

# **The Phenotypic Stability of Triploid Bermudagrasses When Exposed to Dinitroaniline Herbicides. (C05-goatley162235-Poster)**

## **Authors:**

- J.M.Goatley, Jr.\* - *Miss. State Univ.*
- E.Van Santen - *Auburn Univ.*
- L.Capo-chichi - *Auburn Univ.*
- H.W.Philley - *Miss. State Univ.*
- J.V.Krans - *Miss. State Univ.*
- B.R.Stewart - *Miss. State Univ.*
- D.W.Wells - *Miss. State Univ.*
- V.L.Maddox - *Miss. State Univ.*

## **Abstract:**

Research was conducted to evaluate the genetic stability of six bermudagrasses (*Cynodon dactylon* (L.) Pers. x *transvaalensis* Burt-Davy, cvs. 'Champion', 'Floradwarf', 'MS-Supreme', 'Tifdwarf', 'Tifeagle', and 'Tifgreen') in response to chronic exposure to two dinitroaniline herbicides (pendimethalin and oryzalin) through five grow-in and herbicide application cycles. Grass samples obtained from foundation stock were established by planting 12 stems into flats filled with sterilized sand-based soil. Upon reaching 100% cover, the grasses received the following treatments: no herbicide, or 6.8 kg ai/ha of either pendimethalin or oryzalin. Each cycle was visually evaluated for morphological changes for 4-6 months after treatment. All visually distinct off-types were removed for molecular analyses. Randomly selected stems from each cultivar by herbicide treatment combination were used to establish the next cycle. Through five cycles of chemical

treatments, a total of four morphologically distinct off-types have been recovered from one cultivar treated with either herbicide. The DNA-typing technique of amplified fragment length polymorphism (AFLP) analysis has differentiated the off-types from the six cultivars evaluated. No off-types were detected in untreated flats.

**Corresponding Author Information:**

Michael Goatley	phone: 662-325-8280
Mississippi State	fax: 662-325-8742
University	e-mail:
Box 9555	mgoatley@pss.msstate.edu
Mississippi State, MS	
39762	

**Presentation Information:**

Presentation Date: Monday, November 11, 2002  
Presentation Time: 4:00-6:00 pm  
Poster Board Number: 1219

**Keywords:**

off-type bermudagrass, golf putting green