

GENETIC DIVERSITY AND VIABILITY OF MICROSATELLITE MARKERS FOR PATERNITY EXCLUSION IN LOCALLY ADAPTED SHEEP FROM PANTANAL REGION OF MATO GROSSO DO SUL

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The naturalized sheep breed from Pantanal Sul Matogrossense stands out for its hardiness and adaptability to the edaphoclimatic conditions found in this biome, possessing desirable characteristics to production systems such as non-reproductive seasonality, greater hulls disease resistance and heat stress tolerance. The aim of this study was to use microsatellites to evaluate genetic diversity and the use of a commercial panel in kinship tests in this population, thus contributing with useful information for this genetic group conservation. Animals belonging to the Pantaneira naturalized populations from the UFGD Experimental Farm (Dourados/MS) (n = 69) and from Embrapa Pantanal (Corumbá/MS) (n = 58), and also Bergamácia breed sheeps (Jardim/MS) (n = 30) were genotyped with eight microsatellite loci (CSR247, HSC, OarAE129, MAF214, OarFCB304, OarCP49, SPS113, D5S2). The Pantaneira population from UFGD showed the highest average number of alleles and allelic richness. The polymorphic information content was highly informative in the studied loci, with a mean of 0.67. For all markers evaluated, the observed heterozygosity was lower than the expected. Through the molecular variance analysis it was observed that the rate of differentiation between the Pantaneira populations was low (5.24%), indicating greater similarity between them when compared with the Bergamácia breed (14%). The combined exclusion probability for the Pantaneira population was > 99.71% while for Bergamácia it was lower. These results indicate that although the observed values can aid in the paternity exclusion within these populations, it is also necessary to increase the panel of markers to increase test accuracy. The database obtained demonstrated the microsatellites potential as a tool for analysis of genetic diversity and similarity of the Pantaneira sheep populations, contributing to better management and genetic management of locally adapted livestock. Financial Support: FUNDECT, CAPES and UFGD