

# UNIVERSITY TURFGRASS RESEARCH UPDATE

**Editor's note:** In our December 2009 and February 2010 issues we published reports from some leading turfgrass researchers in the US on their current studies. For this issue we asked the same academics to update us on those projects and inform on new ones.

## NORTH CAROLINA STATE UNIVERSITY

**Athletic Field Turf Paint Impacts Light Spectral Quality and Turfgrass Photosynthesis.** Doctoral graduate student Casey Reynolds has been investigating chronic declines in turfgrass health and quality from repeated applications of athletic field paint. Studies have evaluated photosynthesis response to paint as well as the transmission, reflectance, and absorption of light based on paint color, dilution, and thickness. Results have proven that paints will differentially reduce photosynthesis based on color and dilution. This research has allowed us to rank common paint colors along a scale that shows their potential to reduce photosynthesis.-Grady Miller and Casey Reynolds, Crop Science Department.

**Evaluation of Athletic Field Paint Application Methods.** Master of Science student Drew Pinnix initiated his research in fall 2011 with the primary objective to determine if he can influence paint and turfgrass performance using different paint application techniques. A series of studies have been designed to test several hypotheses related to application pressures, directional application, paint thickness, various additives, timings, and products. Many of these trials conducted over the next 2 years will use information gained from previous work on spectral qual-

ity and photosynthesis.-Grady Miller and Drew Pinnix, Crop Science Department.

As a follow-up project from a few years ago, we are planning another **broad-based screening of green turf colorants as an alternative to overseeding warm-season turfgrasses.** We evaluated 12 green turf colorants on dormant grasses a few years ago with great results. In the past 3 years at least a dozen new products have been released on the market. Drew Pinnix and Scott Brinton will be screening these new products alongside the old products on athletic field height of cut and putting green height of cut. Several new data points will be collected this time around, including more detailed look at application timing and color-fastness of these products.-Grady Miller, Drew Pinnix, and Scott Brinton, Crop Science Department  
Compiled by Dr. Grady Miller

## AUBURN UNIVERSITY

**Research in turfgrass nutrition has focused on pathways of N loss in fertilized turfgrass.** Because of the ever-increasing interest in the potential of nutrient loss from fertilized turfgrass we have conducted many studies that examine the loss of N via downward movement, or leaching. If fertilized correctly (both rate and source) we rarely find significant nitrate-N loss from fertilized turfgrasses. Another path of N loss is volatiliza-

tion, which is the loss of applied N as ammonia to the atmosphere. Our work using large-scale plots has shown reduced N loss from volatilization when N sources other than urea are used. Last, we continue to conduct work in the area of foliar fertilization, focusing on both sources and application rates.-Dr. Beth Guertal

I am doing work on Roundup tolerant ryegrass, known as Gly-Rye, a product of Jacklin Seed. We are finding that these cultivars have a significant degree of glyphosate tolerance. Utilizing these cultivars would allow for use of glyphosate to control *Poa annua* and other weed species. There is potential to apply 0.5 to 1.0 lb ae/a of glyphosate with little to no injury to ryegrass and excellent *Poa* control. Timing is critical for control and I am currently trying to address the need to tank-mix with other herbicides to potentially prevent herbicide resistance development.

I am also researching other herbicides for *Poa annua* control. Two primary herbicides are amicarbazone and methiozolin. These herbicides must be timed properly for appropriate turfgrass safety and *Poa* control. I am seeing a lot of positive things from both of these products and they will greatly benefit the turf industry in the future.-Dr. Scott McElroy

## UNIVERSITY OF MASSACHUSETTS

The University of Massachusetts Turf Program conducts a wide range of research at both the UMass Joseph Troll Turf Research Center as well as at various field sites throughout the northeast. Our goal is to enhance the functional use of turfgrasses while reducing the environmental impact of turf management practices. Presented below are summaries of selected projects of particular interest to sports field managers. Items were compiled by Mary Owen, extension turf specialist.

**Wear Trials in Perennial Ryegrass and Kentucky Bluegrass Maintained Under Close Height of Cut,** by J. Scott Ebdon, PhD. These are new trials that