

The Australian Limousin Breeder's Society Ltd

The Carcase Breed

Comparison of Eight Sire Breeds over Brahman Cows

The Northern Crossbreeding project is part of the Beef Industry Cooperative Research Centre. It is a comparison of eight breeds crossed with Brahman cows.

Twelve Limousin sires were used in the project representing both "old" and "new" genetics in the breed.

Half of the cattle are finished on grass and the other half are finished in feedlots in northern and southern Australia. The progeny are grown to three slaughter weights; domestic, Korean and Japanese markets.

Liveweights

Limousin calves were intermediate for birth weight averaging 34.6 kg which was 2.0 kg lighter than Charolais sired calves but 2.6 kg heavier than Angus sired calves (see Table 1). Due to the ability of Brahman cows to restrict the size of their calves and their pelvic shape the incidence of calving difficulty was very low for all sire breeds.

Limousin X Brahmans were significantly lighter than Charolais X Brahmans at weaning, 12 months and 18 months of age but much heavier than purebred Brahmans.

Table 1: Breed effects on birth and weaning weights (3 years of data) and weights at 12 months (2 years of data) and 18 months (1 year of data)

Sire Breed	Birth Weight (kg)	Weaning Weight (kg)	Yearling Weight (kg)
Charolais	36.6	212	279
Limousin	34.6	199	267
Hereford	34.4	204	266
Shorthorn	34.3	202	262
Santa Gertrudis	33.3	195	256
Angus	31.8	201	256
Belmont Red	31.9	189	256
Brahman	32.6	182	242

Carcase

The carcase results are where Limousin starts to show out. The average carcase weight for Limousin cross steers of 300kg was only two kilograms lighter than for Charolais X Brahman (302kg) and

heavier than all other breed crosses. The Limousin X Brahman were 50kg heavier than pure Brahman (see Table 2). Limousin and Charolais cross steers had slightly less fat than the other breeds but had adequate fat cover for all three market requirements. The lower fat levels on Limousin cross heifers was an advantage because of the improved yield.

As expected Limousin cross had superior eye muscle area and percentage retail yield to all other breeds. When compared for the weight of primals and total retail cuts, Limousin cross cattle excelled.

Table 2: Effects of sire breed on carcass and meat yield attributes of steers.

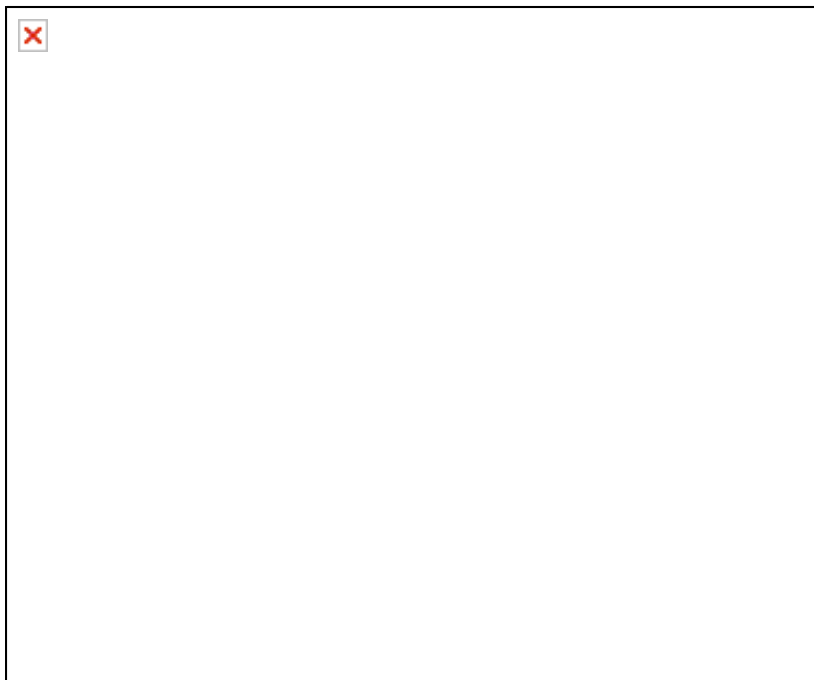
Sire Breed	No. Animals	Hot carcass Wt (kg)	P8 Fat Depth (mm)	Eye Muscle Area (cm²)	Retail Beef Yield (%)	Retail Primals (kg)	Total Weight of Retail Cuts (kg)
Limousin	39	300	9.3	82.1	68.5	69.6	205
Charolais	17	302	9.3	80.8	67.3	68.7	203
Hereford	20	290	10.5	76.2	66.8	67.8	194
Shorthorn	15	289	10.8	79.3	66.0	66.5	191
Santa Gertrudis	33	274	12.9	75.4	65.9	66.6	181
Belmont Red	77	262	11.6	76.7	66.5	67.5	177
Angus	23	295	11.8	75.3	66.1	66.5	175
Brahman	78	250	10.8	76.3	66.6	67.2	167

Consumer Tests

Samples of sirloin from a proportion of the carcasses were tested in the Meat Standards Australia consumer testing program. Consumers ranked the grilled cuts for tenderness, juiciness, flavour and overall acceptability which are combined to give a Meat Quality (MQ4) Score.

The minimum requirement for MSA grading is an MQ4 score of 46. The results for the carcasses tested showed that the MQ4 score for Limousin cross Brahman carcasses was slightly lower than Angus X Brahman but far superior to pure Brahman.

Sire Breed Effects on MQ4 Score



These results were extracted from "Producing and Processing Quality Beef from Australian Cattle Herds" 2000 edited by P Dundon, B Sundstrom and R Gaden. The complete paper is available from Alex McDonald, PO Box 262, Armidale NSW 2350, email alex@limousin.com.au