

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

LONGISSIMUS MUSCLE CHEMICAL COMPOSITION OF NELLORE BULLS FED OR NOT WITH GLYCERIN

Gabriele V. SILVA*¹, Sarah F. M. BONILHA¹, Robson S. BARDUCCI², Joslaine N. S. G. CYRILLO¹, Roberta C. CANESIN¹, Maria Eugênia Z. MERCADANTE¹

*corresponding author: gabi_voltareli@hotmail.com

¹Instituto de Zootecnia, Sertãozinho, São Paulo, Brasil;

²Universidade Estadual Paulista, Jaboticabal, São Paulo, Brasil.

Longissimus muscle chemical composition was measured in order to identify associations between glycerin intake and meat quality in young Nelore bulls feedlot finished. Twenty-eight Nelore bulls, from three selection lines, were evaluated in feedlot. Experimental diets composition on dry matter (DM) basis were 18.3% of corn silage, 45% of ground corn, 25% of soybean hull, 10.3% of sunflower meal and 1% of mineral nucleus for diet without glycerin and 18.3% of corn silage, 25% of ground corn, 20% of glycerin, 25% of soybean hull, 10.3% of sunflower meal and 1.4% of mineral nucleus for diet with glycerin. Animals were slaughtered when reached 520 kg of average body weight. *Longissimus* muscle chemical composition was determined in samples collected immediately after boning, vacuum packed and frozen until analysis. Data were analyzed using the MIXED procedure of SAS, including as fixed effects diet and selection line. Means were compared by t test at 5% of probability. Analyzing feed efficiency traits of the animals fed with or without glycerin, a trend ($P = 0.0579$) of animals fed without glycerin to be more efficient was detected. Residual feed intake means of animals fed with or without glycerin were, respectively, $0.178 \pm 0.089 \text{ kg d}^{-1}$ and $-0.072 \pm 0.089 \text{ kg d}^{-1}$. Significant differences between animals fed with or without glycerin, respectively, were detected for *Longissimus* muscle fat percentage ($27.20 \pm 1.40\%$ vs $31.31 \pm 1.40\%$; $P = 0.0481$) and *Longissimus* muscle protein percentage ($37.64 \pm 2.32\%$ vs $30.38 \pm 2.32\%$; $P = 0.0364$). No significant differences were detected for *Longissimus* muscle water percentage ($33.31 \pm 1.20\%$ vs $36.81 \pm 1.20\%$; $P = 0.0502$) and *Longissimus* muscle ash percentage ($1.85 \pm 0.139\%$ vs $1.50 \pm 0.139\%$; $P = 0.0854$) between animals fed with or without glycerin, respectively. The use of glycerin in finishing diets of Nelore animals altered feed efficiency and *Longissimus* muscle chemical composition, decreasing the amount of protein and increasing fat in the muscle. Glycerin can be used in substitution of corn in finishing diets of cattle, resulting in quality meat.

Keywords: beef cattle, fat, meat quality, protein, water

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