

COMPARISON OF SCROTAL BIOMETRY, ULTRASONOGRAPHIC ATTRIBUTES OF TESTICLES AND SEMINAL CHARACTERISTICS OF NELLORE AND CARACU BULLS - PRELIMINARY DATA

COMPARAÇÃO DE BIOMETRIA ESCROTAL, ATRIBUTOS ULTRASSONOGRÁFICOS DOS TESTÍCULOS E CARACTERÍSTICAS SEMINAIS DE TOUROS NELORE E CARACU - DADOS PRELIMINARES

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Breeding soundness examination allows evaluating characteristics indicative of male fertility. However, these characteristics can differ between breeds. The aim of the present study was to compare the scrotal biometry, ultrasonographic attributes of testicles and seminal characteristics of Nelore and Caracu bulls. The measurements were performed at the Institute of Zootechnics, located in the city of Sertãozinho, SP, from October 2016 to January 2017. Seventy-one mature bulls were grouped according to breed: (1) Nelore animals (n=46, 32.06 ± 9.53 months old, 633.24 ± 132.80 Kg); (2) Caracu animals (n=25, 25.80 ± 4.24 months old, 579.92 ± 107.66 Kg). The B-mode ultrasonographic evaluation of the testicles was performed using a portable scanner (Mindray Z5®, Shenzhen, China) connected to a 7.5-MHz linear transrectal transducer. The ultrasound images were analyzed by Image Pro Plus 7.0™ software (Media Cybernetics Inc., San Diego, CA, USA), to determine mean numerical pixel values (NPVs) and pixel heterogeneity (standard deviation of NPVs) of the testicular parenchyma. The scrotal circumference (SC) was obtained using a tape measure and the testicular volume (TVol) was obtained by the formula: $2 \{(R^2) \times \pi \times TL\}$, where R= radius (diameter/2), TL = testicular length and $\pi = 3.14$. The computer assisted sperm analysis (CASA) evaluated: total motility (%TM); progressive motility (%PM) and rapid cells (RAP). The vigor (VIG) was evaluated by optical microscopy, and the sperm concentration (CONC) was obtained by an SDM-1 photometer (Minitub®, Germany). Sperm morphology was analyzed using a phase-contrast microscopy to determine the major, minor and total defects. The ultrasonographic attribute data were analyzed using the GLM procedure, while the scrotal biometry and seminal characteristics were analyzed using the GENMOD procedure (P<0.05). There were differences between Nelore and Caracu bulls in the NPVs (78.46 ± 1.61 vs. 72.03 ± 2.19), pixel heterogeneity (13.45 ± 0.19 vs. 12.57 ± 0.26), TVol (230.99 ± 0.00 cm³ vs. 267.52 ± 0.00 cm³), SC (34.91 ± 0.00 cm vs 37.30 ± 0.00 cm), VIG (2.82 ± 0.01 vs. 2.32 ± 0.02), major defects (6.60 ± 0.01% vs. 14.06 ± 0.01%) and total defects (12.19 ± 0.00% vs. 20.43 ± 0.00%), respectively. In conclusion, the testicular parenchyma of Nelore bulls presented higher echogenicity and was more heterogeneous in relation to the Caracu bulls. In addition, the testicular volume, scrotal circumference and percentage of spermatid defects were higher in Caracu bulls.

Keywords: andrological, bulls, ultrasound.

Acknowledgments: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES).