



Texas Agricultural Extension Service  
The Texas A&M University System

# Result Demonstration Report

## Beef 706 – A Demonstration of Feeding, Product, and Dollars

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**SUMMARY:** Erath County producers had an opportunity to follow eight locally-produced cattle through feeding all the way to the production of fabricated beef products. These eight head demonstrated the tremendous variation among cattle in feedyard performance, carcass merit, and financial returns. Feedyard gain ranged from 2.42 lb/day to 3.25 lb/day, quality grade from High Standard to Average Choice, yield grade from 2.5 to 4.5, and financial net return varied over \$200/head. Producers learned the factors and possible rewards and risks in selling fed cattle on the rail compared to live marketing. In addition, participants were familiarized with what is done to fabricate beef products beyond the carcass stage, and how this affects the beef industry.

Cow/calf producers are faced with a number of production and marketing alternatives. Knowledge of factors affecting phases of production beyond weaning will result in a better understanding of the entire beef industry and sounder decisions in considering retained ownership.

**OBJECTIVES:** This program was designed to educate producers in the feeding and processing phases of beef production and to demonstrate individual animal variation in feedyard performance, carcass merit, and economic return.

**MATERIAL AND METHODS:** Eight cattle (selected to vary considerably in size and

type) raised by Erath County producers were assembled in early April, transported to the Texas A&M University Beef Cattle Research Station at McGregor, and fed for 181 days. In early October, cattle were transported to the Tarleton State University Meats Lab for processing, where consignors and other producers viewed carcasses and complete fabrication into boneless boxed beef product.

**RESULTS AND DISCUSSION:** Animal description, initial value, and performance are shown in Table 1. The feeder value in Table 1 is what the producer could have received initially based on the initial weight and estimated price (which varies according to sex, breedtype, and weight class), less hauling and commission. Initial weights varied from mid fourweight to sevenweight. Most fourweight and even some fiveweight cattle usually would be grazed for a period before feeding. The feeding period of 181 days is longer than industry average, but is about standard for cattle with starting weights averaging 550 lb - 600lb as in this group. Gains averaged 2.92 lb/day, about industry average for a group of half steers and half heifers. Feedyard gain is one of the most important factors affecting economic returns.

**Table 1. Animal Description, Feeder Value, and Feedyard Performance**

Animal No.	Breedtype and Sex	Initial Weight *	Feeder Value	Final Weight #	Average Daily Gain
1642	Black Limousine	564	\$572.36	1123	3.09
1644	Black Blaze Face	512	\$463.65	950	2.42
1647	RMF Limousine	624	\$499.56	1152	2.92
1651	Angus	462	\$503.62	1033	3.17
1653	Hereford	700	\$561.38	1288	3.25
1645	Brangus	550	\$574.12	1051	2.77
1646	Red Limousine	612	\$543.78	1186	3.17
1657	Yellow Ear Cross	548	\$480.71	1010	2.55
Average		572	\$524.89	1099	2.92

\* Upon arrival, equivalent to payweight after hauling to auction.

# With 4 percent shrink, standard feedyard live payweight.

Carcass factors are shown in Table 2. The range in carcass weight preferred by the industry is 650 lb - 850 lb. However, currently there is no price discount for carcasses

ranging from 550 lb - 950 lb. One of these carcasses barely reached the minimum of 550 lb. The preferred range in ribeye area is from 11 sq. in. to 16 sq. in., and that light carcass had a ribeye well below that range. Preferred fat cover is around 0.4 in. to 0.5 in., which in most instances will result in Yield Grade 2 carcasses. However, YG3 carcasses (which are not significantly discounted) can result from fat cover in the 0.6 in. to 0.7 in. range. The range of fat cover seen in this group is not unusual in a pen of cattle fed for the same length of time.

Most of the yield grades were acceptable at YG2 and YG3. However, two carcasses (the fattest) were YG4, typically discounted around \$20/cwt. Five carcasses quality graded Choice, a little above industry average. In fact, one carcass was average Choice, which would qualify for premium brand name programs and typically bring a premium of \$1/cwt to \$3/cwt. However, one carcass (from that slow gaining, thin, poorly muscled individual) graded Standard, which typically is discounted \$15/cwt to \$20/cwt.

**Table 2. Carcass Characteristics**

Animal No.	Carcass Weight	Ribeye Area	Fat Cover	Yield Grade	Quality Grade
1642	775	14.3	0.70	3.3	Low Select
1644	562	8.9	0.25	2.5	High Standard
1647	771	14.7	0.50	2.5	High Select
1651	690	11.2	0.65	3.6	Avg. Choice
1653	838	12.3	0.80	4.2	Low Choice
1645	727	12.5	0.70	3.5	Low Choice
1646	772	13.8	0.40	2.5	Low Select
1657	680	11.4	0.90	4.5	Low Choice
Average	727	12.4	0.61	3.3	High Select

Some economic factors of this group are shown in Table 3. As it turned out, early April of 2000 was not a good time to put cattle on feed. The prevailing live price when these cattle came out of the yard in early October was \$67/cwt; by January it was near

\$80/cwt. (It should be noted that, with few exceptions, all live cattle traded on a given day bring essentially the same price.) Sold live, these eight cattle would have averaged losing \$72.71, ranging from losses of \$6.65 to \$140.70.

What if the sale had been on the rail using a variable price grid, with premiums and discounts for quality grade, yield grade, and carcass weight? In this group the results would have been worse. Returns selling on the rail averaged a loss of \$134.19 (\$61.48 greater than selling live), with a range of \$220.92. Returns in the Texas A&M Ranch to Rail evaluation program have ranged over \$300 a head from lowest individual to highest individual within a given year. This has been consistent in the Ranch to Rail program over the last 9 years.

Most carcass price grids use as the base a Choice YG3, weighing from 550 lb. to 950 lb. Four of these carcasses would have been discounted for quality grades below Choice including one grading Standard, which was discounted \$18.63/cwt for a total discount of \$104.71. The three Select carcasses were discounted \$6.50/cwt, for average losses for these three of \$50.22 per carcass. Two carcasses were YG4, which were discounted \$19.08/cwt resulting in average discounts of \$144.82 per carcass for these two.

**Table 3. Final Value and Financial Net Returns \***

Animal No.	Live Value #	Rail Value @	Box Value ^	Live Return	Rail Return
1642	\$752.41	\$737.49	\$845.72	\$ (116.49)	\$ (131.11)
1644	\$636.50	\$466.63	\$588.33	\$ (88.15)	\$ (258.02)
1647	\$771.84	\$741.39	\$840.34	\$ (6.65)	\$ (37.10)
1651	\$692.11	\$718.70	\$828.33	\$ (116.35)	\$ (89.76)
1653	\$862.96	\$692.02	\$984.57	\$ (9.89)	\$ (180.83)
1645	\$704.17	\$739.07	\$718.49	\$ (140.70)	\$ (105.80)
1646	\$794.62	\$742.36	\$728.37	\$ (50.58)	\$ (102.84)
1657	\$676.70	\$561.54	\$659.53	\$ (52.89)	\$ (168.05)
Average	\$736.41	\$674.90	\$774.21	\$ (72.71)	\$ (134.19)

\* Returns for live or rail merchandising, less cost of feeder, feed, interest, processing and treatment, and hauling.

# At \$67/cwt., early April price.

@ Based on a typical price grid for early October incorporating premiums and discounts for quality grade, yield grade, and weight.

^ Based on actual boxed beef cutout amounts of these demonstration cattle and using prices for boxed components as received by major packers in early October.

One carcass graded average Choice bringing a premium of \$2.53/cwt, for a total of \$17.46. Three carcasses were YG 2, but one of those graded Standard, which usually does not receive any yield grade premiums. The other two YG2 brought a premium of

\$1.25/cwt, for an average benefit of \$9.64 per carcass. It should be obvious that most price grids have much lower premiums than some of the discounts.

A high percentage of beef is fabricated into boneless cuts, or so-called “box beef”. The difference between live and box value, averaging \$37.80 in this group, is the return the packer would have realized buying live cattle and fabricating box beef. So, why not sell cattle based on box value? That simply is not an industry practice, so the marketing alternatives for fed cattle are live and carcass grid. For a cattle feeder, the choice between these alternatives should be guided by the predicted carcass merit. In the case of cattle of unknown genetics and background, live selling often is the best method, although some pens of highly variable “low quality” cattle can be sold only on the rail. For cattle with documented history, a carcass grid may be the way to go.

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