# Genetic Diversity Among Pentaploid Buffelgrass Accessions as Revealed by AFLP Markers. (C08-burson191557-Poster)

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## Abstract:

Buffelgrass is an important warm-season forage grass that is grown throughout the arid tropics. Even though the grass reproduces primarily by apomixis, it is highly polymorphic. A range of chromosome numbers have been reported for the grass and 2n=4x=36 is the most common. Some accessions collected in central Cape Province of South Africa had 45 chromosomes, a new number for the species. These pentaploid accessions have several important unique agronomic traits. Additional 45-chromosome plants have since been found in the NPGS buffelgrass collection. These were collected in different geographical areas than the original 45-chromosome plants. This study was undertaken to determine the genetic diversity among all the 45-chromosome buffelgrass accessions in the NPGS. AFLP markers were used to determine the genetic diversity and phylogenetic relationship among 149 accessions. Polymorphic markers generated by 18 primer combinations were analyzed using UPGMA cluster analysis. Ordination analysis also was used to study the relationship within a matrix. Most accessions clustered into one group but some separated into a different group, suggesting they are of a different origin.

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