Carcass characteristics of crossbred beef cattle finished on feedlot

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Carcass characteristics are very important among several meat quality and production efficiency parameters. These characteristics can be improved through good quality feeding, efficient health management and superior animals selection. This study aimed to evaluate carcass characteristics of crossbred beef cattle finished on feedlot. The experiment was held at Embrapa Southeast Livestock, São Carlos, SP. One hundred and twenty one animals, steers and heifers from crosses of Canchim, Braunvieh or Hereford bulls and 1/2 Angus x 1/2 Nellore (TA), 1/2 Senepol x 1/2 Nellore (SN) or Nellore (NX) cows were evaluated. After weaning at 8 months, animals were raised at pasture (*Panicum maximum* cv. Mombaça) for approx. 10 months and offered a total of 5 kg corn silage and 1 kg concentrate (26.5% crude protein - CP and 73.0% total digestible nutrients - TDN) per head daily. Animals were then placed into a feedlot individual pen (353 kg) for approx. 86 days where the animals were fed twice daily with a diet containing 13.1% CP and 71.0% TDN. Live weight of animals was obtained each 28 days and before slaughtering with previous 16-hour water and solids fasting. At the end of the feeding period, animals had an average age of 22 months and a live weight of 505 kg. Animals were slaughtered when reached 5 mm of fat thickness estimated by ultrasound measurements between the 12^{th} and 13^{th} ribs, where fat thickness and ribeye area measurements were done. After slaughtering heart weight (HEA), liver weight (LIV) and kidneys weight (KID) were collected. Hot carcass weight and hot dressing percentage (DP) were also obtained. After chilling overnight at 2°C at 24 hours *post mortem*, the left half-carcass was cut between the 12^{th} and 13^{th} ribs and backfat thickness (BF) and ribeye area (REA) were measured. The characteristics were analyzed by analysis of variance, whose model included bull breed (BB), cow genetic group (CGG), sex as fixed effects and interactions. An interaction ($P<0.05$) between BB and CGG was observed only for REA, where animals from Canchim bulls and Nellore cows showed the highest value (74.42 ± 2.29 cm^2) and Hereford Bulls and 1/2 Senepol + 1/2 Nellore animals showed the lowest value (60.11 ± 1.93 cm^2). Bull breed effect ($P<0.05$) was observed for hot carcass weight, DP, HEA, BF and REA. Animals from Canchim bulls crossbreeds showed highest values for DP. This result was expected, once Canchim breed originates from a continental breed with a lower fat deposition, giving to crossbred animals a high dressing carcass. Cow genetic group (CGG) showed a significant effect ($P<0.05$) to the DP, HEA and BF characteristics. Sex affected ($P<0.05$) only BF, where female animals showed the highest values (9.23 ± 0.34 mm) if compared to males (6.68 ± 0.30 mm). High dressing percentage and ribeye areas can be obtained by crossbreeding of Canchim bulls and Nellore cows.

Key words: backfat thickness, crossbreeding, dressing percentage, meat quality, rib eye area