

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](http://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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are used to measure turf water use from irrigation applied by new technology hardware. New concepts for moisture sensor technologies are evaluated for efficacy in maintaining quality turf.

Stephen Cockerham, superintendent of Ag Operations

Using Turfgrass to Remove Contaminants from Reclaimed Water. The objective is to measure the ability of turfgrass to remove personal care products contaminants from reclaimed water. Reclaimed water with known concentrations of personal care products is applied as irrigation to a leaching lysimeter with hybrid bermudagrass turf cover. The captured leachate is analyzed for the concentration remaining in the water after passing through the turf, which is managed as a fairway or home lawn.

Jay Gan, Natural and Agricultural Sciences

Evaluation of Cool-season Turfgrasses under Deficit Irrigation. The objective is to evaluate relative drought tolerance among *Festulolium* and tall fescue experimental lines, tall fescue commercial varieties, and commercial seed mixtures in the field when subjected to deficit irrigation during the warm season. Data show that irrigating tall fescue and other cool-season grasses at the equivalent of 74% ET is not sufficient for the Southern California Inland Valley summer conditions.

Robert Green, Natural and Agricultural Sciences

Examining Turf's Carbon Footprint

The objectives are (1) determine association between water use efficiency and carbon dynamics among different turfgrass species and cultivars under non-limiting cultural practices, and (2) expand knowledge

base about ecological role of turf in the landscape. Whole plot CO₂ and H₂O exchange were measured every two weeks under non-limiting irrigation, fertility, and mowing height the data to establish a baseline for 19 cool season (C-3) grasses and warm season (C-4) grasses. Irrigation was then scheduled at 60% ET; Data being collected include turf quality, color density, leaf firing/wilting, rooting, gas exchange, and leaf C content.

Daryl Jenrette, Natural and Agricultural Sciences

Chemical Control of Anthracnose and Dollar Spot on Putting Greens. Forty-two fungicide treatments were evaluated for their effectiveness in controlling anthracnose (*Colletotrichum cereal*) on creeping bentgrass. Disease severity was high, reaching an average of 57% in untreated plots. Banner, Tourney, and Triton FLO provided good to excellent control. Several products formulated as products and used in tank mixes also provide excellent control. Thirty-four fungicide treatments were evaluated for their effectiveness in controlling dollar spot (*Sclerotinia homoeocarpa*) on creeping bentgrass. Disease severity was high reaching 72% in untreated plots. All materials provided significant control.

Frank Wong, Natural and Agricultural Sciences

Assessment of Soil Amendments for Turf Water Conservation.

Two rates of an inorganic amendment, one inorganic amendment, and the native fine sandy loam soil are to be treated with three irrigation regimes and evaluated for potential water savings in turfgrass management.

Laosheng Wu, Natural and Agricultural Sciences ■

STMA Affiliated Chapters Contact Information

Special Note: The North Florida Chapter has changed its name to Florida #2.

Sports Turf Managers Association of Arizona: www.azstma.com.

Chesapeake Chapter STMA (formerly Mid-Atlantic Athletic Field Managers Organization – MAFMO Chapter STMA): www.ccstma.org.

Colorado Sports Turf Managers Association: www.cstma.org.

Florida #1 Chapter: 954/782-2748

Florida #2 Chapter: 850/580-4026.

Gateway Chapter Sports Turf Managers Association: www.gatewaystma.org.

Georgia Sports Turf Managers Association: www.gstma.org.

The Greater L.A. Basin Chapter of the Sports Turf Managers Association: www.stmalabasin.com.

Illinois Chapter STMA: 847/263-7603.

Intermountain Chapter of the Sports Turf Managers Association: www.imstma.org.

Iowa Sports Turf Managers Association: www.iowaturfgrass.org.

• **Keystone Athletic Field Managers Org. (KAFMO/STMA):** www.kafmo.org.

• **Kentucky Sports Turf Managers Association:** www.kystma.org.

• **Michigan Sports Turf Managers Association (MiSTMA):** www.mistma.org.

• **Minnesota Chapter STMA:** www.mstma.com.

• **MO-KAN Sports Turf Managers Association:** www.mokanstma.com.

• **New England STMA (NESTMA):** www.nestma.org.

• **Nebraska Sports Turf Managers Association:** 402/441-4425.

• **North Carolina Chapter of STMA:** www.ncsportsturf.org.

• **Northern California STMA:** www.norcalstma.org.

• **Ozarks STMA:** www.ozarksstma.org.

• **Sports Turf Managers of New York:** www.stmony.org.

• **Sports Field Managers Association of New Jersey:** www.sfmanj.org.

• **Ohio Sports Turf Managers Association (OSTMA):** www.ostma.org.

• **Oregon STMA Chapter:** 503/953-9406

• **Pacific Northwest Sports Turf Managers Association:** www.pnwstma.org.

• **Southern California Chapter:** www.socalstma.com.

• **South Carolina Chapter of STMA:** www.scstma.org.

• **Texas Sports Turf Managers Association:** 866/897-8621.

• **Tennessee Valley Sports Turf Managers Association (TVSTMA):** www.tvstma.com.

• **Virginia Sports Turf Managers Association:** www.vstma.org.

• **Wisconsin Sports Turf Managers Association:** www.wstma.org.

Forming Chapters:

• **Central Florida:** Contact George Lawson, 863-665-5800

• **Gulf Coast Chapter:** 225/757-9136.

• **Nevada STMA Chapter:** 702/884-2987.

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