Growth performance of super-young steers finished on feedlot fed two different diets

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Super-young steers production can be considered as an alternative in Brazilian livestock herd as there are several positive responses to the system, beyond improving the growth performance, effciency, weight gain, meat quality and give more available pasture in the production system as these animals are slaughtered earlier. The aim of this study was evaluate the growth performance of crossbred super-young animals finished on feedlot, fed two different diets. Eighty animals, young bulls and heiferscrossbred from Hereford or Charolais bulls and 1/2 Angus x 1/2 Nellore or 1/2 Simmental x 1/2 Nellore cows, were maintained in 30 m^2 individual pens from 7 months of age after weaning, and randomly assigned to two different diets - A and B (25 animals per treatment), and subdivided in two: a initial and a finishing diet. The proportions of crude protein (PB) and total digestible nitrogen (NDT) were 14.3%/13.4% PB and 71.3%/79.1% NDT for diet A and 14.4%/13.3% and 69.9%/73.4% PB for A and B diets respectively. The diets were offered twice a day and the consumption was *ad libitum.* Initial weight (PI), final weight (PF), daily dry matter consumption (CMS), daily weight gain (GPD) and feed efficiency (EA) were evaluated. Animals were slaughtered when reached 5 mm of backfat thickness determined by ultrasound measurements at a commercial abattoir, according to Sao Paulo state Sanitary Inspection System (SISP). Feedlot growth performance data were analyzed by analysis of variance, considering bull breed (RT), cow genetic group (GGV), sex, diet as fixed effects and interactions. A significant effect ($p<0,05$) was found for RT, where animals from Charolais bulls showed higher values of PI (265.79 kg vs 252.12 kg), PF (436.20 kg vs 411.94 kg), GPD (1.55 kg vs 1.38 kg) and EA (0.17 vs 0.15) if compared to animals from Hereford bulls. The sex also showed a significant effect ($p<0,05$), with male animals showing higher values for PI (270.81 kg vs 247.10 kg), PF (456.03 kg vs 392.11 kg), GPD (1,64 kg vs 1.28 kg) and EA (0.18 vs 0.14) if compared to female animals. Dry matter consumption was not affected by non of the studied parameters. A double interaction ($p<0.05$) was found between diet and sex, where young bulls showed higher values than heifers, independently from the diets offered. The results indicate that the growth performance of super-young crossbred beef cattle can be improved when Charolais bulls are used in the crossbreedings and young bulls have better performance.

Keywords: isoproteic diets, efficiency, young bulls, super-young

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