



## GENETIC VARIABILITY OF SANTA INÊS SAMPLES STORED IN THE BRAZILIAN ANIMAL GERMPLASM BIOBANK (BBGA).

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### Abstract

Santa Inês is a widely distributed and economically important Brazilian sheep breed conserved in the Brazilian Animal Germplasm Biobank (BBGA). The aim of the present study was to investigate if Santa Inês germplasm samples in the BBGA are representative of the overall variability observed in this breed. Thirteen samples from BBGA and 112 from Embrapa *in situ* conservation flocks were genotyped with the OvineSNP50 Illumina chip. Data were analyzed with SVS Golden Helix, Arlequin v3.5.2.2, Admixture 1.2 and Clumpak.  $F_{ST}$  (0.034 / P value <0.001) and the Principal Component Analysis estimates obtained between samples from BBGA and the conservation flocks suggest that samples conserved in BBGA are representative of the overall genetic variability found in the Santa Inês breed. However, results obtained with ADMIXTURE showed a subtle difference between the two sub-samples. Locations of the flocks may have led to the structuring of the two groups studied, since the Santa Inês samples from the *in situ* flocks and associated flocks come from the Northeast and Midwest regions, while those from the germplasm bank come exclusively from the region Northeast. Therefore, future collections should be carried out in flocks from different locations from Midwest in order to better capture Santa Inês breed genetic variability.

**Keywords:** genetic characterization; germoplasm bank; *Ovis áries* SNP.