

Morphometric Characterization of Goats in the Southern Region of Espírito Santo

Jéssica Delesposte Destefani¹; Ida Rúbia Machado Moulin²; Aparecida de Fátima Madella de Oliveira¹

¹Instituto Federal do Espírito Santo campus Alegre, Espírito Santo, Brasil.

²Universidade Estadual do Norte Fluminense Darcy Ribeiro, Rio de Janeiro, Brasil.

*Corresponding author: jessicaddestefani@gmail.com

Abstract

Goat farming is an important socioeconomic and environmental activity in disadvantaged areas, vital for the livelihood of many farmers and the Brazilian economy in general. This sector has great potential for increased exploitation. However, there is little knowledge and work to characterize and raise awareness about the genetic groups in the country. Thus, learning about the biometrics of a genetic group contributes to the definition of this group, especially the purpose of its size and fitness, serving as a basis for the differentiation of groups. The objective of this study was to evaluate the morphometric measurements according to the genetic groups of goats in the southern region of Espírito Santo state. We used 46 adult goats from three municipalities (Castelo, Cachoeiro de Itapemirim, Muniz Freire) in southern Espírito Santo, with the following genetic groups: Anglonubian, Saanen, Parda Alpina, and mixed breed. Morphometric variables of a quantitative nature were measured: Sternal Height (SH), Sacral Region Height (SRH), Body Length (BL), Thoracic Perimeter (TP), Croup Width (CW), Croup Length (CL), Shin Perimeter (SP), Ear Size (ES), Face Width (FW), Head Width (HW), and Head Length (HL). The measurements were made with a tape measure and hipometer on the right side, with the animal kept well positioned in the station. Data were tabulated according to genetic groups, and means were compared using the SNK test. The mean morphometric values did not differ statistically ($P>0.05$) for SH, BL, TP, CW, CL, FW, HW, and HL. The Anglonubian genetic group showed a higher mean for SRH (73 ± 6.6), SP (10 ± 1.10), and ES (24 ± 3.2), followed respectively by Saanen (70.5 ± 5.5 ; 8.6 ± 0.9 ; 20 ± 3.4), mixed breed (67.2 ± 4.3 ; 8.8 ± 0.75 ; 16.7 ± 3.3) and Parda Alpina (65.5 ± 5.5 ; 8.8 ± 0.8 ; 15.8 ± 2.4). The mixed breed showed less standardization due to the significant variation of the genetic groups used for crossbreeding. We recommend that the variables SRH, SP and ES be maintained in future studies because they showed significant differences between the genetic groups analyzed. Few studies have investigated the morphometric pattern in goats in the region, and new research is needed with a larger sample size to better understand the animals raised in the south of the state.

Keywords

Phenotypic characterization, Morphometric measurements, breeds, goats.

Acknowledgments

To the Instituto Federal do Espírito Santo for the financial support.