Journal of Animal Science

Postweaning growth and carcass traits in crossbred cattle from Hereford, Angus, Brangus, Beefmaster, Bonsmara, and Romosinuano maternal grandsires

E. Casas, R. M. Thallman, L. A. Kuehn and L. V. Cundiff
USDA, ARS, US Meat Animal Research Center, Clay Center, NE 68933

Abstarc :

The objective of this study was to characterize breeds representing diverse biological types for postweaning growth and carcass composition traits in terminal crossbred cattle. Postweaning growth and carcass traits were analyzed on 464 steers and 439 heifers obtained by mating F1 cows to Charolais and MARC III (1/4 Hereford, 1/4 Angus, 1/4 Pinzgauer, and 1/4 Red Poll) sires. The F1 cows were obtained from mating Angus and MARC III dams to Hereford, Angus, Beefmaster, Brangus, Bonsmara, and Romosinuano sires. Traits evaluated were postweaning ADG, slaughter weight, HCW, dressing percentage, percentage of carcasses classified as USDA Choice, LM area, marbling score, USDA yield grade, fat thickness, retail product yield (percentage), and retail product weight. Maternal grandsire breed was significant ($P < 0.05$) for all traits. Animals with Angus grandsires grew faster and had the heaviest carcasses, with the greatest percentage of carcasses classified as USDA Choice and the greatest marbling scores when compared with other grandsire breeds. Animals with Romosinuano and Bonsmara inheritance grew slower, had the lightest weights at slaughter, the lightest carcass weights, the least percentage of carcasses classified as USDA Choice, and the least amount of marbling and fat thickness. Animals with inheritance from these 2 breeds had a more desirable yield grade with the greatest retail product yield. Maternal granddam breed was significant ($P < 0.05$) for marbling score, USDA yield grade, fat thickness, and retail product yield. Sex class was significant ($P < 0.05$) for all traits except for retail product yield. Steers grew faster, were heavier, had heavier carcasses, and were leaner than heifers. Heifers had a greater dressing percentage, a greater percentage of carcasses classified as USDA Choice, a greater LM area, and a decreased yield grade when compared with steers. Sire and grandsire breed effects can be optimized by selection and use of appropriate crossbreeding systems.

Key Word :
beef cattle, breed, carcass composition, growth

Volume 88, Number 1, January 2010