

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

PERFORMANCE AND CARCASS TRAITS OF NELLORE YOUNG BULLS WITH DIFFERENT POST-WEANING GROWTH RATE POTENTIALS

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Increasing production efficiency is very important in beef cattle industry. Selection of animals based on their post-weaning growth has been widely used to improve performance, however it can affect performance and carcass traits at slaughter. Therefore, this study was carried out to evaluate the performance and carcass characteristics of Nelore young bulls with different post-weaning (from 7 to 16 months old) expected progeny difference for growth (EPDg). A total of 147 Nelore non-castrated animals with average initial body weight of 412 ± 53.8 kg and 19 months old, were used in two consecutive years (2016/2017) in a completely randomized design and divided into two groups: 1) Seventy-three bulls high EPDg (mean of 11.50 kg) and 2) Seventy-four bulls low EPDg (mean of -1.0 kg). The animals were fed for 100 days, with a diet was composed by 73% concentrate and 27% roughage (corn silage). At the beginning of the experimental period and every 28 days all animals were weighed and data was used to calculate average daily gain (ADG). Dry matter intake (DMI) was measured daily. At the end of the feedlot period, all animals were slaughtered and the hot carcass weight and internal fat were recorded. After 24 hours of chilling, *Longissimus* muscle area e fat thickness were measured at 12nd rib level. Data was analyzed as a completely randomized design, using the MIXED procedure of SAS (SAS Institute Inc. NC, USA), including the fixed effects of EPDg and random effect of year. There was a trend ($P = 0.08$) of higher initial body weight for animals with high EPDg compared to low (427.3 and 412kg, respectively). In addition, animals with higher EPDg had greater final body weight (587.5 and 569.2kg, respectively; $P = 0.04$) and cold carcass weight (342 and 331.2kg, respectively; $P = 0.05$), compared to low EPD animals. On the other hand, high and low EPDg did not differ for DMI (10.9 and 10.6 kg/day, respectively), average daily gain (1.73 and 1.65 kg DMI/day, respectively), feed efficiency (0.15 and 0.16 kg DMI/kg ADG, respectively), ribeye area (82.6 and 81.6 cm², respectively) and fat thickness (5.6 and 5.7, respectively). Animals with different EPDg, did not differ in feedlot performance and carcass traits on finishing phase, and the initial differences between groups seems to remain stable during the finishing period.

Keywords: *Bos indicus*, carcass, genetic selection, weight gain.

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