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CARCASS TRAITS OF NELLORE BULLS CLASSIFIED FOR RESIDUAL FEED INTAKE

CARACTERÍSTICAS DE CARCAÇA DE BOVINOS NELORE CLASSIFICADOS POR CONSUMO ALIMENTAR RESIDUAL

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This study was carried out to identify associations among carcass traits and residual feed intake (RFI) in young Nellore males feedlot finished. Data was obtained in four experiments, after the animals had been evaluated in individual pens and classified in low RFI(<mean - 0.5 standard deviation), medium RFI (± 0.5 standard deviation from mean) and high RFI (> mean + 0.5 standard deviation). One hundred-sixteen non castrated males from low and high RFI classes, with 369 kg of initial body weight and 439 days of initial age, were used for finishing phase. Animals were distributed in individual pens for 100 days and weighed at the beginning and end of experimental period after 16 hours solids fasting. Animals were slaughtered with a minimum of 4 mm for subcutaneous fat thickness over *Longissimus* muscle between the 12th and 13th ribs. Slaughter was carried out in experimental slaughter houses following the normal procedures of Federal inspection. After slaughter, carcasses were weighed (hot carcass weight) and transferred to chilling room where they were kept at 2°C for 24h. Dressing percentage was calculated as the ratio between hot carcass weight and slaughter body weight. After chilling, carcasses right halves were divided into carcass primary cuts: forequarter, hindquarter and spare ribs, which were also weighed. Data were analyzed using the SAS MIXED procedure (SAS Inst. Inc., Cary, NC), including RFI class as fixed effect and year and genetic group as random effects with significance level of 5%. As expected, low and high RFI animals had RFI value significantly different (Table 1). For the other studied traits, slaughter body weight, hot carcass weight, dressing percentage and carcass primary cuts weight, no significant differences were detected between RFI classes. For a similar slaughter body weight and carcass weight, low RFI animals required lesser amount of food than high RFI animals. In the literature, variations around 10% in dry matter intake are usually found when in comparison to animals from different RFI classes. RFI can be considered as trait for selecting Nellore animals, due to the fact the more efficient ones (low RFI) used less food to produce similar carcasses. Therefore, identifying more efficient animals causes severe impact on production system performance and profitability.

Table 1. Carcass traits of Nellore animals from low and righ residual feed intake

	Residual Feed Intake		
	Low	High	P-value
Residual feed intake, kg	- 0.343 ±0.232	0.372 ±0.236	<0.001
Slaughter body weight, kg	436 ±7.81	438 ±7.94	0.896
Hot carcass weight, kg	266 ±5.02	267 ±5.11	0.789
Dressing percentage, %	60.9 ±0.201	61.1 ±0.204	0.451
Hindquarter, kg	61.1 ±1.07	61.4 ±1.08	0.868
Forequarter, kg	52.9 ±1.03	53.6 ±1.05	0.672
Spare ribs, kg	17.9 ±0.357	17.8 ±0.363	0.836

Keywords: carcass primary cuts, dressing percentage, feed efficiency.

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