



Assessment of genetic diversity of bermudagrass germplasm from southwest China and Africa by using AFLP markers

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ABSTRACT. *Cynodon dactylon* (L.) Pers. var. *dactylon* (common bermudagrass) is widely distributed geographically between approximately 45°N and 45°S latitude, penetrating to approximately 53°N latitude in Europe. The extensive variation of morphological and adaptive characteristics of the taxon has been substantially documented, but information is lacking on DNA molecular variation in geographically disparate forms. The genetic diversity of 51 wild accessions of bermudagrass from southwest China (Sichuan, Chongqing, Yunnan, Guizhou, and Tibet) and 8 African bermudagrass was analyzed using amplified fragment length polymorphism molecular markers. A total of 670 polymorphic bands were detected with 11 primer combinations, of which 663 (98.74%) bands were found to be polymorphic. The genetic similarity among the accessions ranged from 0.64-0.96 with an average of 0.78. All 59 wild accessions were clustered into 5 eco-geographic groups, and nearly all accessions from the same area were classified into the same group and were found to be associated with their geographical distributions. Therefore, complex geographical and

ecological environments are important factors for the genetic structure and geographical distribution of *C. dactylon*.

Key words: AFLP marker; Bermudagrass; Genetic structure