

The Angus and Brahman cows were purebreds, while the Charolais were high grades (three-fourths to purebred). Cows were culled from the herd annually for unsoundness or failure to raise a calf. The breeding season was restricted to 90 days (March 1 to June 1, 1967-1973).

The criteria for evaluating cow reproductive performance were pregnancy rate, calf survival, and weaning rate. Measurements used for evaluating weaning traits were condition score, 205-day weight, weaning weight, and annual production per cow. Sires of both parent breeds were backcrossed to F₁ cows to determine heterosis levels for maternal performance of F₁ dams.

Postweaning performance studies of breed groups were conducted for comparative feedlot performance and carcass characteristics. Weanling steer calves were fullfed in drylot for approximately 174 days.

Angus, Brahman, Charolais, and reciprocal BA and BC cross steer calves were randomized by breed across pens and fed rations averaging 15 parts of 41% cottonseed meal, 50 parts dried citrus pulp, 29 parts corn, 5 parts alfalfa, and 1 part of mineral, plus 3 pounds Pangolagrass hay daily per steer. Approximate protein and total digestible nutrient (TDN) content of rations were 13% and 72%, respectively.

The finished steers were slaughtered at the University of Florida Meats Laboratory, Gainesville, where slaughter and carcass data were collected. Cold carcass weights were obtained after chilling for 48 hours at 2° to 3° C. The estimated percent yield expresses the percent of boned and closely trimmed major cuts from the round, rump, loin, rib, and chuck; the components of percent kidney, fat over the eye, rib eye area, and cold carcass weight were used in estimating the formula. Carcass grade was based on grade standards prior to April 14, 1975.

Average daily gains for breed comparisons were computed from actual weight of calves when put on feed and final weight adjusted to a 60% chilled dressing percentage. This was obtained by dividing the chilled carcass weight by 60 and multiplying by 100 (1). Measurements for evaluating breed of steers were adjusted daily gain, federal carcass grade (old), fat over the eye, ribeye area, and estimated percent yield.

All data were analyzed by least squares methods for disproportionate subclass frequencies as outlined by Harvey (9). Reproduction and production traits were adjusted for years and age of dam, whereas postweaning traits were adjusted for years and age of steers.