

WITHIN HERD VARIATION FOR FEEDLOT PROFIT

J. W. Oltjen¹ and D. R. Gill²

Cattle feeders have long since recognized that cattle within a pen vary tremendously in their profit potential. This observation appears true within a relatively homogenous group of cattle, even for those originating from the same herd. Although factors affecting this variation may be genetic and environmental, our interest has been in relating easily measured individual traits with subsequent feedlot profits.

A preliminary data set containing individual birth date, weaning weight, off-pasture (feedlot-in) weight, feedlot check (75 day on feed) weight, carcass weight, yield and grade data was collected for 148 Charolais x (Hereford-Angus) steers from one herd fed in a Panhandle feedlot. Feed intake was estimated based on National Research Council equations for gain. Financial data were feedlot-in price, \$61/cwt; carcass price, \$93/cwt-GOOD and \$103/cwt- CHOICE; and \$182/ton feed dry matter (includes all miscellaneous costs). Greater weaning weight, pasture daily gain and feedlot-in weight were associated with less profit; increased feedlot gain, quality and yield grade, and early feedlot gain were associated with more profit (table 1). Quality grade had the greatest effect on profit due to a \$10/cwt differential between good and choice carcasses. When this effect was removed statistically, a remaining change in profit was -\$12 per 100 lb weaning weight, -\$18 per 100 lb off pasture weight, -\$15 per lb prefeedlot (pasture) daily gain, -\$1 per unit yield grade, +\$10 per lb feedlot daily gain and +\$6 per lb 75 day feedlot daily gain.

Table 1. Relationship of feedlot profit with various traits^a.

Item	Correlation (r)	Effect ^b (\$/unit change)
Weaning weight	-.17*	- .12
Weaning age	+.03	
Weaning weight/day age	-.15	
Pasture daily gain	-.22**	-15.28
Off pasture weight	-.34**	- .18
Feedlot daily gain	+.25**	+ 9.70
Feedlot intake	+.12	
Final weight/day age	+.01	
Final weight	+.00	
Final age	+.03	
Quality grade	+.77**	+27.64
Yield grade	+.32**	- 1.19
75 day feedlot weight	+.20*	+ 6.25

^aWeight (lb); time (D); quality grade (Choice=10, choice=9, etc.).

^bAfter adjustment for quality grade effect.

*P<.05, **P<.01.

¹Assistant Professor ²Professor