Application of Somaclonal Variation in Triploid Bermudagrass Breeding. (C05-zhang145248-Poster)

Authors:

- G.Zhnag - *Rutgers University, New Brunswick, NJ*
- S.Lu - *The South China Agri. Univ. Guangzhou, China*
- T.A.Chen - *Rutgers University, New Brunswick, NJ*
- C.R.Funk - *Rutgers University, New Brunswick, NJ*
- W.Meyer - *Rutgers University, New Brunswick, NJ*

Abstract:

Mutation breeding has been the only way to genetically improve high quality dwarf cultivars of triploid bermudagrass, either through natural mutant selection or through radiation induced mutant selection. Using the nodes of TifEagle and TifDwarf as material, we successfully established an embryogenic callus culture and regeneration system. One hundred and three of 279 regenerated plants showed variation which involved every aspect of important morphological turf traits. Further propagation indicated that these variations were usually stable. The further investigation for a highly potential variant, designated showed more appealing color, higher density and shorter length of internodes, indicated that it could withstand mowing at 5/32 inch during summer growing season with significantly shorter internodes. The variant also showed significant improvement on drought tolerance and longer leaf color retention in the fall. RAPD assay disclosed a slight difference at DNA level between the variant and TifEagle, a two bands difference among a total of 186 obviously amplified bands. These results indicate that somaclonal variation could be a practical method for triploid bermudagrass breeding.

Corresponding Author Information:

Gengyun Zhang
Rutgers University
63 Nichols, 900 Davidson Rd.
Piscataway, NJ 08854

phone: 732 878 2843
fax: 732 932 9377
e-mail: gengyun@eden.rutgers.edu

Presentation Information:

Presentation Date: Tuesday, November 12, 2002
Presentation Time: 9:00-11:00 am
Poster Board Number: 1038

Keywords:
triploid bermudagrass, somaclonal variation, breeding