MANAGEMENT OF NUCLEI CONSERVATION SCHEMES OF BRAZILIAN LOCALLY ADAPTED GOATS USING MOLECULAR MARKERS

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Abstract / Resumo:

The local adapted goat breeds undergo indiscriminate crossbreeding with several commercial breeds, affecting effective population size and therefore desirable allelic combinations for adaptation to extreme environmental conditions. Few studies have been carried out on the origin of these breeds, their production potential and genetic diversity. The objective of this study was to advance studies on genetic variability in the Conservation Nuclei of Canindé and Moxotó breeds kept in Embrapa Goats by mitochondrial DNA sequencing (mtDNA) to assist in optimization of genetic management of these herds as well as guide the collection of germplasm for ex situ conservation. A total of 391 base pairs were sequenced from the first half of the control region (D-loop) from 41 Moxotó and 30 Canindé goats from the Conservation Nuclei of Embrapa Goats, Ceará State, Brazil. Thirty nine haplotypes were observed of which 16 were specific to the Canindé breed, 11 to the Moxotó and seven to commercial breeds. The results, in addition to those with nuclear markers (microsatellites), should help in the genetic management of these two herds and optimize genetic diversity and thereby reduce inbreeding.