

FEED EFFICIENCY AND RERANKING OF BEEF CATTLE AT DIFFERENT STAGES OF DEVELOPMENT

EFICIÊNCIA ALIMENTAR E RECLASSIFICAÇÃO EM BOVINOS DE CORTE EM DIFERENTES FASES DE DESENVOLVIMENTO

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The Residual Feed Intake (RFI) is a measure of feed efficiency usually evaluated post-weaning, and according to available evidences in the literature is highly correlated to RFI measured at other ages. The objective of present study was examining the reclassification of RFI in Nelore bulls classified in two post-weaning tests. In post-weaning performance test 127 Nelore males (210 ± 45 days of age) in feedlot collective pens (GrowSafe Systems®) were evaluated. Data of dry matter intake (DMI, 7.23 ± 1.72 kg/day) and mean body weight (BW, 306.72 ± 7.54 kg) were collected during 112 days, and the animals were classified according to RFI. The RFI was estimated as multiple regression error of DMI on average daily gain (ADG) and metabolic weight (BW^{0.75}). Thereafter, a sample of 24 animals (408 ± 45 days old), 12 high (2.34 ± 0.24 kg DM/day) and 12 low RFI animals (-1.48 ± 0.24 kg DM/day) were reclassified after performance post-weaning test in feedlot for 84 days in individual pens. The diet was offered twice daily, contained corn silage (53.6% DM), *Urochloa* hay (10.0% DM), ground corn (21.8% DM), soybean meal (11.6% DM) and mineral supplement (3.0% DM). The experimental design was completely randomized. Data were analyzed using GLM procedure (SAS Inst., Inc., Cary, NC), fitting a model including the fixed effects of RFI class and the initial weight as linear covariate. Means were adjusted by the least squares method and compared by the Tukey test (P<0.01). The 24 animals reclassified in performance post-weaning, 33.3% retained the class of RFI established in the post-weaning performance, and 66.7% of the animals changed RFI class on 0.5 standard deviation from the mean. On the other hand, 16.7% of the animals changed from high to low RFI class, and 12.5% changed from high to medium RFI class (Table 1), showing improvements in feed efficiency. These results indicate that there is reranking of RFI in Nelore young bulls at different stages of development with same diet.

Table 1. Proportion of animals that changed between the low, medium and high classes

RFI groups	Number of animals	Reranking ¹
High-to-low	4	16,67
Low-to-high	3	12,50
High-to-medium	3	12,50
Low-to-medium	6	25,00
Changed	16	66,70
No change	8	33,30

¹proportion of animals.

Keywords: feedlot, Nelore, residual feed intake.

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