fungicides and the same results were observed. These non-target effects are significant and could be used by a turf manager to quickly enhance establishment and quality.

For more info on our Sports Turf Program, see our website: Buckeyeturf.osu.edu

Our annual field day report is at: http://buckeyeturf.osu.edu/pdf/ 2009_Field_day_book.pdf

*Pamela J. Sherratt & Dr. John R. Street, Horticulture and Crop Science*

## Clemson University

**Optimizing the Spring Transition with Cultural and Trifloxysulfuron Treatments**. Bermudagrass is often overseeded with perennial ryegrass to hide its dormant brown color and improve its winter playability. However, prolonged overseeding cover shades and potentially deteriorates the bermudagrass base.

Cultural treatments are often implemented to aid in providing a desirable spring transition back to the bermudagrass base. Though, without a favorable climate, cultural treatments alone often fail to consistently provide a desirable spring transition.

Transition aid chemicals are often needed to ensure sufficient bermudagrass recovery time. Unfortunately, chemical treatments alone often yield spring transitions with unacceptable lapses in turf quality.

Therefore, combining cultural and chemical control options appears to be the best approach to achieving a desirable spring transition while sustaining acceptable turf quality.

The objective of this research was to evaluate combinations of mowing height, fertilizer rate and application timing and rate of trifloxysulfuron (Monument, Syngenta) to determine which practices would optimize the spring transition and ensure continuous acceptable turf quality.

A 12-week study was conducted from mid-April to July 2006 and repeated in 2007 on an established stand of Tifway 419 hybrid bermudagrass overseeded with a perennial ryegrass blend at 7 pounds/1,000 square feet pure live seed.

Cultural treatments 0.5 or 1.0 inch mowing heights and 0.375 or 0.75 pound nitrogen/1,000 square feet/week fertility rates were initiated on April 11, 2006 and 2007. Trifloxysulfuron (Monument 75WG) was applied at 0.1 or 0.3 ounce/acre in mid-April or mid-May of each year with a nonionic surfactant added at 0.25% by volume.

Turf quality, percent perennial ryegrass/bermudagrass, clipping/root weights, and bermudagrass shoot counts were taken throughout the study.

Both years, cultural practices alone failed to provide an acceptable transition to the bermudagrass base and had to be coupled with trifloxysulfuron to achieve a complete, timely spring transition. Although there was not a consistent treatment over both years, plots treated with the low rate of trifloxysulfuron in May (0.1 ounce/acre) at 0.5-inch mowing height and fertility treatments of 0.75 pound nitrogen/1,000 square feet/week maintained acceptable turf quality and spring transition throughout 2007.

*Raymond K. McCauley, Bert McCarty, Ph.D, Haibo Liu, Ph.D, Joe E. Toler, Ph.D*

## North Carolina State

**Evaluating the effects of athletic field paint on turfgrass growth processes**. This study is covering many of the basic growth aspects such as photosynthesis and water relations, as well as practical aspects associated with painting turf. Data indicates there are some marked differences due to paint color and dilution. Study conditions include a combination of control-chamber work and field evaluations. We believe data generated in these studies will allow us to make recommendations on paint use as it relates to turfgrass health.

*Grady Miller, Casey Reynolds, and Scott Brinton, Crop Science Department*

Another current research area includes **evaluating the use of green turf colorants as an alternative to overseeding warm season turfgrasses**. A recently concluded field study conducted in Raleigh, NC evaluated the effects of 12 green turf colorants on dormant bermudagrass and zoysiagrass. This study aimed to not only determine the effectiveness of the 12 turf colorants to provide acceptable green color when applied to dormant warm season turfgrasses, but also determine the longevity of these colorants.

Visual turf color ratings were taken as well as digital photographs of treatments and color matching was conducted using Pantone® PMS numbers. The 12 different color brands provided varying color and longevity when applied to the turfgrass. The Pantone PMS number data illustrated how some products tend to change color over time. This research indicates that some turf colorant products can offer an aesthetically pleasing and cost effective alternative to overseeding. A journal article has been submitted for publication consideration with the results of this study.

As a compliment to this concluded study, we have several additional studies planned for 2009-2010 involving green turf colorants. These studies include a look at several turfgrass and environmental parameters that may impact the application, effectiveness and longevity of green turfgrass colorants.

*Grady Miller, Scott Brinton, Kyle Briscoe, NCSU Crop Science Department*

## University of California, Riverside

**Evaluation of Bentgrass Cultivars for Putting Greens in Southern California**

The objective is to evaluate 19 creeping bentgrass cultivars and one velvet bentgrass cultivar on a sand based putting green under simulated championship conditions. The green was mowed at 0.135 in, Primo Maxx applied, rolled daily, and a traffic simulator used to apply metal spike traffic. Highest rank cultivars in the study were L-93, Brighton, Mariner, Dominate Plus, Penn G-6, Seaside II, and Penncross.

*James Baird, Botany and Plant Sciences*

**Assessment of Turfgrass Water Management Systems**.

The objective is to evaluate a series of new technologies for potential water savings while maintaining quality turf. Weighing lysimeters

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