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## Optimization and evaluation of SSR primers for *Urochloa brizantha*

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The genus *Brachiaria/Urochloa* belongs to the family Poaceae, and comprises approximately 100 species. The genetic characterization represents a great help for the knowledge of genetic resources and conventional breeding. SSR (simple sequence repeats) molecular markers have been used as an efficient tool for genetic variability analysis. The design of the primers used in this study is based on the sequences available in the *B. brizantha* expressed sequence database of the project "Functional genomics and genetic control of sexual reproduction and apomixis of plants with biotechnological perspectives", which after mining, clustering and reduction of redundancy, resulted in 315 SSR-EST (expressed sequence tags) primers. Thus, the objective of this study is to evaluate and characterize the primers for *U. brizantha*. A total of 40 accessions of the *Brachiaria* germplasm active bank of Embrapa Gado de Corte were used. The loci were amplified by PCR reactions (Polymerase Chain Reaction), the separation of the fragments performed by electrophoresis in 5% polyacrylamide gel and analysis by band presence or absence. From a total of 154 primers, 81 presented polymorphism representing 52.59% of the total tested. In a preliminary analysis, four polymorphic SSR primers were used for the 40 accessions that generated a total of 30 markers and grouped the accessions in a similarity that ranged from 0.18 to 1. Two groups were formed with 0.26 and 0.21 of similarity respectively. Thus, these primers are promising for the future study of accessions variability of the germplasm bank.

### Biography

Nayara Carvalho has completed her Graduation in Agronomy at University of Brasilia (Brazil) in 2015. She is pursuing her PhD at the same university and is working on molecular markers since graduation. She has published one paper in *Genetic and Molecular Research* journal.

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