Factors Influencing Net Income from a Steer through Feedlot

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Summary

Steers entering feedlots with higher starting weight per day of age had greater net value at slaughter than lighter steers. Faster gaining steers brought the highest net income. Age on feed did not influence net income. High dressing percentage increased the net income but generally the relationship was low between carcass traits and net income.

Introduction

Conditions in the beef industry are forcing cattlemen to manage for maximum returns. This study was to determine what factors influence returns. The data were from the 1975 Kansas Steer Futurity Test and the 1975 Commercial Cattle Improvement Program.

Experimental Procedure

Commercial Cattle Improvement Program [a] - December 11, 1974, 58 steers from seven heards were put on feed at the Solomon Valley Feedlot, Inc., Beloit, Kansas. The rations were the same as those fed commercial cattle in the feedlot. Average daily gain was obtained. Steers were slaughtered at the Dubuque Packing Plant in Mankato, Kansas, when the feedlot manager felt they would grade choice. Carcass data were collected.

Kansas Steer Futurity Test [b] - One hundred forty-nine steers from nineteen herds throuahout Kansas went on feed December 6, 1974, at the Oswalt and Arnett Feedlot, Garden City, Kansas. They were fed the same rations as the commercial cattle in the feedlot. They were slaughtered and carcass data collected, when they were considered to grade choice.

Results and Discussion

The average net income per steer was $114. Net income was defined as:

net income = total carcass value - pre-test production cost - feedlot cost during test - trucking cost

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Carcass value, feedlot cost during test, and trucking cost were actual costs. Production cost before going into feedlot was set at $200. Costs were not corrected for age or weight of the calf as these were primarily costs of maintaining cows. Ownership of the calves was retained by the producers.

Steers with higher starting weight per-day-of-age produced higher net incomes. One pound increase in starting weight resulted in about 50 cents increase in net income. The partial correlation coefficient between starting weight and net income (0.71) shows a close relationship.

Average daily gain (ADG) on feed for all steers was 3.04 lb. Steers with high ADG produced high net income. One pound more ADG in the feedlot increased net income $83. The partial correlation between those two factors was 0.69.

Age on test did not significantly influence net income. That was expected because pre-test costs were held constant.

Choice carcasses brought $34. per carcass more than those graded good, which shows the importance of an accurately chosen slaughter date. High dressing percentage also increased the net income significantly. All other carcass traits had little relationship to net income.

Table 29.1   Partial Correlations with Net Income

Traits	Net income
Age on test	0.04
Beginning weight	0.71
Total carcass value	0.60
Average daily gain	0.69
Kidney knob	0.19
Dressing percentage	0.45
Loin eye area	0.21
Backfat thickness	0.07
U.S.D.A. yield grade	0.08
U.S.D.A. quality grade	0.44

Table 29.2   Data from steers in comercial feedlots.

Marketing	Location	No. of steers	Age on feed days	Days fed	Beginning weight lb.	Final weight lb.	Average daily gain lb.	Backfat thickness in.	Loin eye area sq. in.	Average price/cwt. $	Net income $
5/1	Beloit	7	266	141	567	1017	3.19	0.39	10.81	71.14	58.74
5/16	Garden City	72	257	161	598	1103	3.12	0.39	12.93	79.00	137.18
5/22	Beloit	10	272	162	609	1174	3.48	0.47	12.89	76.14	146.62
5/30	Garden City	76	249	175	552	1062	2.91	0.31	12.56	79.88	114.20
6/19	Beloit	9	265	190	538	1098	2.97	0.40	13.28	83.72	130.66
7/3	Beloit	24	247	204	464	1074	3.00	0.42	11.60	83.41	89.71