Performance of Canchim steers finished on feedlot

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With the increasing demand for food, from domestic and foreign markets, it is necessary to adopt strategies that can enhance beef meat production. The aim of this study was to evaluate performance of Canchim (synthetic breed 5/8 Charolais) steers finished in feedlot system. The study was conducted at Embrapa Pecuária Sudeste (Brazilian Agricultural Research Corporation - Southeast Livestock) experimental station located in São Carlos, São Paulo state, in Southeast of Brazil, during the period of June to September 2015. Twenty-four Canchim steers, separated according to their lineages, 12 belong to the new line (NL) and 12 ancient lineage (AL), with an initial body weight of 368 kg and age of 21 months, were housed in feedlot with collective pens, equipped with drinking trough and automated feed troughs (GrowSafe system). The experimental diet was composed of 15.7 % CP and 72.1 TDN and animals were fed *ad libitum* during 106 days. Initial weight (IW), final weight (FW), daily dry matter intake (DMI), daily weight gain (DWG), feed conversion (FC) and feed efficiency (FE) were evaluated. After slaughter, in commercial abattoir, carcass were chilled overnight at 2°C. At 24 h post mortem, the following measurements were obtained: rib eye area (REA) taken by direct grid reading of *longissimus thoracis* muscle at the 12th rib; backfat (BF) at the 12th rib taken by plastic ruller. Performance data on feedlot and carcass characteristics were analyzed using the SAS's MIXED procedure and mean values were compared using the Tukey test. Treatment differences were considered significant at P < 0.05. The initial (387.1 kg vs. 349.0 kg) and final (525.1 kg vs. 469.4 kg) body weight, daily dry mater intake (9.75 kg / d vs. 8.51 kg / d), and daily weight gain (1.31 kg / d vs. 1.14 kg / d) were higher (P < 0.05) for NL compared to AL. In relation to feed conversion (7.60 kg / kg vs. 7.51 kg / kg), feed efficiency (13% vs. 13%), rib eye area (75.2 cm^2 vs. 73.7 cm^2) and backfat thickness (4.1 mm vs. 3.2 mm) there were no differences (P > 0.05) between NL and AL. Steers from the new lineage of Canchim proved to be superior to the ancient at initial body weight, final body weight, daily dry mater intake and daily weight gain.

Keywords: automated troughs, beef cattle, Canchim, feed conversion, feed efficiency, lineage