

**1993-94 Texas A&M Ranch to Rail - North/South
Summary Report**

The Texas A&M Ranch to Rail program is an information feedback system that allows producers to learn more about their calf crop and the factors that influence value beyond the weaned calf phase of beef production. It is not a contest to compare breeds or breeders and it is not a retained ownership promotion program. It creates an opportunity for producers to determine how their calf crop fits the needs of the beef industry and provides the information needed to determine if changes in genetics and/or management factors are warranted in order to be competitive in beef production.

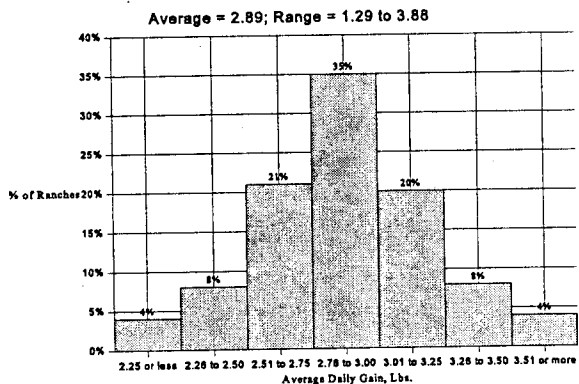
Entries from 380 ranches totaled 3,268 head that were placed on feed in October 1993 at Randall County Feed Yard at Amarillo and at King Ranch Feed Yard at Kingsville. Upon arrival the steers were eartagged, weighed and processed. Each steer was assigned a per hundredweight value based upon current local market conditions by Federal-State Livestock Market News Service personnel to serve as a basis for calculating theoretical breakevens and the financial outcome of the program. The steers were sorted into feeding groups based upon weight, frame, flesh condition and biological type. Management factors such as processing, medical treatments and rations fed to the steers in Ranch to Rail were the same as the other cattle in the feedyards. Individuals were slaughtered when they reached the weight and condition regarded as acceptable for the industry and market conditions by the feedyard managers. The cattle were sold on a carcass basis with premiums and discounts for various quality grades, yield grades and carcass weights. Feed, processing and medicine costs were financed by the feedyards. All expenses were deducted from carcass income and proceeds were sent to the owner along with detailed performance, carcass and financial summary reports.

Performance Information

Weights used to determine gain were off-truck arrival weight and sale weight (final weight less a 4% pencil shrink). Average off-truck weight was 591 pounds and average sale weight was 1,174 pounds. The average days on feed was 202. The average daily gain for all steers was 2.89 pounds while the range for the ranch entries varied from 1.29 to 3.88 as shown in the following graph. Thirty two percent of the entries gained over 3.0 pounds per day

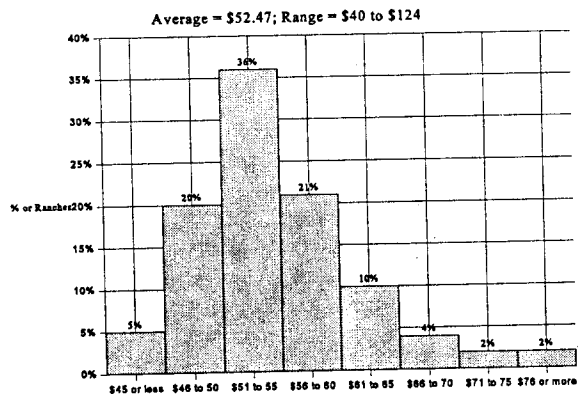
while 12% gained 2.5 pounds per day or less. Most of the low rates of gain were due to death loss in a ranch entry since total sale weight minus total off-truck weight divided by total head days were used to calculate the performance of each ranch group.

Distribution of Average Daily Gain



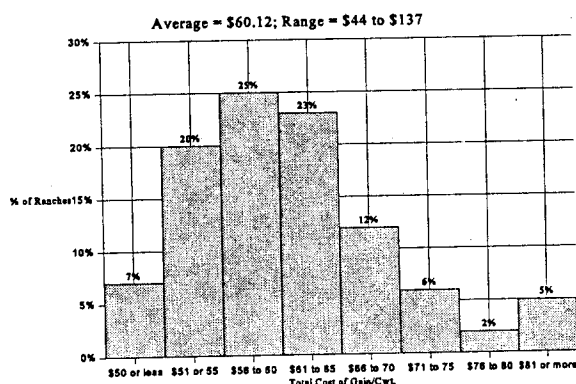
Feed consumption for each steer was determined by dividing total pen consumption by head days for the pen and each steer was assigned its prorated share based upon its days on feed. This is based upon the assumption that all steers had equal access to feed. To help assure this, steers of similar size and type were placed in the same pen. Steers that gained faster had more desirable feed costs of gain since feed cost was divided by net gain to calculate feed costs of gain. The chart below shows that the average feed cost of gain was \$52.47 per cwt. and the range varied from \$40 to \$124 per cwt.

Distribution of Feed Cost of Gain



Total cost of gain per cwt. averaged \$60.12 and ranged from \$44.00 to \$137 as shown below. Entries with low total costs of gain were characterized by high rates of gain and low, or no medicine costs.

Distribution of Total Cost of Gain



Carcass Information

The steers were sold on a carcass basis when the feedyards determined that each steer was at its optimal market condition. Steers were sold in 21 groups based upon current market demands. Prices were relatively strong when the first group was sold on April 5, 1994, but weakened in mid-May and became extremely low when the last groups were sold in June and July. Price drops within a given quality and yield grade ranged from \$18-27/cwt. The highest price paid was \$123/cwt. for Choice Yield Grade 1's and the lowest was \$70/cwt. for Standard Yield Grade 5's.

The steers at Randall County Feed Yard were sold to either IBP at Amarillo or Excel at Plainview. Yield Grades 2 and 3 were priced on a split yield grade (i.e. 2a/2b and 3a/3b). Yield Grade 2a would be all steers with a Yield Grade between 2.0 and 2.49, whereas 2b would be 2.5 to 2.99. All Standard carcasses received the same price regardless of yield grade.

CARCASS PRICES RECEIVED
1993-1994 RANCH TO RAIL-NORTH (\$/lb.) CARCASS

DAYS ON FEED		165	179	181	188	196	202	207	209	217	223	229
DATE SOLD		4-5	4-18	4-21	4-28	5-5	5-12	5-17	5-19	5-27	6-2	6-7
QUALITY GRADE	YIELD GRADE											
CHOICE	1	1.23	1.21	1.23	1.20	1.20	1.14	1.13	1.10	1.08	1.11	1.05
CHOICE	2a	1.22	1.20	1.22	1.19	1.19	1.13	1.12	1.09	1.07	1.10	1.04
CHOICE	2b	1.21	1.19	1.21	1.18	1.18	1.12	1.11	1.08	1.06	1.09	1.03
CHOICE	3a	1.20	1.18	1.20	1.17	1.17	1.11	1.10	1.07	1.05	1.08	1.02
CHOICE	3b	1.19	1.17	1.19	1.16	1.16	1.10	1.09	1.06	1.04	1.07	1.01
CHOICE	4	1.05	1.03	1.05	.98	.98	.91	.95	.89	.95	.95	.87
CHOICE	5	.98	.98	1.00	.93	.93	.86	.90	.87	.90	.90	.82
SELECT	1	1.19	1.17	1.20	1.16	1.16	1.10	1.08	1.04	1.01	1.05	.99
SELECT	2a	1.18	1.16	1.19	1.15	1.15	1.09	1.07	1.03	1.00	1.04	.98
SELECT	2b	1.17	1.15	1.18	1.14	1.14	1.08	1.06	1.02	.99	1.03	.97
SELECT	3a	1.16	1.14	1.17	1.13	1.13	1.07	1.05	1.01	.98	1.02	.96
SELECT	3b	1.15	1.13	1.16	1.12	1.12	1.06	1.04	1.00	.97	1.01	.95
SELECT	4	1.01	.99	1.02	.94	.94	.87	.90	.83	.78	.80	.81
SELECT	5	.94	.95	.97	.89	.89	.82	.85	.78	.73	.73	.76
STANDARD		1.01	1.04	.93	.90	.90	.97	.89	.95	.95	.96	.87
DARK CUTTER		1.01	1.04	.93	.90	.90	.97	.89	.90	.95	.85	.87
OVERWEIGHTS		1.10	1.04	1.04	1.02	1.02	.89	.97	.91	.83	.85	.84
UNDERWEIGHTS		1.11	1.09	1.04	1.03	1.03	.92	1.02	.83	.82	.86	.89

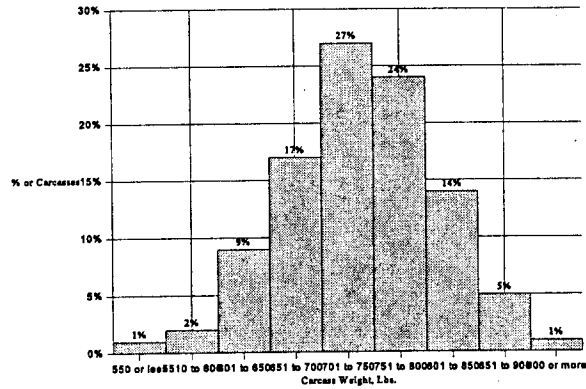
The steers at King Ranch Feed Yard were sold to Sam Kane Beef Processors at Corpus Christi. Yield Grades 2 and 3 were not split as they were at Amarillo and prices received for Standard carcasses were dependent upon yield grades.

CARCASS PRICES RECEIVED
1993-1994 RANCH TO RAIL-SOUTH (\$/lb.)

DAYS ON FEED		162	176	183	190	197	204	213	225	234	253
DATE SOLD		4-5	4-19	4-26	5-3	5-10	5-17	5-26	6-7	6-16	7-5
QUALITY GRADE	YIELD GRADE										
CHOICE	1	1.21	1.23	1.22	1.18	1.10	1.11	1.05	1.06	1.06	.98
CHOICE	2	1.20	1.22	1.21	1.17	1.09	1.10	1.04	1.05	1.05	.97
CHOICE	3	1.19	1.21	1.20	1.16	1.08	1.09	1.03	1.04	1.04	.96
CHOICE	4	1.09	1.11	1.10	1.06	.98	.99	.93	.94	.94	.86
CHOICE	5	.99	1.01	1.00	.96	.88	.89	.83	.84	.84	.76
SELECT	1	1.18	1.21	1.19	1.15	1.06	1.07	1.00	1.02	1.02	.94
SELECT	2	1.17	1.20	1.18	1.14	1.05	1.06	.99	1.01	1.01	.93
SELECT	3	1.16	1.19	1.17	1.13	1.04	1.05	.98	1.00	1.00	.92
SELECT	4	1.06	1.09	1.07	1.03	.94	.95	.88	.90	.90	.82
SELECT	5	.96	.99	.97	.93	.84	.85	.78	.80	.80	.72
STANDARD	1	1.16	1.18	1.16	1.13	1.03	1.04	.98	1.00	1.00	.92
STANDARD	2	1.15	1.17	1.15	1.12	1.02	1.03	.97	.99	.99	.91
STANDARD	3	1.14	1.16	1.14	1.11	1.01	1.02	.96	.98	.98	.90
STANDARD	4	1.04	1.06	1.04	1.01	.91	.92	.86	.88	.88	.80
STANDARD	5	.94	.96	.94	.91	.81	.82	.76	.78	.78	.70

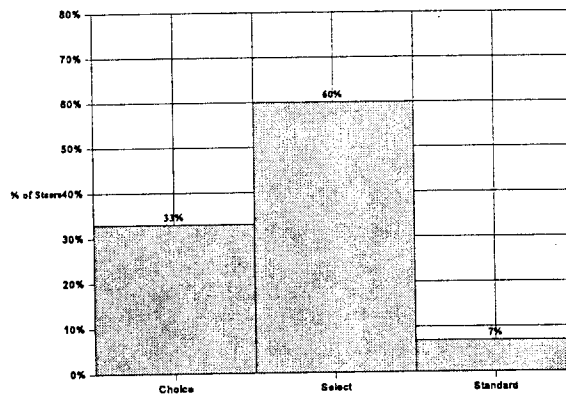
Carcass weights averaged 740 pounds. However, 18% were outside the range of 650 - 850 pounds that is generally preferred by most packers. Carcass weights ranged from 409 to 1,009 pounds.

Distribution of Carcass Weights



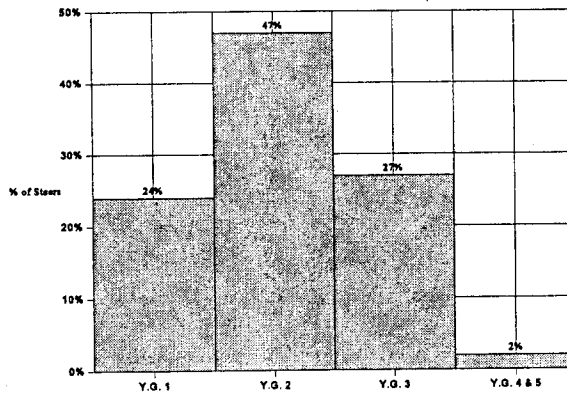
Thirty three percent of the carcasses graded Choice, 60% were Select and 7% graded Standard. The percent Choice was lower than generally anticipated for steers on feed for this length of time (162-253 days on feed). However, the yield grades were better than industry averages which reflects their leanness.

Quality Grades



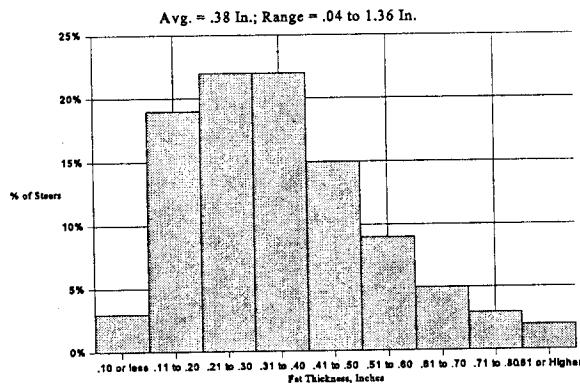
Seventy one percent of the carcasses were Yield Grades 1 and 2 and only 2% were Yield Grades 4 and 5. This low percentage of 4's and 5's reflects the intent to not overfeed the steers.

Yield Grades



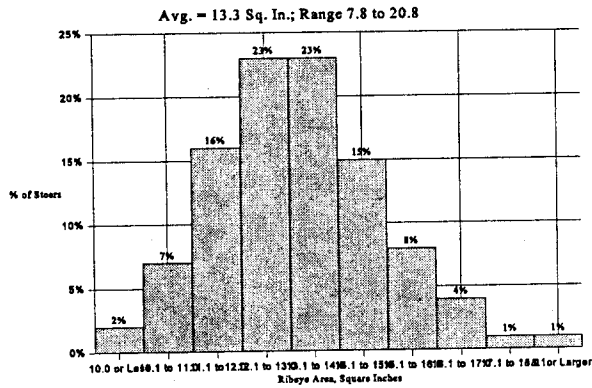
Fat is one of the major factors that influences yield grade. Average fat thickness over the ribeye was .38 inches. The range was .04 to 1.36 inches. Some of the extremely fat carcasses were the result of overfeeding and the genetic predisposition to accumulate fat. Carcasses that are extremely lean often do not possess adequate marbling and are more prone to produce cuts that are tough due to cold shortening. Carcasses with .25 to .45 inches of external fat are more optimal.

Fat Thickness



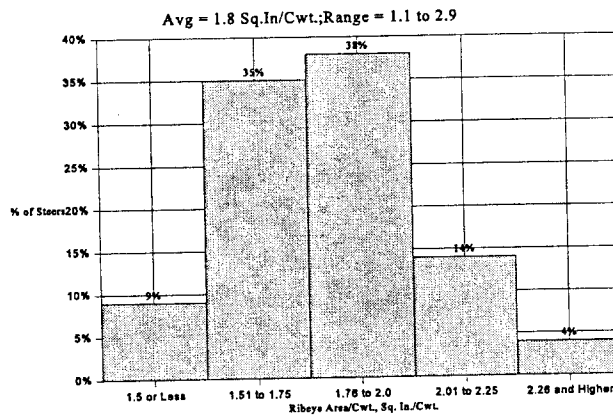
Ribeye area is a primary indicator of carcass muscularity and lean meat yield. The average ribeye area was 13.3 square inches. The range varied from 7.8 to 20.8 square inches. Extremes in ribeye size present problems in fabricating cuts. Ribeyes that range from 11.0 to 16.5 square inches generally have more utility in the beef industry.

Ribeye Area



Ribeye area is greatly influenced by carcass weight. Heavier carcasses tend to have larger ribeyes. Ribeye area per 100 pounds of hot carcass weight provides a measure of relative muscling. The average was 1.8 square inches per cwt., while the range was 1.1 to 2.98 square inches per cwt. Higher values indicate increased muscling, but production related factors such as calving ease necessitate not selecting for extreme muscling.

Ribeye Area/Cwt. Hot Carcass Weight



Financial Information

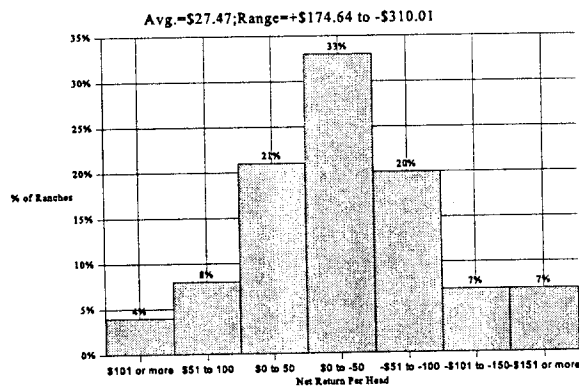
The budget below shows that the average net return per head sold was -\$27.47. Increased grain costs coupled with reduced fed cattle prices resulted in returns that were not as lucrative as the previous two years of the program.

1993-94 Ranch to Rail Summary Results
Financial Results

Income	\$803.92
Expenses	
Feeder Steer Value	\$486.38
Feed	301.12
Medicine	12.19
Processing	11.48
Death Loss	9.65
Fees	1.40
Interest	5.22
Other	3.95
Total	\$831.39
 Net	 \$-27.47

The range in returns per ranch varied from +\$174.64 to -\$310.01 per head for the cooperating 380 ranches. The distribution of net returns is shown in the graph below. Thirty three percent of the ranches made a profit. Profitable entries were characterized by high rates of gain, low medicine costs and high grading, lean carcasses.

Distribution of Net Return Per Head



Railed Steers

Steers that were sold prematurely due to poor performance or in order to salvage their value due to conditions such as chronic bloat or water belly are referred to as railers or realizers. They

accounted for a total loss of \$15,376.01. This includes their initial value, processing cost, feed and other expenses incurred prior to sale. Some of these steers actually returned a small profit, whereas others contributed to a sizeable loss. Fifty head were railed (1.5%) at an average loss of -\$307.52.

Performance and Economics of Railed Steers

Head 50	<u>Average</u>	<u>Range</u>
Days on Feed	150	132 to 213
Average Daily Gain	1.78	.04 to 3.22
Net	-\$307.52	+\$56.45 to \$874.79

Death Loss

Fifty steers died for a 1.5% death loss with an economic impact of \$31,057.45. Shown below are the diagnosed causes of death.

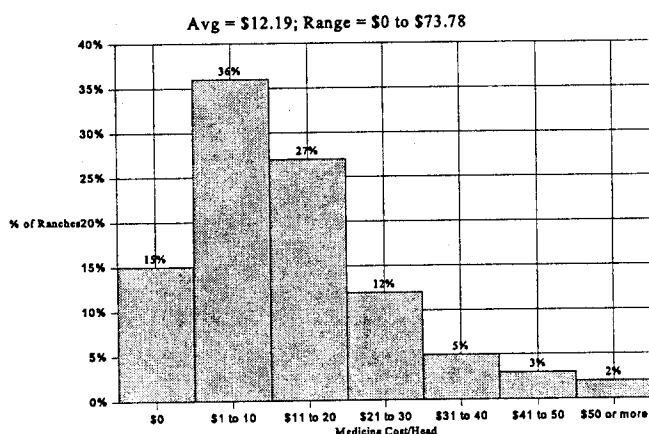
Death Losses

Diagnosis	Percent
Pneumonia	42%
Central Nervous System Diseases	12%
Peritonitis	8%
Clostridal Diseases	8%
Bloat	8%
Urinary Calculi	4%
Other (injury, rupture, BVD, etc.)	18%

Effect of Health on Performance and Profit

The health status of steers in the feedyard had a major impact on performance and profit. The average medicine cost above processing was \$12.19 per head. However, the range for the ranch entries varied from \$0 to \$73.78 per head. Fifteen percent of the ranches incurred no medicine expenses and an additional 36% had costs per head of \$10 or less. However, 22% of the entries had average medicine costs in excess of \$20 per head.

Distribution of Medicine Costs



Steers that got sick not only incurred additional medicine costs, but they also generally gained less, were less efficient and graded lower. Shown below is a comparison of all steers that got sick vs. those that required no treatment at the feedyard.

Healthy vs. Sick Steers

	<u>Sick</u>	<u>Healthy</u>
Head	1,113	2,155
Death Loss	2.2%	.8%
Avg. Daily Gain	2.69	2.92
Feed Cost of Gain	\$55.98	\$52.44
Total Cost of Gain	\$67.33	\$56.16
Medicine Cost	\$37.90	\$0.00
Net Return	-86.38	+\$2.17
Quality Grade		
Choice	19%	26%
Select	73%	67%
Standard	8%	7%

Healthy steers had an average of \$88.55 more favorable return. Steers that got sick not only incurred an average of \$37.90 more expense in medicine costs, but there was \$50.65 in "lost value" (\$88.55-\$37.90) due to reduced efficiency, lowered gain and reduced sale value. Calves that got sick were theoretically worth \$15.70 less per hundred weight upon arrival than steers that never required treatment.

Difference in Value

Sick	-\$86.38
Healthy	<u>+\$2.17</u>
Difference	\$88.55

Avg. In Weight of Sick Steers = 564 Lbs.
\$88.55 564 = \$15.70/cwt Less as Feeders

Summary

Extremes in net return, health costs, performance factors and carcass parameters among the Ranch to Rail entries reflect the variability that exists in the beef industry. Reduction of these variables and production of a product that meets the needs of all segments of the beef industry must be each producers goal. Ranchers need to assess their operations and implement cost effective management factors and adjust the genetics of their herd to make sure they are on target. Value based marketing at all levels of the industry is rapidly becoming a reality, and those that know what constitutes value and have a product that meets those demands will be competitive in the market place. The purpose of Ranch to Rail is to provide feedback to producers to allow them to make decisions to enhance their production efficiency, profitability and contribution of a satisfactory product in the beef industry.

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TEXAS A&M RANCH TO RAIL
an
Information Feedback System For the Beef Industry

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