Performance of cross-bred cattle in confinement in Brazil

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With the trend towards reducing the length of the productive cycle and increasing demand for higher quality meat, there is a need to adjust some points within the growth curve to produce an animal which meets weight and finishing requirements for slaughter at a younger age. Cattle production relies on a combination of good management, good feed and above all, the use of animals with a genetic makeup which allows a rapid development with major weight gain and good feed efficiency. The objective of this study was to assess different genetic groups of cross-bred cattle and their influence on the performance of these animals in confinement. Recorded variables were daily weight gain (DWG), feed conversion (FC), feed efficiency (FE) and daily consumption of dry matter (DCDM). Steers offspring of Brangus, Canchim (synthetic breed 5/8 Charolais) or Bonsmara bulls and Nellore, ½ Angus + ½ Nellore or ½ Senepol + ½ Nellore cows, reared on pasture and finished in feedlot were evaluated. The animals were confined in collective stalls equipped with GrowSafe troughs, grouped according to weight and the genetic group of the mother and father. The diet was based on maize (corn) silage, ground maize (corn), soybean bran and wheat bran with 51.8% of DM, 13.1% of CP, 71.0% of TDN and 3.2% of EE, provided twice daily, ensuring free consumption. The duration of the confinement period for each animal was variable to allow for a similar finished carcass amongst the animals. Data was analyzed using the PROC MEANS and MIXED procedure of SAS and averages were compared using Tukey's test with significant differences at P<0.05. Statistical differences were not found between the genetic groups assessed for the variables DWG, FC, FE and DCDM. The average values obtained were 1.79±0.30, 6.67±0.75, 15.17±1.66 and 11.80±1.29 kg/d, respectively.

Effects of seam (kernel) fat on carcass unit price in Japanese Black cattle

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In Japan, beef carcasses are cut and graded at the level of the 6th and 7th rib section. Seam (kernel) fat (SF) is the intermuscular fat surrounded by M. semispinalis capitis, M. semispinalis dorsi and M. longissimus dorsi. According to the Japanese grading rules, if a carcass has over 12 cm^2 SF area then the yield grade is downgraded. Thus, purchasers of carcasses and consumers tend not to favor and subsequently discount carcasses with higher SF. The objective of this study was to investigate the effect of SF on carcass grading traits, image analysis traits and carcass unit price in Japanese Black cattle. Carcass data were collected from carcasses marketed between April 2009 and March 2013 in Hokkaido, Japan. The numbers of records of steer and heifer carcasses were 5,889 and 2,068, respectively. The image analysis traits were calculated from images taken at the 6th and 7th rib section. Correlation coefficients were calculated in order to investigate the relationship between SF and each trait. Analysis of variance was performed by each marbling score (BMS: 2 to 12) to investigate the effect of SF on carcass unit price. The average SF for steer and heifer carcasses was 5.64±2.39 cm^2 and 9.16±3.04 cm^2 respectively. This difference between SF for steer and heifer carcasses is statistically significant (P<0.01). The correlation coefficient of each sex between SF and Coarseness index of marbling was 0.25 and 0.27 respectively. However, the correlation coefficients between SF and subcutaneous fat thickness was low for each sex (0.09~0.14). The analysis of variance revealed that carcass unit price was reduced significantly when the SF was higher than 12 cm^2 (P<0.05: ex: marbling score BMS 6, small SF 1,582 JPY/kg, middle SF 1,571 JPY/kg, large SF 1,540 JPY/kg). This result indicates that SF has an undesirable effect on the carcass unit price and also leads to coarser (larger) marbling particle size.