

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## RESPONSES TO SELECTION FOR YEARLING WEIGHT IN NELLORE AND CARACU BREED IN THE INDIVIDUAL PERFORMANCE TEST

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The objective of this study was to measure the yearling weight and body growth in Nellore and Caracu breed during individual performance test. Data from 203 male animals, born in the year 2014 and progenies of bulls submitted to the individual performance test (IPT) in the 2015 were used. The animals were from CAPTA - Instituto de Zootecnia, Sertãozinho, SP, Brazil. Three experimental groups were used: Control Nellore (NeC; n = 20), Selected and traditional Nellore (NeST; n = 111) and Caracu (Ca; n = 72). The parameter of final weight (FW) was estimated. The body measurements were collected during the final weighing of IPT using appropriate metric instruments: thoracic perimeter (TP), hip height (HH), and scrotal circumference (SC). Variance analysis was performed through the General Linear Model procedure of the Statistical Analysis System and the model included the fixed effects as month of birth and initial weight at the IPT. All effects were significant ( $p < 0.05$ ) except month of birth for HH and SC. The means and standard deviations of FW, TP, HH and SC were ( $329.1 \pm 5.591$  kg), ( $1.6 \pm 0.012$ cm), ( $1.3 \pm 0.009$ cm) and ( $23.9 \pm 0.538$ ) for NeC, ( $350.13 \pm 2.147$ kg), ( $1.67 \pm 0.005$ ), ( $1.36 \pm 0.004$ ) and ( $24.1 \pm 0.206$ ) for NeST and ( $345.49 \pm 2.704$ ), ( $1.65 \pm 0.006$ ), ( $1.23 \pm 0.005$ ) and ( $30.7 \pm 0.266$ ) for Ca, respectively. NeC presented greater genetic variability and showed that this group does not present precocity and adequate weight gain. Several significant phenotypic correlations were observed among variables, however, a high positive magnitude was observed mainly between FW and TP ( $r = 0.77$ ;  $p < 0.01$ ). A positive and significant correlation was observed between FW and SC ( $r = 0.54$ ;  $p < 0.01$ ), SC and TP ( $r = 0.41$ ;  $p < 0.01$ ), FW and HR ( $r = 0.33$ ;  $p < 0.01$ ), TP and HR ( $r = 0.37$ ;  $p < 0.01$ ). However, the present results suggest that agents that influence in FW may also be associated with body growth traits. SC and HR was inversely correlated ( $r = -0.38$ ;  $p < 0.01$ ) and suggests that animal with lower frame size may have higher FW. The animals born in November presented lower values for FW and TP, whereas animals born in September and October have advantages in the final classification of the tests. Thus, this advantage can be considered in IPT, which minimizes selection errors and increases accuracy. Lastly, the results showed that FW can be used properly as a selection criterion.



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