

# LIMOUSIN VERSUS SALERS AS A TERMINAL SIRE: POSTWEANING AND CARCASS TRAITS

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## Story in Brief

Limousin and Salers sires were used in this study to compare the usefulness of these breeds as a terminal sire. Twelve different sires were used each year. These consisted of six sires from the Limousin breed and six sires from the Salers breed. Carcass data were collected on 289 calves. The Limousin sires were represented with 152 calves and the Salers sires were represented with 137 calves. There were small advantages for Limousin-sired calves relative to Salers for days on feed (199 vs 204 days) and slaughter age (409 vs 415 days). Carcass weight per day of age was the same for the two sire breeds (1.79 lb/day of age). Feedlot daily gains for the two sire breeds were very similar (approximately 2.9 lb/day). There were no substantial differences in carcass characteristics between the breed groups. These results indicate that the Salers breed can be as useful as the Limousin breed for serving the purposes of a terminal sire in order to produce calves for use in a feedlot and for slaughter.

(Key Words: Limousin, Salers, Terminal Sire.)

## Introduction

The beef cattle industry is constantly concerned with meeting consumer demands. As consumer demand shifts toward a leaner product use of a "terminal sire" breed in a breeding program becomes important. The terminal sire serves as one way in which the producer can change the product which he or she wants to put on the market to the consumer.

A producer must be concerned with producing a product as efficiently as possible as well as meeting consumer demands. The choice of terminal sires in a program becomes important. Selection of an appropriate terminal sire should enhance growth rates and carcass merit of calves.

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Selection of the appropriate sire breed to implement in a crossbreeding system is a very important decision to the producer. As new beef breeds have arrived in the United States it has become important to evaluate them for use in a terminal sire crossbreeding system. The Limousin breed is known for its benefits to a terminal crossbreeding system. This study was established to compare the usefulness of Salers as a terminal sire in comparison with the Limousin.

## Materials and Methods

Two different cow herds were used in this study. Calves born in 1986 were from 11-, 12-, and 13-year old cows from eight different breed groups: Hereford x Angus, Angus x Hereford, Simmental x Angus, Simmental x Hereford, Brown Swiss x Angus, Brown Swiss x Hereford, Jersey x Angus and Jersey x Hereford.

The 1987-born calves were produced by 4-, 5- and 6-year old crossbred cows of six different breed groups. These different crossbred cow groups consisted of Hereford x Angus, Angus x Hereford, Brahman x Angus, Brahman x Hereford, 1/4 Brahman-1/4 Hereford-1/2 Angus and 1/4 Brahman-1/4 Angus-1/2 Hereford.

The bulls used in this study were selected by the North American Limousin Foundation and the American Salers Association. The semen was donated by the owners of the bulls. A total of 12 bulls were used each year. Within each year there were six different bulls from each breed. Bulls were randomly assigned to each cow group with approximately an equal representation of each bull within each cow group. Birth and weaning characteristics have been reported by Tinker et al. (1988).

The 1986-born calves were shipped to the feedlot operation with the on-test weight recorded approximately 24 hours after arrival. The 1987-born calves received a pencil shrink of 4% off the actual weaning weights. Calves received a grower-type ration in the early part of the feeding period and were shifted to a high concentrate ration later in the feeding period.

Carcass information obtained on these calves included rib eye area, yield grade, quality grade, marbling score, rib fat thickness, adjusted fat thickness and hot carcass weight. Other postweaning traits included feedlot daily gain, days on feed, and days birth to slaughter.

Calves were taken out of the feedlot when trained personnel working for the feedlot decided that the calves were at a desired endpoint in terms of weight and carcass grade.

## Results and Discussion

A total of 289 calves were evaluated in this study for carcass and postweaning traits. Sire breed means were averaged over years, crossbred dam groups and sexes (Table 1). Among the traits evaluated in this study only days on feed and slaughter age had a tendency ( $P < .10$ ) to be different for the two breeds. The Limousin-sired calves averaged 199 days on feed while the Salers-sired calves averaged 204 days on feed. Slaughter age for the Limousin-sired calves averaged 409 days while the Salers-sired calves averaged 415 days. The remaining traits included on-test weight, slaughter weight, feedlot daily gain, hot carcass weight, carcass weight per day of age, dressing percentage, rib fat thickness, adjusted fat thickness, kidney, pelvic and heart fat percentage, yield grade, ribeye area, marbling score and quality grade. The two sire breeds did not exhibit any significant differences ( $P > .10$ ) for these traits.

These results provide preliminary indication that Salers-sired calves provide similar carcass and postweaning merit in comparison with the Limousin-sired calves. However, more research is needed to clarify the usefulness of Salers in a breeding program. This study suggests that the Salers breed has potential as a terminal sire breed.

Table 1. Crossbred calves sired by Limousin and Salers bulls.

Trait	Breed of sire <sup>a</sup>	
	Limousin	Salers
Number of animals	152	137
On test weight, lb	528	541
Slaughter weight, lb	1107	1127
Days on feed*	199	204
Slaughter age, d*	409	415
Feedlot daily gain, lb/day	2.91	2.88
Hot carcass weight, lb	729	741
Carcass wt. per day of age, lb/day	1.79	1.79
Dressing percentage	65.9	65.8
Rib fat thickness/in	.42	.41
Adjusted fat thickness/in	.48	.48
Kidney, pelvic and heart fat, %	2.16	2.11
Yield grade	2.34	2.47
Ribeye area, sq in	14.3	14.0
Marbling score <sup>b</sup>	470	486
Quality grade <sup>c</sup>	8.59	8.95

<sup>a</sup>Least squares means with adjustments for years, crossbred dam groups and sexes.

<sup>b</sup>Marbling score: 400=slight, 500=small.

<sup>c</sup>Quality grade: 8=Se<sup>0</sup>, 9=Se<sup>+</sup>.

\* $P < .10$ .

## Literature Cited

Tinker, E.D. et al. 1988. Limousin vs Salers as a terminal sire: Birth and weaning characteristics. Okla. Agr. Exp. Sta. Res. Rep. MP-125:7.