



Determination of the genetic diversity among accessions of *Senna spectabilis* (canafístula) by using RAPD markers

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ABSTRACT. *Senna spectabilis* (DC.) H.S. Irwin & Barneby (Fabaceae; Caesalpinioideae), commonly known as “canafístula” or “cassia”, is widely used in the semi-arid region of northeastern Brazil as a source of forage and timber. The plant presents a high nutritional content in comparison with other forage species that are native to the Brazilian Caatinga; thus, it represents a valuable resource during periods of drought. The aim of this study was to evaluate the genetic variability among eight accessions of *S. spectabilis* available in the forage germplasm collection of Embrapa Meio-Norte using the random-amplified polymorphic DNA technique. The 15 primers selected for use in the analysis produced 107 bands, including 59 (55.14%) that were polymorphic. A similarity matrix was generated on the basis of Jaccard coefficients, and a dendrogram was constructed using the unweighted pair group method with arithmetic mean clustering technique. The mean value of the similarity coefficients was 0.73, and the cophenetic correlation coefficient was 83.76%. Accessions CAN. 4 and CAN. 5 presented the greatest genetic similarity, while CAN. 6 and CAN. 8 were the most divergent. The *S. spectabilis* accessions were classified

into two main groups with group I including accessions CAN. 1, CAN. 2, CAN. 4, CAN. 5, CAN. 7, CAN. 8, and CAN. 9, and group II comprising the single accession CAN. 6. The results presented herein revealed that, although the germplasm collection is presently limited, there is sufficient genetic variability among the accessions to permit future breeding programs.

Key words: Germplasm bank; Forage legume; Brazilian Caatinga