

OK Steer Feedout

Spring-born 2001 – 2002 Summary

The OK Steer Feedout is an educational program that allows cow-calf producers an opportunity to learn more about their calf crop and the traits that influence value in the beef industry. The program is conducted by the Oklahoma Cooperative Extension Service to provide information to cattlemen about the post-weaning performance and carcass merit of their calves. The data is provided to ranch owners as a genetic selection or management tool, not as a contest. The OK Steer Feedout provides information on important economic traits that assist ranchers as they determine the genetic and/or management changes desired for their cow herd as they strive to meet their ranch goals and provide a product in demand by the beef industry.

OK Steer Feedout, 2001- 2002

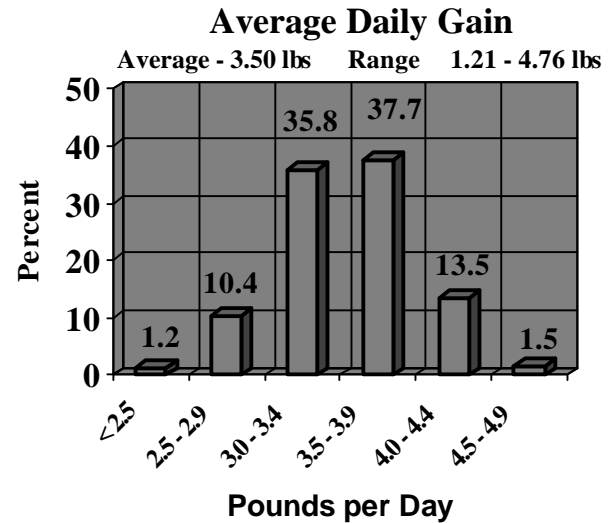
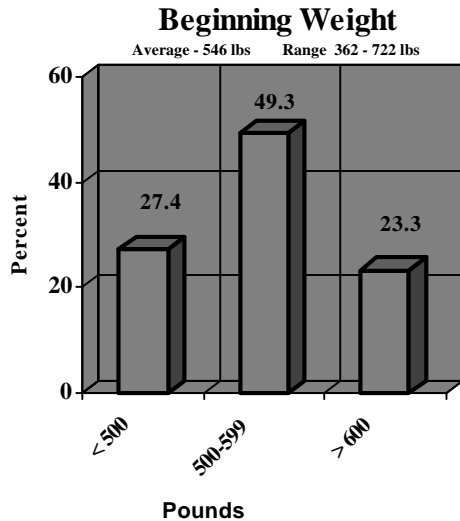
On November 7, 2001, 270 steers representing 33 ranches from Oklahoma, Missouri, Texas, and Nebraska were delivered to Oklahoma Feeders Inc. near Coyle, Oklahoma. Each ranch entered steers by groups, with 5 steers per group. The range in number of steers entered in the Feedout per ranch was from 5 to 30 head. The next morning the cattle were given the normal processing regimen for incoming feeder cattle to Oklahoma Feeders. In addition, each steer was given a Feedout tag and each group was sorted into one of four feedlot pens. Cattle were sorted based on projected days on feed by evaluating weight, frame, condition and breed type. Data collected at the beginning of the Feedout includes weight, hip height, picture and current market price. The steers were placed on a standard corn based feedlot ration. A check weight was taken approximately half way through the test. Feed intake was calculated using the NRC Net Energy System and this estimate was multiplied by the ration cost to determine the feed expense for each steer. The cattle were harvested on four dates in April and May. Steers were marketed to Excel Corporation and harvested at the plant in Dodge City, Kansas. Cattle were marketed as producer groups were considered acceptable for weight and finish. Cattle were sold on a grid negotiated weekly for the Choice, yield grade 3 base price and the choice/select spread. The premiums and discounts for quality grades, yield grades, and carcass weight remained constant for the test. Carcasses were railed in the sales cooler and individual carcass data collected. Data collected includes ribeye area, 12th rib fat thickness, carcass weight, percent internal fat, marbling score, USDA quality grade and USDA yield grade. Some ranches paid an additional charge to evaluate the tenderness score of a ribeye steak. Samples were removed from the carcasses and transported to Oklahoma State University. Steaks were cooked, cored and tested. Warner-Bratzler shear force values were determined for each steak.

Harvest Summary 2002 - OK Steer Feedout Spring-born Steers

	Days on Feed	# Steers	Base Price	Ch/Se Spread
April 2	144	15	\$112.81	\$ - 3.00
April 15	158	88	\$110.20	\$ - 10.00
April 29	172	87	\$103.25	\$ - 10.00
May 6	179	66	\$106.41	\$ - 10.00

Performance Data

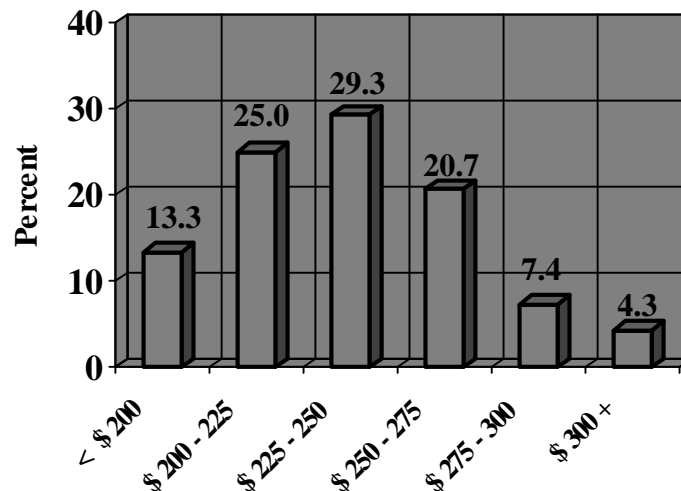
Average Daily Gain. Weights used to determine gain were beginning weight and ending weight (actual, no shrink). Average beginning weight was 546 pounds and ranged from 362 to 722 pounds. Average ending weight was 1132 pounds and ranged from 668 to 1406 pounds. The mean average daily gain was 3.50 pounds per day with a range of 1.21 to 4.76 pounds per day. Days on feed ranged from 144 to 179 days.



Cost of Gain and Feed Cost Per Head. The average feed only, cost of gain was \$49.09/cwt and ranged from \$40.76 to 57.01/cwt. Feed intake was calculated using the NRC Net Energy equations based on average daily gain, average weight, and net energy content of the ration. This estimate was multiplied by the ration cost to determine the feed expense for each steer. Days on feed ranged from 144 to 179 days. Since the feed intake is calculated, no individual feed efficiency measurements are available. The average feed cost was \$228.40 with a range of \$163.99 to \$346.80.

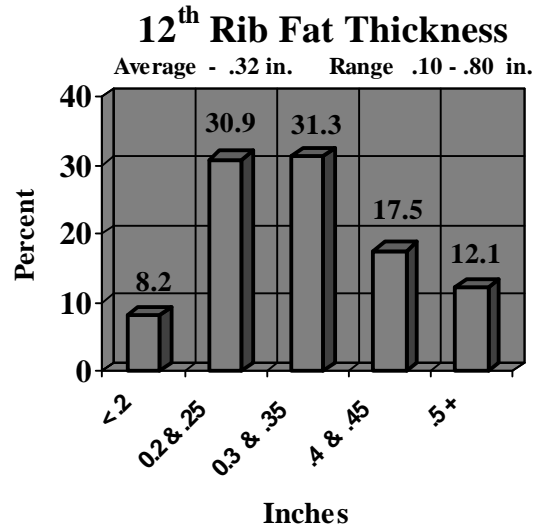
Feed Cost per Head

144 to 179 days on feed
Average - \$ 228.40 Range \$163.99 - \$ 346.80

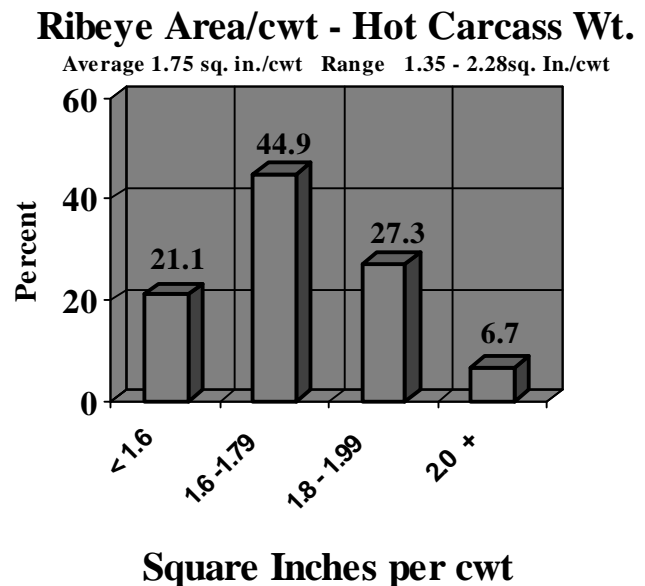
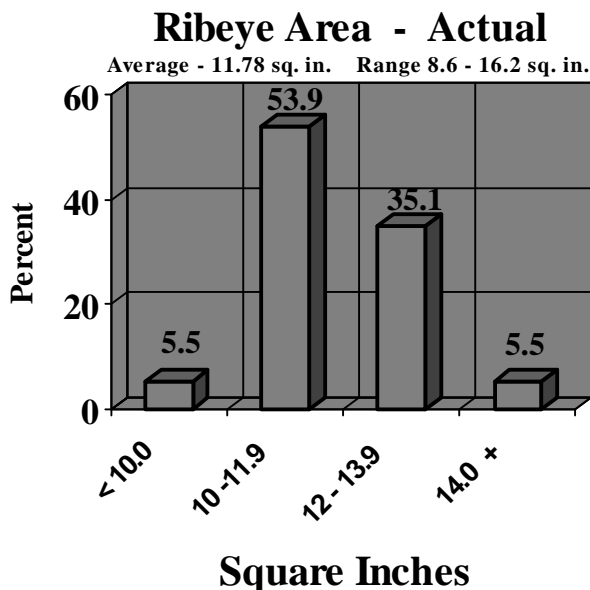


Carcass Information

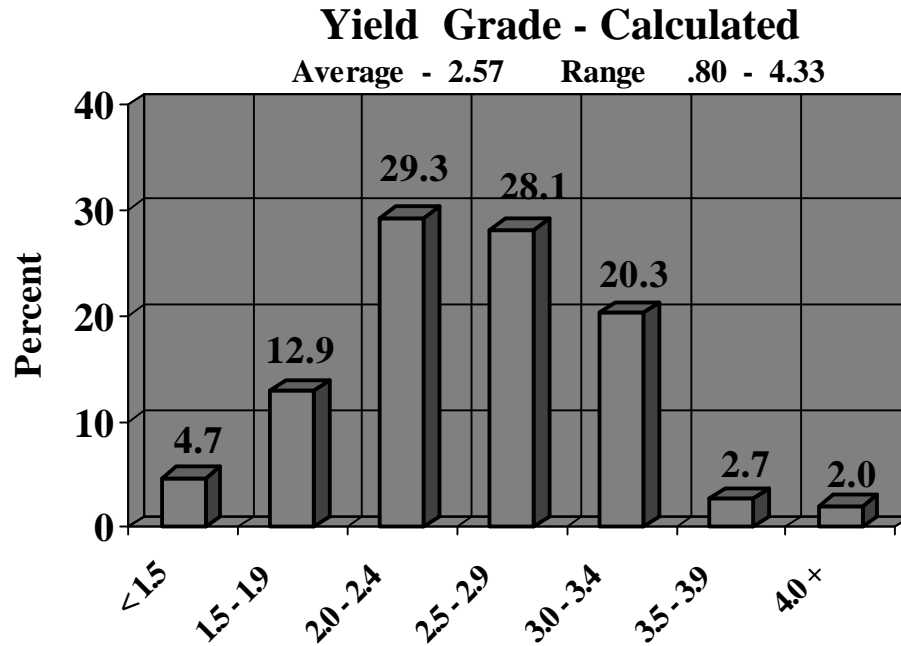
12th Rib Fat Thickness. Fat thickness is one of the primary factors that influences yield grade. Cattle are sold when the producers group of 5 was estimated to be acceptable for weight and finish or when the test concluded at 179 days on feed. The average fat thickness was .32 inches with a range of .10 to .80 inches.



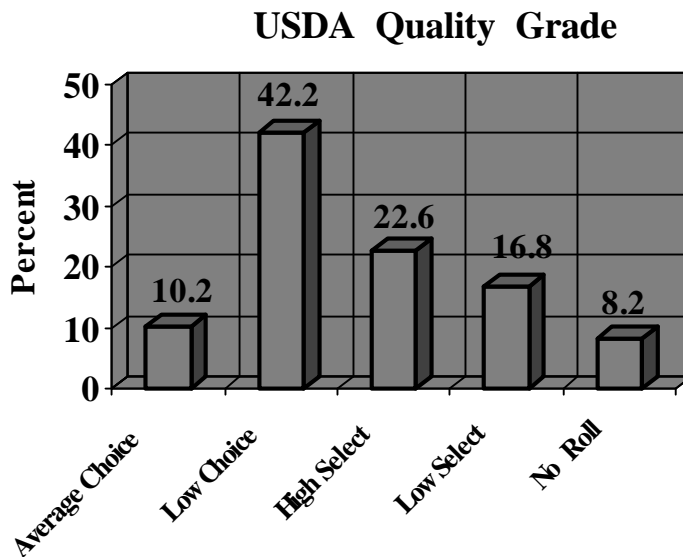
Ribeye Area. Ribeye area is the primary indicator of carcass muscularity and lean meat yield. The average ribeye area was 11.78 square inches and ranged from 8.6 to 16.2 square inches. Ribeye area is greatly influenced by carcass weight. Heavier carcasses tend to have larger ribeyes. Ribeye area per 100 pounds of carcass weight provides a measure of relative muscling. The yield grade equation requires 1.8 square inches per 100 pounds of carcass weight or an increase in yield grade is imposed. The average ribeye area per 100 pounds of carcass weight was 1.75 square inches with a range of 1.35 to 2.28 square inches.



Yield Grade. Yield Grades identify the differences in cutability or yield of boneless, closely trimmed retail cuts from the round, loin, rib and chuck. The yield grades are numbered 1 through 5, with Yield Grade 1 having the highest cutability. The four factors utilized to determine USDA Yield Grade are carcass weight, 12th rib fat thickness, internal fat %, and ribeye muscle area. The USDA Grading Service stamps a grade on the eligible carcasses and the plant pays each producer on the official grade. From the data collected through the OK Steer Feedout, we use the yield grade equation and calculate the actual grade. The average calculated yield grade was 2.57 and ranged from .80 to 4.33.

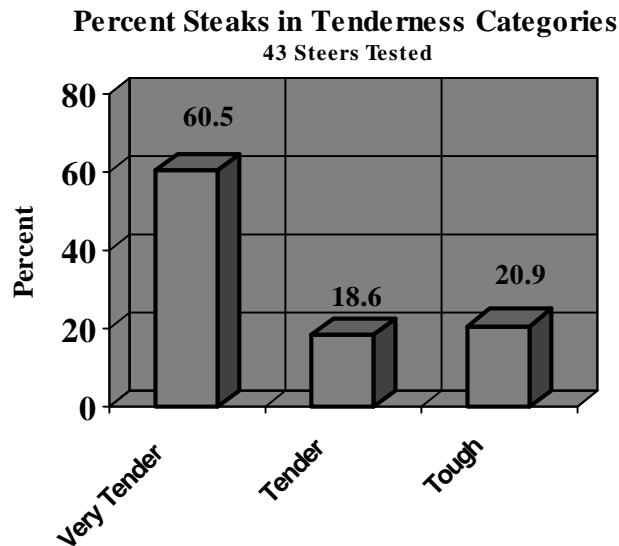


Quality Grade. The USDA Quality Grade is determined by considering the degree of marbling in the cut surface of the rib eye, in relation to the carcass maturity. Assuming age is not a factor, the quality grade is dependant on the amount of intramuscular fat or the fat within the ribeye muscle. Over 52% of the carcasses graded USDA Choice or better. The “no roll” category refers to all carcasses that did not meet the requirements for the USDA Select grade and would likely grade USDA Standard if graded.

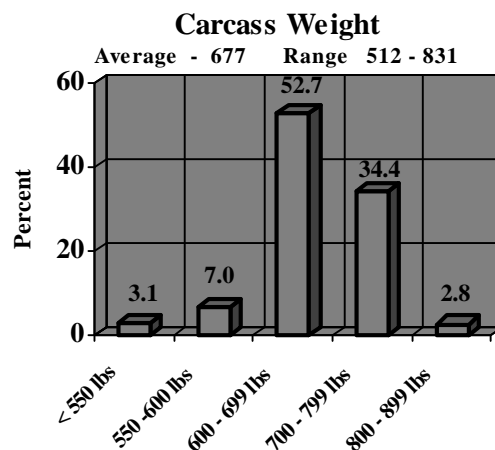


Tenderness. For an optional fee, producers can elect to have a steak from their steers tested for a tenderness value. Forty-three steaks were tested from this Feedout. Steaks were removed in the cooler at Excel in Dodge City and transported to the Food and Agriculture Products Center at Oklahoma State University. Steaks were stored, thawed, cooked, cooled, sampled, and tested according to accepted analytical procedure. Shear force values were determined using an Istron Universal testing machine equipped with a Warner-Bratzler attachment. Based on the Warner-Bratzler values the steaks were put into three categories:

- Very tender = < 8.5 lbs of shear force
- Tender = 8.51 – 10.0 lbs of shear force
- Tough = > 10 lbs. of shear force



Grid Pricing. OK Steer Feedout cattle were sold on a grid negotiated weekly for the Choice, yield grade 3 base price and the Choice/Select price spread. The premiums and discounts for quality grades, yield grades, and carcass weight remained constant for the spring-born test. The most common discount was for no roll carcasses, which are carcasses that do not have the marbling to grade USDA Select and are not designated with a USDA grade. Most all no roll cattle would have the marbling score for the USDA Standard grade. The next most common discount is for carcass weight. There were 3.1% of the carcasses that weighed between 500 and 549 pounds. There were no carcasses under 500 pounds or over 950 pounds.



Grid Summary. Below is a summary of the four weeks which steers in the OK Steer Feedout were marketed. Of the 256 steers, 51.2% were priced for USDA Choice or better and 38.3% USDA Select. The light weight and Y-4 cattle received quality grades, but were priced at the appropriate discount. Certified Angus Beef and Excel Sterling Silver require a marbling score of Modest 0 or an average Choice, USDA quality grade. Excel Angus Pride is an in-house branded beef program requiring a marbling score of Small 50, half way to average Choice.

<u>Quality Grade</u>	<u>Yield Grade</u>	<u>4/2/02</u>		<u>4/16/02</u>		<u>4/30/02</u>		<u>5/7/02</u>		<u>Total</u> 256 hd
		<u>\$/cwt</u>	<u>15 hd</u>	<u>\$/cwt</u>	<u>88 hd</u>	<u>\$/cwt</u>	<u>87 hd</u>	<u>\$/cwt</u>	<u>66 hd</u>	
Certified Angus or Sterling Silver	2			115.20	6	108.25	8	111.41	4	18
Certified Angus or Sterling Silver	3			112.20	3			108.41	3	6
Angus Pride	1			114.70	1			110.91	1	2
Angus Pride	2			113.70	7	106.75	1	109.91	3	11
Angus Pride	3			110.70	4	103.75	1	106.91	1	6
CHOICE	1			114.20	2	107.25	3	110.41	3	8
CHOICE	2	115.31	2	113.20	26	106.25	18	109.41	14	60
CHOICE	3	112.81	1	110.20	7	103.25	4	106.41	8	20
SELECT	1			104.20	4	97.25	20	100.41	7	31
SELECT	2	112.30	6	103.20	12	96.25	19	99.41	14	51
SELECT	3	109.80	1	100.20	10	93.25	2	96.41	3	16
Wt 500 - 549				100.20	5	93.25	2	96.41	1	8
NO ROLL		104.80	5	95.20	1	88.25	9	91.41	3	18
Yield Grade 4								91.41	1	1

Grid - Premiums and Discounts

<u>Premiums</u>			<u>Discounts</u>		
	<u>\$/cwt</u>	<u>Hd</u>		<u>\$/cwt</u>	<u>Hd</u>
Certified Angus Beef	2.00	16	No Roll (back of Select)	-5.00	18
Excel Sterling Silver	2.00	8	Yield Grade 4	-15.00	1
Excel Angus Pride	.50	19	500 – 549 lbs.	-10.00	8
USDA Prime	4.50	0			
			< 500	-35.00	
Yield Grade 1	4.00	41	950-999 lbs	- 5.00	
Yield Grade 2	3.00	122	> 1000 lbs	-30.00	
			Discounts are back of Choice Y-3 Base unless noted		

Health Report

The steers in pens 12 and 14 experienced more health problems than steers in pens 9 and 11 in the 2001-2002 spring-born Feedout. Pens 12 and 14 were mass medicated about two weeks into the test. A total of 154 steers (57%) were treated during the Feedout. The average treatment cost over all the steers was \$25.38. The death loss was 3.33%. The percentage of realizers was 1.8%. The realizers are steers not marketed with the cattle going to harvest because of poor feedlot performance.

	Pen 9	Pen 11	Pen 12	Pen 14	Total
Steers, hd	75	70	75	50	270
Treated, hd	32	6	75	41	154
Treated, %	43 %	9 %	100 %	82 %	57 %
Mass Medicated	no	no	Nov 18	Nov 15	
Treatment Cost, ave	\$26.66	\$ 3.75	\$ 35.51	\$ 38.52	\$ 25.38
Death Loss, hd	2	0	5	2	9
Realizers, hd	0	4	1	0	5

Health records from the feedyard were used to categorize the cattle by severity of Bovine Respiratory Disease (BRD) into three general groups: Healthy (never treated), Treated (pulled once for treatment), and Repulls (pulled more than once for treatment). Steers in the Repulls category had reduced average daily gain, more death loss, and much higher medicine cost. Steers in the Treated and Repulls category had a much lower percentage of carcasses that graded USDA Choice and had a much higher incidence of no roll carcasses. Although not analyzed statistically, the health data from the OK Steer Feedout tends to follow trends of similar programs and industry research.

	Healthy	Treated	Repulls
Steers	118	122	30
Death Loss, Hd	0	1	7
ADG, lb/day	3.51	3.55	3.36
Medicine Cost	0	\$ 29.58	\$ 105.97
USDA Choice	61.8 %	44.5 %	45.4 %
USDA Select	33.9 %	43.6 %	45.4 %
No Roll	4.3 %	11.9 %	9.1 %

Summary. The OK Steer Feedout had 270 steers entered and 256 harvested for carcass data. The days on feed ranged from 144 to 179 days. The mean average daily gain was 3.50 pounds per day and the mean feed cost per head was \$228.40. The average ribeye size was 11.78 square inches with a range of 8.6 to 16.2 square inches. The average 12th rib fat thickness was .32 inches, the mean calculated yield grade was 2.57 and the average carcass weighed 677 pounds. Over 52% of the carcasses graded USDA Choice or better while 8.2% were in the no roll category not reaching the Select grade. Two of the four feedlot pens experienced major health problems and were mass medicated. Records show the steers never treated for BRD had a greater percentage grade Choice and half as many no roll cattle as the steers that were treated once or more.

OK Steer Feedout data demonstrates the extremes in each trait which reflects the variability that exist in the beef industry. Participating in the Feedout provides cattlemen with feedlot performance information, a benchmark on the effectiveness of their post-weaning health performance, and reports the carcass data of the steers harvested. Ranchers need to evaluate their ranch resources and develop cost effective production and marketing goals. Information feedback from the OK Steer Feedout should be utilized to make genetic improvement and/or management adjustments to effectively meet these goals.

To get additional information or an entry form for the OK Steer Feedout contact:

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