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CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

ADJUSTMENT OF SCROTAL CIRCUMFERENCE FOR GROWTH TRAITS IN BRAFORD CATTLE RAISED UNDER TROPICAL CLIMATE CONDITIONS

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Data from 24,688 young Braford bulls born between 1991 and 2017, belonging to the historical dataset from Conexão Delta G was used to estimate simple and double adjustment factors of scrotal circumference (SC) for: age (SC_A), weight (SC_W), conformation (SC_C), precocity (SC_P), musculature (SC_M), size (SC_S), age and weight (SC_{AW}), age and conformation (SC_{AC}), age and precocity (SC_{AP}), age and musculature (SC_{AM}), age and size (SC_{AS}), weight and conformation (SC_{WC}), weight and precocity (SC_{WP}), weight and musculature (SC_{WM}), weight and size (SC_{WS}), being all measures taken at yearling. After edition, the dataset totalized 7,594 young bulls belonging to 401 contemporary groups. For SC_{AW} were performed, initially, the adjustment of weight for standardized ages at weaning and at yearling (205 and 500 days, respectively). First of all, the regression coefficients were estimated simultaneously for both simple and double adjustment using procedure GLM (SAS, 2014) and the traits statistically significant linear or quadratic were considered to predict the value of adjusted SC. After, the multiplicative adjustment factors (AF) were estimated by application the mean value for each variable according to the average of the data, in general were 500 days of age, 330 kg of weight and score 3 for conformation (C), precocity (P), musculature (M) and size (S), using the equation: $AF_x = SC_{base}/SC_x$, where AF_x is the adjustment factor of SC for the studied effect; SC_{base} is the predicted value of SC, in centimeters, obtained for the standardized mean of each trait considered; SC_x is the predicted value of SC, in centimeters, for each animal. The AF of SC_A and SC_W presented greater amplitude of 0.34 and 0.53, respectively, in simple adjustments, whereas the amplitude founded on SC_C, SC_P, SC_M and SC_S averaging 0.11 to 0.13, indicating small variation of score traits. When AF was evaluated for double adjustments happen that SC_{AW} had the highest amplitude from 0.61. Between age and weight AF behaved in a proportional way to adjust them to score traits, where the SC_{AC}, SC_{AP}, SC_{AM} and SC_{AS} varied 0.31 to 0.35, and SC_{WC}, SC_{WP}, SC_{WM} and SC_{WS} were 0.51 to 0.54. Thus, the results indicated that there were important differences among growth traits adjustments for scrotal circumference so, these adjustments could lead to different relationships between growth and reproduction animal´s performance.

Keywords: conformation, musculature, precocity, sexual precocity, size

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