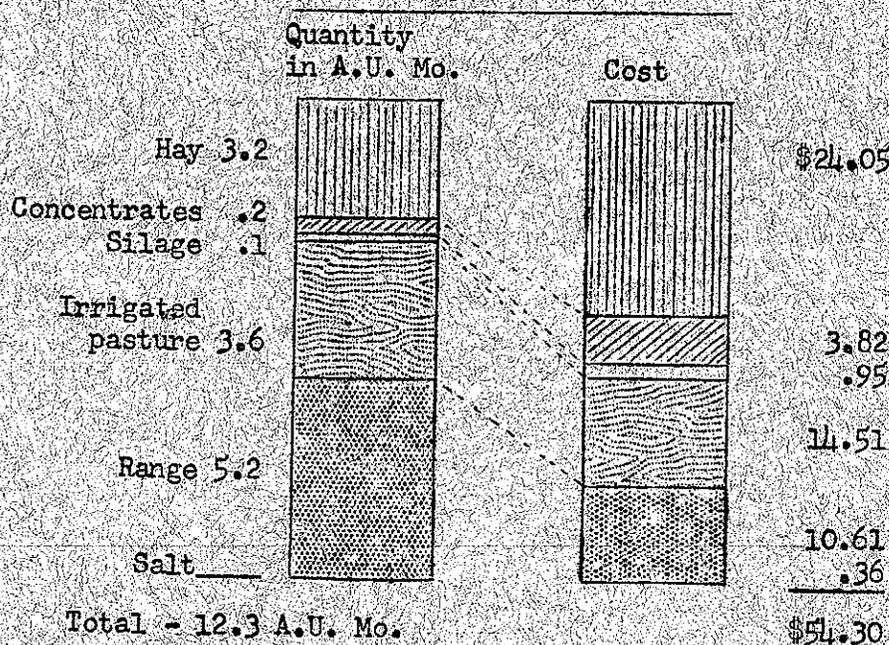


LAKE COUNTY BEEF CATTLE MANAGEMENT STUDY FOR 1954

Feed Costs were 67% of Total Costs

Per Animal Unit



Hay furnished 26% of the nutrients but accounted for 41.3% of the feed cost.

Study Conducted by the Agricultural Extension Service
University of California, in Co-operation with
Ten Lake County Beef Producers

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January, 1955

INTRODUCTION

This is the second annual report of the Lake County Beef Management Study. This study was undertaken by the Agricultural Extension Service in co-operation with a small group of local beef producers for the purpose of learning more about this business and to discover how profits might be improved. Records were obtained on the beef enterprise from ten growers, covering the calendar year 1954. Some of these enterprises are a small sideline to other kinds of farming. All but one included a breeding herd. Hay and irrigated pasture each contributed a larger proportion of total feed costs used during the year than did the natural range. Hence feed costs were high and all but one record showed a loss.

The averages for these 10 records shown in the following report should not be considered as typical of beef production in Lake County. They apply only to these 10 enterprises and only for the year 1954. It is hoped that this study may continue for a few more years and hence develop information more typical of what may be expected over a few years with costs and prices more nearly in line, and with type of production more suitable to the feeds available.

EXPLANATION OF RECORDS AND TERMS

Beef Enterprise - These records cover the beef enterprise only as a part of the operator's total farm business but separate from feed production. All feeds, whether purchased or produced, are charged to beef enterprise on a quantity basis at the farm value per ton of hay and per animal unit month for range and irrigated pasture. Labor costs are only for care of the cattle and do not include labor in growing the feed. The investment per animal unit shown at the bottom of Table 2 is for cattle and cattle buildings and equipment only and does not include range, pasture, and feed crop land.

Animal Unit - Size of enterprise is shown in average animal units in the enterprise for the year. An animal unit is a mature head of cattle over 2 years of age or its equivalent in stock of other ages. We figured calves at from 0.2 to 0.5 animal units per head, depending on age, and yearlings at .75. Animal units in each herd were calculated each month, based on the number of head and age in each group. All production and cost figures are shown in detail per average animal unit for the year.

Animal Unit Month - Pasturage is shown and figured in animal unit months. One animal unit month is the feed required for good growth or production by one animal unit for one month. It is roughly equivalent to .4 ton of hay in nutrient content and may be considered as furnishing about 400 pounds of total digestible nutrients.

Production - Net production is figured in pounds of live weight and value of animals as follows: Sales plus closing inventory less purchases and opening inventory. Its calculation is shown in Table 2 by value per animal unit.

Management Income - is the value of production less the total cost of production as shown per animal unit in Table 2. Total costs include interest on the investment in the beef enterprise and the value of the operator's own labor. This profit figure is the remainder available to reimburse management after all other costs have been met. Losses are shown by a minus sign (-).

Farm Income - is the management income plus the operator's labor and interest on investment. It is the amount available from the beef enterprise to reimburse the operator for his labor, management, and invested capital. Or it is profit as figured when operator's labor and interest on investment are not included in expenses. This figure as shown in this report applies only to the beef enterprise and does not include profit or loss in feed producing enterprises, such as range, hay and irrigated pasture. Total net farm income from all these enterprises together is not available.

TABLE 1 - GENERAL SUMMARY OF LAKE COUNTY 1954 BEEF ENTERPRISE RECORDS

	10	1	6	8	9	4	7	5	3	2	Average
Number of animal units	19.0	169.7	61.8	48.3	18.8	53.1	14.9	103.3	65.0	40.2	594.1
Animal units per cow	-----	1.8	1.8	1.5	2.7	1.7	1.7	1.6	1.7	1.3	1.7
Calves raised per cow	-----	1.0	.77	.85	.57	.90	.89	.67	.63	.77	.82
Pounds produced per cow	-----	574.	721.	727.	1,832.	569.	688.	410.	374.	497.	635.
Pounds produced per animal unit	647.	321.	408.	496.	680.	332.	416.	254.	219.	371.	365.
Main age and kind sold	Yr.St.	S-2 yr.	Yr.St.	Calves	Yr.St.	Cows	Calves	Cows	Yr.Heif.	Cows	Yr.St.
Price received per cwt.	19.21	18.13	19.35	18.67	17.85	8.70	15.52	9.73	14.80	13.04	18.67
Av. price per cwt. all sales	19.15	17.54	16.85	20.70	15.90	11.23	15.81	10.58	15.87	13.84	15.83
Value per cwt. produced	21.49	17.83	16.67	17.17	12.76	12.30	12.66	10.90	21.36	14.20	15.34
Total cost per cwt. produced	17.65	20.54	19.74	20.02	15.28	21.19	20.42	26.07	46.27	29.16	22.06
Management income per cwt.	3.84	-2.71	-2.07	-2.85	-2.52	-8.89	-7.76	-15.17	-24.91	-14.96	-6.72
All costs per cow	-----	117.81	142.26	145.49	279.96	120.60	140.56	106.95	172.94	144.95	139.97
Value produced per cow	-----	102.29	120.12	124.76	233.75	70.00	87.16	44.70	79.83	70.58	97.32
Management income per cow	-----	-15.52	-22.14	-20.73	-46.21	-50.60	-53.40	-62.25	-93.11	-74.37	-42.65
Farm income per cow	-----	3.45	7.83	6.42	16.02	-23.59	-13.38	-39.69	-50.41	-46.57	-14.40

Individual records are listed above in order of management income per animal unit which appears in Table 2. The more profitable records are at the left above. The only record with a true profit is No. 10 which had no cows but bought calves and sold yearlings. Losses are indicated by a minus sign. Records 1, 6, 8, and 9 had a loss or minus management income, but all four had a plus farm income which is profit without including the value of family labor and interest on the beef enterprise investment as expenses. Notice that all sold steers over a year old except No. 8 which sold calves.

The last 5 records beginning with No. 4 all had a minus farm income. Income was not great enough to cover production costs including a fair value for the farm produced feeds such as hay, irrigated pasture and range. Majority of sales from these unprofitable enterprises were cows and calves. Such animals do not ordinarily bring enough to cover costs of production on such high cost feeds as hay and irrigated pasture.

Cattle sold are those produced partly this year and partly in former years. The average value per hundredweight of stock produced during the year takes in inventories of cattle still on hand and hence differs from the average price of cattle sold. Costs can only be applied to quantity produced this year.

TABLE 2 - INCOME, COSTS AND NET INCOME PER ANIMAL UNIT

	10	1	6	8	9	4	7	5	3	2	Average
Income per animal unit											
Bulls sold	----	3.18	3.45	----	----	----	----	4.07	----	----	1.98
Cows sold	----	.74	5.54	2.90	40.11	21.48	----	26.68	8.59	29.76	11.80
Calves sold	3.44	5.49	2.77	30.38	13.00	2.07	42.70	2.09	1.07	2.26	6.74
Yearling heifers sold	----	1.49	39.39	22.32	113.52	2.03	7.20	4.51	24.37	2.87	13.94
Yearling steers sold	240.43	.90	41.48	3.74	200.41	13.38	22.21	----	11.93	2.86	22.16
2-year-old steers sold	----	22.75	----	47.29	49.87	----	----	----	19.19	----	14.01
Total sales per animal unit	243.87	34.55	92.63	106.63	416.91	38.96	72.11	37.35	65.15	37.75	70.63
Plus an increase stock inventory or less a decrease stock inventory	24.73	22.71	----	----	----	1.90	----	----	----	14.93	----
Less cost of stock bought	129.52	----	19.75	21.39	225.19	----	19.47	9.65	18.48	----	6.65
Net value of production per A.U.	139.08	57.26	68.03	85.24	87.03	40.86	52.64	27.70	46.67	52.68	56.02
Expenses per animal unit											
Total feed costs or value	76.83	48.83	56.32	68.76	59.61	47.35	49.65	45.00	57.41	73.56	54.30
Hired labor	----	1.16	.37	----	----	----	----	----	2.05	4.20	.88
Operator's labor	8.88	2.21	7.10	6.11	13.43	4.71	12.92	3.77	12.38	10.26	6.02
Horse, auto and truck cost	4.11	1.00	1.70	1.72	13.12	----	4.03	1.55	3.99	4.18	2.24
Miscel. expense, taxes, etc.	6.32	3.19	4.00	8.41	5.15	3.70	5.37	4.00	4.08	4.62	4.29
Depreciation buildings & equip.	6.84	1.15	1.21	1.97	3.19	3.58	1.67	1.74	8.61	.87	2.60
Interest on investment, 5%	11.21	8.41	9.87	12.43	9.74	11.06	11.26	10.20	12.58	10.48	10.24
Total cost per animal unit	114.19	65.95	80.57	99.40	104.24	70.40	84.90	66.26	101.10	108.17	80.57
Management income per animal unit	24.89	-8.69	-12.54	-14.16	-17.21	-29.54	-32.26	-38.56	-54.43	-55.49	-24.55
Add operator's labor	8.88	2.21	7.10	6.11	13.43	4.71	12.92	3.77	12.38	10.26	6.02
Add interest on investment	11.21	8.41	9.87	12.43	9.74	11.06	11.26	10.20	12.58	10.48	10.24
Farm income per animal unit	44.98	1.93	4.43	4.38	5.96	-13.77	-8.08	-24.59	-29.47	-34.75	-8.29
Average investment per animal unit beef enterprise only	224.21	168.21	197.53	248.66	194.78	221.18	225.17	203.99	251.62	209.61	204.74

Value of stock produced per animal unit is composed of sale plus an increase in stock inventory during the year or minus a decrease and less the cost of stock bought. This is shown in the first section of the above table. Expenses shown in the second section of the table are deducted from the value produced to obtain profit or loss. Management income and the computation of farm income appear after costs. Notice the wide range in beef enterprise farm income per animal unit from \$44.98 in No. 10 down to a minus \$34.75 in No. 2.

TABLE 3 - FEED QUANTITIES, PRICES AND COSTS PER ANIMAL UNIT

	10	1	6	8	9	4	7	5	3	2	Average
Quantities, per animal unit											
Tons of hay	2.34	1.39	1.46	1.45	1.36	1.11	1.17	1.00	.92	1.54	1.29
Pounds of concentrates	737.00	20.00	65.00	112.00	--	4.00	--	251.00	378.00	142.00	140.00
All feeds in animal unit months											
Hay	5.8	3.5	3.6	3.6	3.4	2.8	3.0	2.5	2.3	3.9	3.2
Concentrates	1.1	.1	.1	.2	--	--	--	.5	.7	.2	.2
Silage	--	--	--	--	--	--	--	--	.2	.8	.1
Irrigated pasture	6.6	2.7	4.6	7.2	4.4	6.3	4.4	--	3.6	5.2	3.6
Range	--	6.3	4.3	1.2	7.1	1.5	6.4	8.8	4.9	3.8	5.2
Total A.U.Mo.	13.5	12.6	12.6	12.2	14.9	10.6	13.8	11.8	11.7	13.9	12.3
Cost per 400 lbs. TDN - feed equivalent to one A.U.Mo.											
In hay	6.90	7.02	7.73	9.34	7.98	6.77	6.36	7.26	7.60	8.03	7.47
In concentrates	8.95	19.83	10.00	15.45	--	--	--	20.91	13.96	9.38	15.43
In silage	--	--	--	--	--	--	--	--	28.75	6.58	12.49
Irrigated pasture, per A.U.Mo.	4.00	4.00	3.50	4.00	4.00	4.00	4.00	--	4.00	4.83	4.01
Range, per A.U.Mo.	--	1.98	2.50	2.00	2.04	2.00	2.00	1.95	2.00	2.44	2.04
In all feeds and pastures	5.68	3.89	4.45	5.63	3.99	4.48	3.59	3.83	4.91	5.29	4.40
Feed costs per animal unit											
Hay	40.32	24.31	28.16	33.86	27.18	18.93	18.79	17.78	17.66	30.95	24.05
Concentrates	9.89	.70	.97	3.20	--	.14	--	9.72	9.88	2.33	3.82
Silage	--	--	--	--	--	--	--	--	5.30	5.40	.95
Irrigated pasture	26.32	11.06	16.02	28.60	17.87	25.09	17.72	--	14.52	24.88	14.51
Range	--	12.46	10.84	2.48	14.36	3.01	12.89	17.13	9.69	9.33	10.61
Salt and minerals	.30	.30	.33	.62	.20	.18	.25	.37	.36	.67	.36
Total feed cost per A.U.for yr.	76.83	48.83	56.32	68.76	59.61	47.35	49.65	45.00	57.41	73.56	54.30
Feed cost per 100 lbs. of live animals produced	11.87	15.21	13.80	13.85	8.74	14.82	11.94	17.71	26.28	19.83	14.87

Feed costs are shown in detail in the above table. To compare feed quantities all feeds have been converted into animal unit months so you may see the proportion of a year's feed (12 months) represented by each type of feed used. No. 10 had no range so had the highest feed cost per AUM and per animal unit for the year but was also most profitable by using calf to yearling feeders which can stand these high feed costs and still show a profit. A cow herd can show a profit with these high feed costs only by carrying stock on to sell as yearling feeders or "good" slaughter steers.

SUMMARY AND CONCLUSIONS

This study and the comparison of individual records illustrates the importance of selecting a suitable type of production to fit the feed supply and having the right number of the right kind of cattle to turn this feed into a valuable marketable product.

No. 10 which shows a profit was the only one with the type of enterprise offering the best profit opportunity on irrigated pasture with enough hay and grain to produce good slaughter steers from weaner calves purchased the year before. It is admittedly more speculative than a cow herd but the best adapted to this feed supply.

No. 1 was a cow herd with a 100 percent calf crop, getting over half its feed from lower cost range and selling 2 year old steers and some calves. A reduction in cows so all stock can be held and sold as fleshy yearling feeders or good slaughter cattle at the end of the irrigated pasture season would probably improve profit.

No. 6 is a cow herd with an economical feed supply largely in range and irrigated pasture and selling mostly yearlings but some cows to reduce the numbers and concentrate production on the yearlings.

No. 8 had high and efficient production but mostly on hay and irrigated pasture, which are high cost feeds for a cow herd. Although some yearling steers were sold at good prices, some of the calves had to be sold to carry on so many cows. All calves should be carried over for sale as yearlings and would improve the profit potential.

No. 9 is largely a feeder enterprise - calves to yearlings - but did buy and calve and then sell a few cows at a loss, which offset potential profits on the feeder calves from last year sold as yearlings.

No. 4 is a cow herd selling largely cows this year and carrying over its calves to sell at a profit next year. Raising too many heifers to sell as cows is not profitable. With largely irrigated pasture, it would be more profitable to buy calves and sell yearlings or at least minimize the cows raised and sold to concentrate on steers.

No 7 seems to be concentrating on raising cows and selling off their production as calves before their economical growth to yearlings. Cows bring a low price, and only enough should be kept to furnish the calves needed to produce some profit when sold as yearlings.

No. 5 is a cow herd which moved in the right direction by selling off some cows and holding calves to be sold at a profit next year. Feed here was largely range with no irrigated pasture. This is adapted to a cow herd selling yearling feeders. But raising too many heifers to maintain the minimum cow herd needs to be avoided, since steers bring more than cows or heifers.

No. 3 is a cow herd with only a 63 percent calf crop and not very good selling weights or prices despite considerable concentrates fed. Improved gains with a reduction in cows and heifers and more concentration on selling yearling fed steers would probably reduce losses or enable a profit.

(Continued next page)

Summary and Conclusions (continued)

No. 2 with a minimum of range has rather high feed costs for a cow herd with so many cows and calves sold instead of yearlings. A switch to feeders or a reduction of cow herd to enable carrying over the calves to sell as fed yearlings will offer a better profit opportunity.

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The 1954 records show some improvement over 1953. The proportion of cows to total animal units was reduced and average pounds per animal unit increased from 357 to 365, which is really very good. Average price per hundredweight sold, however, was lower in 1954 at \$15.83 with a reduction in calves sold than the \$16.50 for 1953. Value of all production, however, was increased from \$14.25 per hundredweight in 1953 to \$15.34 in 1954. Production cost was reduced from \$29.68 per hundredweight to \$22.06 this last year. Cooperators are making progress toward more profitable enterprises. Management income per animal unit was a loss of \$55 in 1953 and a loss of only \$24 in 1954. With prices in 1955 expected to be about the same as this last year, a further swing toward the production and sale of more profitable yearlings should result in a better profit or lower average loss in this study in 1955.

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