an IPM program have been doing this for decades to reduce non-target effects on biological control organisms.

Unfortunately, neonicotinoids are the most common class of insecticides that people have historically used for high selectivity and low non-target toxicity. Given recent developments, this mode of thought may need to be reconsidered. The key is using these products properly by following the pollinator protection labeling and not applying the products to flowering plants or when bees are foraging. This may change the products being used depending on the host plant being treated and the time of treatment.

**What are the alternatives?**

**Soaps and Oils**

Insecticidal soaps and horticultural oils are among the most widely recognized products that are compatible with natural enemies of plant pests. They can provide excellent control; however, they are not always appropriate depending on the target pest, host plant and landscape requirements.

**Biopesticides**

Biopesticides are another option for controlling plant pests and have minimal effect on beneficial insects. These include naturally occurring bacteria (e.g., *Bacillus thuringiensis*, *Chromobacterium subtsgae*, *Saccharopolyspora spinosa*), fungi (e.g., *Metarhizium anisopliae*), and plant-derived compounds such as azadirachtin. These products can provide excellent control of pests but require a good understanding of each because some have shorter periods of residual activity, need to contact the pest or have other cultural requirements for good control.

**Synthetics**

There are also several synthetic insecticides shown to control pests and pose minimal risk to pollinators and beneficial arthropods. These products are classified by the Environmental Protection Agency as “reduced risk” based on several metrics including low non-target toxicity, high selectivity, low use rates and compatibility with IPM practices. Active ingredients that fall into this category include acequinocyl, acetamiprid, chlorantraniliprole, pymetrozine, pyriproxyfen, spiromesifen and tebufenozide. Although acetamiprid is a neonicotinoid, research has found that it does not exhibit the same levels of toxicity to pollinators as others in its class.

Despite the reduced toxicity of these products to pollinators, most remain toxic to pollinators when in direct contact.
Therefore, they should not be applied directly to flowers or areas where bees are foraging. Although these products will not solve all insect management needs, they do provide alternatives to help pest control managers. A massive amount of ongoing research is investigating the effects of pesticides on pollinators worldwide and regularly providing new information.

**The future of landscape pest management**

The landscape pest control industry is changing as illustrated by recent pollinator protection labeling on insecticides and big box stores and pesticide brands phasing out product sales. The tides appear to be shifting toward stricter regulation of insecticide use to manage landscape pests. This means that exploring new cultural pest control strategies, biological control tactics, and newer chemistries are more important than ever. When regulations change, you do not want to be left behind.

Exploring new pest control strategies is important now for more reasons than insecticide regulations. As Florida’s population grows, land is developed and natural resources such as water become more precious; the tools used to manage pests and turfgrass must adapt. For that reason, stricter regulation may serve as a catalyst to help drive innovative pest management strategies that benefit landscape pest management, the environment and the future of Florida’s turfgrass industry.

*Photos courtesy of Nick Sabatino.*

Dr. Dale is an assistant professor and extension specialist of turf and ornamental entomology at the University of Florida in Gainesville, Florida. His primary responsibilities are to address the pest management needs of Florida’s green industry and disseminate information to industry professionals across the state. He aims to develop more sustainable pest control strategies by investigating interactions between plants, insects and their environment.