



Communicating Sustainable Use of Pesticides

Pesticides are safe for all on the course when used as directed by the label.

*By Todd Burkdoll,
BASF Technical Specialist*

Superintendents are faced with all kinds of job-related questions, particularly about the agronomics of using pesticides and other chemicals on their courses. Many are having a hard time clearly explaining the benefits of chemical use to curious golfers and community members, and as a result, sometimes avoid the topic. However, communicating with the public is no longer optional; superintendents must address questions, ease concerns and take part in community education programs on a regular basis in order to continue building and sustaining community confidence.

Many people assume pesticides are toxic and harmful to their health. That belief, however, is rarely grounded in science. Antibacterial soap, dishwasher soap and laundry detergent are technically toxic pesticides because they kill germs; however, when used correctly, they do not harm humans. The same goes for chemicals that are used to protect plants. Just as soap controls harmful pathogens that humans encounter, fungicide controls



Be smart. Be Safe. Photo by Joel Jackson.

pathogens that damage plants.

Simply put, plants – like people – get sick. For example, when their systems get over-run, plants can suffer from environmental stress that creates conditions for pest pressure and disease. When that happens,

medication in the form of pesticides is required to nurse the plant back to health. Like human drugs, pesticides today are highly targeted to specific problems, including fungi, weeds and insects.

The need for plant medication, so to speak, is understood by most people. But they may need more explanation about the science behind responsible chemical use.

The Safety Stance. Scientifically proving with reasonable certainty that a pesticide will not harm people or the environment is a fundamental part of the product-approval process. The United States has one of the strictest registration processes in the world. Federal law requires that before selling or distributing a pesticide in the United States, a person or company must obtain registration, or license, from the Environmental Protection Agency (EPA).

Before registering a new pesticide – or a new use for a registered pesticide – the EPA must first assure the public that the pesticide is considered safe, when used according to label directions. To make such determinations, the EPA requires more than 100 different scientific studies and tests from applicants.

Even before they go through government review, these chemical compounds are tested for toxicity by non-biased, third-parties. If a pesticide receives a “strike” against it at any point during testing process, the manufacturer does not approve it for government testing.

Once the product is registered, it is selected and applied by highly trained professionals. Just as a pharmacist would recommend medicine for a specific ailment, superintendents work with industry experts – including chemical applicators with years of formal education – to prescribe a pesticide for a specific problem.

Not all pesticides are equal. Toxicity levels vary by product and instructions for use are clearly outlined on each pesticide’s label. Labels are designed to explain the correct application procedure, so the chemical has little or no direct negative impact on organisms beyond the targeted pest. As a rule, chemical experts consistently stress the importance of reading and following the pesticide label.

As a precautionary measure, most pesticides cannot be bought over the counter. Some products also require applicators to post signs or flags that alert the public that a given area has been treated recently. The signs, which usually are left standing for 24 hours, are simply informative, since no danger to humans or animals exists after application. In many cases, the majority of pesticides break down naturally in the soil after controlling target pests.

What is your role? Some superintendents have taken a proactive communication approach to combating the general public’s misperceptions and fear of pesticides. Superintendent Jed Spencer, CGCS, for Chenal Country Club in Little Rock, Ark., participates in monthly Greens Committee meetings and now hosts annual open houses to give all members a behind-the-scenes look at how he maintains his course. In addition to addressing topics such as chemical and fertilizer use, maintenance and even golf etiquette, his crew operates equipment for participants, allowing them to get a firsthand look at what his crew does and how they do it. Spencer’s goal is to educate the community, and show members the purpose behind his crew’s actions.

“The response to our communication efforts has been extremely positive,” Spencer said. “Community members really appreciate the visual component. It reduces concerns about the possible effects our treatment plan could have on them and their surroundings.”

Spencer has taken additional steps to show his concern for the environment, which the community has applauded. Three years ago, he formed a partnership with Ducks Unlimited to establish a wood duck colony on the course, which helps attract the birds and allows his crew to manage the population. He also maintains a chemical building on his property that houses a 1,000-gallon storage tank for recycling chemicals.

Fred Gehrish, superintendent for Highlands Fall Country Club in Highlands, N.C., holds educational forums for residents living on or near his course to explain what his crew is spraying and why. He also writes a regular column for his local newspaper that addresses course issues such as the scientific benefits of safely controlling disease and



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*The food chain thrives on golf courses.
Photo by Joe Hubbard.*

invasive plants on his course.

Gehrisch also is involved in a study under way by the University of Missouri on salamanders at 10 courses in the area – including his – to see how they are affected by chemical use. Along with the university, he regularly works with environmental groups, whether it is coordinating joint speaking engagements or donating his staff to support a local event.

Gehrisch says most people he speaks with are relieved once they learn the chemicals he uses are similar to everyday household products.

“I have found that using common medications as examples is the most effective way to demonstrate why they do not need to fear the products we use,” Gehrisch said. “I read a list of side effects and lead them to believe it is a chemical I am using to treat turf disease when, in reality, it is aspirin.”

Communicating with the public falls under the many day-to-day responsibilities of a superintendent, and more of them are taking it upon themselves to go above and beyond that duty. At a minimum, superintendents should be able to confidently explain the parallels between plant and human disease, and how science helps alleviate damage in both cases.

“We talk a lot within our inner circle about what needs to be done, but as an industry, we tend to be slower in responding to the public than we should,” Gehrisch said. “For any change to happen, supers need to leave their desks and get out in front of their communities.”

Despite the fact that pesticides are useful tools that can provide significant benefits to our communities, the debate over whether to use them will undoubtedly continue. By basing communications on science instead of emotion, superintendents can help community members appreciate the time, labor and money-saving benefits of environmentally sound chemicals.

FTGA Foundation Presented Four Scholarships at 2010 Conference



Bradley Williams



Douglas Faller



Steven Denvir



Bradley Quakenbush

By Heather Russo,
FTGA Director of Marketing

At the October 2010 FTGA Conference in Show in Orlando the Florida Turfgrass Research Foundation (FTRF) presented four Florida students with scholarships for the 2010-2011 academic year. All recipients attend either the University of Florida or Florida Gateway College (formerly Lake City Community College) and are preparing for careers as a golf course superintendent or in turfgrass management. These students were selected based on their academic record, leadership capabilities and extra-curricular activities.

University of Florida: Bradley Thomas Williams received the Col. Frank Ward Memorial Scholarship for \$1,500. A 2009 recipient of the FTGA's Max J.

McQuade Scholarship, we are once again enthusiastic to award Bradley Thomas Williams an FTGA Scholarship. Bradley is working toward his Masters Degree in Environmental Horticulture. His Master's Thesis examines traffic tolerance and recovery rate of eight bermudagrass

cultivars, under the guidance of Assistant Professor Jason Kruse. He has taught turfgrass labs to undergraduate students at UF, delivered several guest lectures and is an active member of the Turf Club. Bradley earned a Bachelor's degree in soil science from the University of

Wisconsin. He has spent seven summers working on golf courses, has interned with the USGA Green Section, and upon graduation, he intends to pursue a career in golf course management in Florida.

Florida Gateway College:

Douglas Faller received the James L. Blackledge Memorial Scholarship for \$1,500. Douglas was born in Winter Haven and is studying turf management with the intention of becoming a Florida-based golf course superintendent. During the school year, he works in golf course maintenance at Haile Plantation Golf & Country Club.



From left: FTGA President Mac Carroway, FTGA Past President Greg Pheneger, U. of Florida student Bradley Williams and FTGA Scholarship Chairman Stacie Zinn at the FTGA Conference Awards Breakfast. Photos by Leading Edge Communications.

His summer internship this year was at Cardsound Golf Club on Key Largo. He also participated in prep work for Jack Nicklaus' Memorial Tournament at Murifield Village in Ohio. Douglas is an active member of Gateway's FTGA Student Chapter.

Stephen Denvir received the Hans Schmeisser Memorial Scholarship for \$1,500. Stephen was born in New Jersey and grew up in Florida. He is studying to become a golf course superintendent and has a special interest in grow-in renovations in Florida. Stephen is an avid golfer and serves as Secretary of the College's Turf Club. He worked at Riviera Country Club in Coral Gables, Spessard Holland Country Club in Melbourne Beach and this summer interned at Trump National in Bedminster, New Jersey. The youngest of seven children of a retired firefighter's and his wife, Stephen said in his application that he was trying to win this scholarship as a gift for his parents for all of their financial support.

Bradley Quackenbush received a General Scholarship for \$1,000. Bradley was born in Winter Haven and is studying turf management at Gateway to pursue a career as a golf course superintendent in Florida. During the school year he is employed at Haile Plantation. He has worked in turf maintenance at Champions Gate, near Orlando, and at highly ranked Winged Foot Golf Club in Mamaroneck, New York. This summer his internship was at Arnold's Palmer's Bay Hill Club & Lodge in Orlando.

GOT DIVOTS?



**Vegetatively Propagated
Bermudagrass for Divot Recovery**

Divot Recovery

Study by The University of Arkansas

Celebration was the top rated vegetatively propagated Bermudagrass for divot recovery in a study by The University of Arkansas.

Nonlinear regression results for predicting bermudagrass variety recovery from injury. Varieties are sorted by average K value (fastest to slowest recovery). 48 cultivars were evaluated in this study. The below chart only includes the 22 varieties commercially available.

Variety	Propagation ¹	2003		2004		
		K ²	(SE)	K ²	(SE)	
La Paloma	S	0.115	(0.0071)	0.96	0.201 (0.0125)	0.96
Yukon	S	0.122	(0.0078)	0.96	0.193 (0.0112)	0.97
SR 9554	S	0.130	(0.0011)	0.93	0.179 (0.0143)	0.93
Celebration	V	0.121	(0.0066)	0.97	0.177 (0.0107)	0.96
Arizona Common	S	0.119	(0.0117)	0.91	0.178 (0.0101)	0.96
Panama	S	0.122	(0.0100)	0.93	0.173 (0.0078)	0.98
NuMex Sahara	S	0.141	(0.0047)	0.99	0.152 (0.0114)	0.93
Princess 77	S	0.129	(0.0064)	0.98	0.160 (0.0155)	0.89
Sunstar	S	0.117	(0.0134)	0.88	0.170 (0.0124)	0.94
Transcontinental	S	0.114	(0.0075)	0.96	0.169 (0.0082)	0.97
Riviera	S	0.132	(0.0067)	0.96	0.151 (0.0108)	0.94
Mohawk	S	0.120	(0.0090)	0.94	0.159 (0.0091)	0.96
Sundevil	S	0.117	(0.0045)	0.99	0.148 (0.0087)	0.96
Southern Star	S	0.097	(0.0052)	0.97	0.162 (0.0074)	0.97
Aussie Green	V	0.108	(0.0049)	0.98	0.143 (0.0114)	0.91
GN-1	V	0.092	(0.0038)	0.98	0.158 (0.0101)	0.95
Patriot	V	0.125	(0.0073)	0.97	0.121 (0.0087)	0.93
Midlawn	V	0.114	(0.0059)	0.98	0.130 (0.0075)	0.95
MS-Choice (Bulbeve)	V	0.111	(0.0083)	0.95	0.131 (0.0098)	0.93
Tifway	V	0.096	(0.0062)	0.96	0.139 (0.0072)	0.96
Ashmore	V	0.093	(0.0070)	0.95	0.119 (0.0068)	0.93
TifSport	V	0.074	(0.0072)	0.91	0.128 (0.0096)	0.92

¹ S = seeded, V = vegetative
² K values determine recovery percentage according to the formula:
 $1 - \exp(-K * \text{DAI})$, where DAI = days after injury. Higher K values indicate faster recovery from injury.

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