

SIMMENTALS LEAD IN SOUTH AFRICAN RESEARCH

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In a major breed comparison research project in South Africa, Simmentals have demonstrated their superiority over most other breeds in efficient beef performance measures.

Almost 3/4 million animal records, from 16 breeds taken between 1980 to 1993, were analysed to determine breed average differences for commercially important traits.

Birth Weight

While birth weight is highly correlated to mature cow weight for any breed, Simmental sired calves had a much more favourable "weaning weight to birth weight ratio" than did Charolais and Hereford sired calves. Researchers concluded that it is possible to select sire breeds to produce fast growing calves with low birth weights.

	Aver Birth Wt (kg)	Adj.Daily Gain to Weaning (kg/day)
Simmental	39	0.965 (highest gainers)
Charolais	41	0.957
Limousin	38	0.914
Hereford	35	0.784

Growth to Weaning

Simmental and Charolais had the heaviest weaning weights at 236 kgs. These were 8.4% heavier than Angus and 5.3% heavier than Hereford calves.

Simmental calves also had the fastest pre-weaning weight gains.

Simmentals also were an impressive 5.9% heavier than their predicted weaning weight, based on mature cow weight calculations, mainly attributed to their superior milk production.

Efficiency - Weaning Weight/Cow Weight

Simmental, Shorthorn and Santa Gertrudis had the highest pre-weaning efficiencies based on calf growth to weaning compared to cow weight at weaning.

Hereford and Africander were among the least efficient breeds.

Post Weaning Efficiency

Post weaning average daily gain, compared to mature cow weight was used to determine post weaning efficiency.

Simmental (+ 13.8%) and Angus (+15.5%) were the best performers. Africander (-12.2%), Brahman (-14.5%) and Limousin (-7.0%) were the worst performers.

COW PRODUCTION EFFICIENCY

Cow efficiency combines calving rate with weight of calf weaned relative to cow weight. It was found that this

efficiency index was not necessarily related to mature cow size. Simmental, Shorthorn and Angus were the most efficient cow breeds, with Africander the least efficient.

CONCLUSION

The profitability of a beef enterprise depends on two major components. Firstly productivity (growth rate) and secondly maternal traits (reproduction and milk production) - breeds differ markedly for each of these traits. Charolais is amongst the fastest growing breeds, with the highest mature size. However, it ranked about average for pre-weaning growth efficiency and cow production efficiency. Africander was the lowest for almost all traits.

By contrast, Simmental proved amongst the highest ranking breeds for all traits.

Researchers concluded that these results show Simmental is the logical choice as a terminal sire and also as a dam breed under favourable conditions.