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Office of the Director
College of Agriculture
Berkeley 4, California

BEEF CATTLE MANAGEMENT STUDY FOR

LASSEN COUNTY

1943

A study of income, costs and earnings on 7 beef cattle enterprises in Lassen County for the record year ending February 28, 1944

Study conducted by the
University of California Agricultural Extension Service
and the United States Department of Agriculture
in cooperation with a group of cattlemen from
Lassen County

Report issued September, 1944

Beef Cattle Management Study

Lassen County, 1943

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This is the ninth annual report of a beef cattle management study, which has been conducted in cooperation with progressive cattle producers in Lassen County, California by the Agricultural Extension Service of the University of California. During 1943, seven cooperators completed records on their herds. This report summarizes these records and shows the profit-determining factors in comparison with records of the preceding eight-year period. Included in this report there is also a summary of each record, which was carried during the past year. All of these accounts were kept on typical beef cattle ranches, although the number completed is small in comparison with the total number in the county. Therefore, the authors of this report are not presenting these data as averages for the district. They are quite typical, however, of the better managed beef cattle layouts. The purpose of conducting studies of this character is to develop management information which will be helpful to individual cattlemen in deciding on the most profitable management practices to use in his operations.

Relation of Beef Cattle to Other Farm Enterprises

Most of the farm income on the ranches where these records were kept came from the sale of beef cattle, but on practically all of them other farm enterprises contributed some income. This report, however, deals only with the beef cattle operations. Some of the other farming operations, such as hay, grain, or pasture production, are carried on primarily for the purpose of furnishing needed materials for growing livestock. Other types of production, such as egg production or dairying, may not have any relation to the cattle business. Where the farm business is made up of more than the cattle enterprise, the records were kept so that the beef enterprise was charged with the proper expenses and credited with the proper income, in order to have a satisfactory analysis of the management factors responsible for success or failure in the beef cattle business. For example, all man labor, field power, cash and overhead expenses incurred in the production of hay or other feed crops should be charged as a feed crop expense. The cattle enterprise should be charged with feed crop items only at the time of use and in such portions as the feed is used. Farm prices are used so that net income from feed crops will not be accredited to the beef cattle enterprise. On the other hand, labor for feeding cattle is charged to the cattle enterprise and not to feed cost.

Basis of Comparison

When the beef cattle management studies were begun, about 10 years ago, it was necessary to adopt uniform standards of comparison, in order to make comparisons between the individuals and also between the different individual records. For example, many cattlemen measure results based on the breeding cow as a unit. When asked the size of their herd they will say "We have 150 breeding cows." This is not an accurate measure, as the size of the herd depends upon the number and age of animals of which it is composed. The accurate measure is the number of animal units carried throughout the year. The "breeding cow" unit is satisfactory for comparing some items of production, such as size of calf crop, but does not suffice for making comparisons of many other production factors, such as carrying capacity of pastures or ranges, pounds of beef produced, and other management factors. This is particularly true where the number of other stock in relation to the number of breeding cows

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varies widely from herd to herd. Experience has shown that the "animal unit" or mature head equivalent is the most satisfactory basis with which to measure production factors, for then most types of managerial variations can be compared with one another. An "animal unit," as it is used in this publication, may be defined as the equivalent of a mature beef animal. One animal over 2 years old in the herd for 1 year is considered an "animal unit;" if in the herd 1 month, the unit of measure is then "one animal unit month." Animals under 1 year are considered 50 per cent, and animals from 1 to 2 years are considered 75 per cent of an "animal unit." When measured in terms of feed intake, one animal unit is considered equivalent to the consumption of about 400 pounds of digestible nutrients per month, or 2.4 tons for the year.

Net Income or Profit

The net income or profit earned by an enterprise is the difference between income and expense. Since accounting for different purposes may follow slightly different methods, the computed profit may not always be the same. In these records a uniform method of calculation was followed throughout so the relative profit in comparing different enterprises will show the relative efficiency or earning ability, even though the exact figures may not check with those arrived at in the individual's personal accounting system. Some producers want as a profit the figure by which their income exceeds their actual cash outlay; others want their income above outlay minus their own wages for work done. In order to supply a number of earning ratios or figures, the following standard measures of net income are used in this report.

Management Income is the amount by which total income exceeds total costs, with costs including the wages of the operator for work actually done, depreciation on facilities and interest on investment. This is the amount left to reimburse the operator for his skill in management after all expenses have been met. If a loss occurs, it will be indicated by a minus sign (-) in front of the management income figure.

Labor and Management Income is the management income plus value of the operator's labor previously included as an expense. It is called, for brevity, Labor Income, and is the amount the operator can withdraw from his business to pay himself for labor and management.

Capital and Management Income is the management income plus the interest on investment previously included as such in the expense. It is the amount the producer can consider his return for management and invested capital. It is not shown in this report but may easily be computed by adding the proper figures.

Farm Income is the labor income plus interest on investment. It is the total amount receivable from the enterprise after meeting cash costs, the value of farm-produced feeds and depreciation on facilities. It includes a profit for skill in management, wages for labor performed and interest on capital invested. It is the amount the operator can safely withdraw from the business to live on and pay interest and principal on indebtedness, if any. Interest actually paid is not recognized in these costs, it being assumed that the interest computed on the investment could cover interest on borrowed capital, as well as that invested by the operator.

Total Farm Income is the farm income for the beef enterprise plus the interest on the owned range, which was included as a part of the pasture cost in computing the beef record. This is the total amount the cattleman, who is out of debt and has no interest to pay, makes from his combined beef cattle and range enterprises.

Table 1. General Summary of Lassen County Beef Cattle Management Records for 1943 with comparisons

Record Year	1935	1936	1937	1938	1939	1940	1941	1942	1943	9 Yr. Av.
Number of herds in study	10	11	9	9	11	12	13	9	7	91*
Breeding cows per herd	303	305	276	181	353	210	302	233	283	272
Average number animal units per herd	639	657	558	356	665	377	616	438	528	537
Average an. units per 100 breeding cows	210.6	216.1	202.3	196.5	188.6	179.2	204.0	188	186	197
Calves raised per 100 breeding cows	74.9	76.7	68.0	75.2	72.4	77.9	81.4	86.1	84.7	77.5
Number of animals died or lost	5.2	4.5	7.1	4.8	2.4	3.4	2.3	2.7	3.5	4.0
Net head raised per 100 br. cows	69.7	72.2	60.9	70.4	70.0	74.5	79.1	83.4	81.5	73.5
Net head raised per 100 A.U.	33.1	35.5	30.1	35.8	37.1	41.6	38.8	44.4	43.8	37.8
Pounds beef produced per cow	591	599	486	586	521	545	608	573	582	566
Pounds beef produced per A.U.	281	277	240	298	276	304	298	305	313	288
Pounds beef sold per A.U.	243	212	287	410	278	271	268	295	276	282
Hay fed per A.U.-pounds	1939	1926	1952	1576	1762	2183	2513	2029	1905	1865
Grain fed per A.U.-pounds	34	16	24	45	56	34	28	64	30	37
Salt fed per A.U.-pounds	10	8	7	10	13	--	8	8	9	8
Hours hired labor per A.U.	5.1	3.7	5.5	4.4	5.2	5.2	4.1	4.0	3.1	4.5
Hours operators labor per A.U.	2.3	2.4	3.2	3.5	1.6	3.0	1.9	3.4	2.7	2.7
Total man hours labor per A. U.	7.4	6.1	8.7	7.9	6.8	8.2	6.0	7.4	5.8	7.1
Value of hay per ton	\$ 5.57	5.68	6.23	5.56	6.06	6.08	7.00	9.68	10.10	6.88
Value of concentrates per cwt.	\$ 1.18	1.92	2.04	1.54	1.96	1.64	1.91	1.73	2.41	1.81
Value per hour hired labor	\$26.6	29.0	22.4	23.6	28.5	28.9	30.4	32.1	36.7	28.7
Value per hour operator's labor	\$32.0	38.0	22.5	25.7	36.3	31.4	43.2	45.9	50.8	36.2
Gross income per breeding cow	\$36.84	41.15	35.95	45.79	34.00	41.41	53.66	62.10	64.54	46.16
Gross income per animal unit	\$17.49	19.07	17.77	23.30	18.02	23.12	26.31	33.02	34.68	23.64
Gross income per cwt. of beef raised	\$ 6.23	6.87	7.34	7.81	6.53	7.60	8.83	10.83	11.09	8.13
Management income per animal unit	\$.32	2.11	- .11	2.21	.33	4.19	4.61	9.51	11.53	3.86
Farm income per animal unit	\$ 3.37	5.20	2.90	5.57	3.19	7.41	8.01	13.86	15.70	7.25
Farm, beef, and range income per A.U.	\$5.69	6.81	3.93	7.16	5.33	9.18	9.82	15.17	16.62	8.86
Management income per cwt. beef	\$.11	.76	- .04	.74	.12	1.38	1.55	3.12	3.69	1.27
Farm income per cwt. beef	\$ 1.20	1.88	1.20	1.86	1.15	2.44	2.69	4.55	5.02	2.44
Farm, beef & range income per cwt.	\$ 2.03	2.46	1.63	2.39	1.93	3.02	3.30	4.98	5.31	3.00

*Totals

Table 2. General Summary of Lassen County Beef Cattle Management 1943 (continued)

	1935	1936	1937	1938	1939	1940	1941	1942	1943	9-yr. Av.
<u>Cost per animal unit of producing beef</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>	<u>Dollars</u>
Rented grazing land	.52	.82	1.10	1.10	.80	.90	1.02	.95	1.24	.94
Temporary farm pasture	1.13	.97	.57	.77	.77	.75	.86	.88	1.01	.86
Owned permanent pasture and range	2.03	1.49	1.22	1.90	2.85	2.14	2.29	1.65	1.57	1.90
Total pasture cost	3.68	3.28	2.89	3.77	4.42	3.79	4.17	3.48	3.82	3.70
Value of hay used	5.40	5.47	6.08	4.38	5.34	6.63	8.80	9.82	9.63	6.84
Value of concentrates and grain	.40	.31	.49	.69	1.10	.55	.53	1.11	.73	.66
Value of salt and minerals	.09	.09	.08	.09	.14	.12	.11	.11	.08	.10
Total feed cost	9.57	9.15	9.54	8.93	11.00	11.09	13.61	14.52	14.26	11.30
Hired labor cost	1.35	1.22	1.23	1.03	1.49	1.50	1.25	1.28	1.13	1.27
Value of operator's labor	.73	.71	.73	.91	.56	.95	.84	1.56	1.37	.93
Value of horse labor	.42	.43	.42	.38	.41	.39	.42	.43	.34	.40
Auto and truck expense	.22	.20	.21	.22	.24	.28	.24	.19	.27	.23
Miscellaneous, taxes, etc.	.50	.52	.41	.47	.46	.74	.61	.61	.64	.55
Depreciation	.36	.34	.34	.51	.41	.46	.37	.41	.38	.40
Interest on investment	2.32	2.38	2.28	2.45	2.30	2.27	2.72	2.79	2.80	2.48
Total cost per animal unit	15.47	14.95	15.16	14.90	16.87	17.68	20.06	21.79	21.19	17.56
Less miscellaneous income	.10	.12	.12	-	.01	.14	.06	.02	.01	.06
Net cost of production per A.U.	15.37	14.83	15.04	14.90	16.86	17.54	20.00	21.77	21.18	17.50
Total value of beef produced	15.69	16.94	14.93	17.11	17.19	21.73	24.61	31.28	32.71	21.36
Management income per A.U.	.32	2.11	-.11	2.21	.33	4.19	4.61	9.51	11.53	3.86
Plus operator's labor	.73	.71	.73	.91	.56	.95	.68	1.56	1.37	.91
Labor and management income	1.05	2.82	.62	3.12	.89	5.14	5.29	11.07	12.90	4.77
Plus interest on investment	2.32	2.38	2.28	2.45	2.30	2.27	2.72	2.79	2.80	2.48
Farm income, beef cattle only	3.37	5.20	2.90	5.57	3.19	7.41	8.01	13.86	15.70	7.25
Plus interest on range owned	2.32	1.61	1.03	1.59	2.14	1.77	1.81	1.31	.92	1.61
Beef and range income per A.U.	5.69	6.81	3.93	7.16	5.33	9.18	9.82	15.17	16.62	8.86
Capital and management income	2.64	4.49	2.17	4.66	2.63	6.46	7.33	12.30	14.33	6.33
Per cent earned on investment	5.7	9.4	4.8	9.5	5.7	14.2	13.5	22.1	25.5	12.3
Labor and management income per hr.	.46	1.18	.19	.89	.56	1.71	2.78	3.26	4.79	1.76
Hours of operator's labor	2.3	2.4	3.2	3.5	1.6	3.0	1.9	3.4	5.0	2.9

Table 3. General Summary of Lassen County Beef Cattle Management 1943 (continued)

	1935	1936	1937	1938	1939	1940	1941	1942	1943	9-Yr.Av.
<u>Cost per cwt. of producing beef</u>	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Range and pasture	1.31	1.18	1.19	1.26	1.60	1.25	1.40	1.14	1.23	1.28
Value farm hay	1.93	1.97	2.51	1.47	1.93	2.18	2.95	3.22	3.08	2.36
Grain and concentrates	.14	.11	.20	.23	.40	.18	.18	.36	.23	.23
Salt and minerals	.03	.03	.04	.03	.05	.04	.04	.04	.02	.04
Total feed cost	3.41	3.29	3.94	2.99	3.98	3.65	4.57	4.76	4.56	3.91
Hired labor	.48	.44	.51	.35	.54	.49	.47	.42	.36	.45
Operator's labor	.26	.26	.30	.30	.20	.31	.23	.51	.43	.31
Horse labor	.15	.16	.07	.13	.15	.13	.14	.14	.11	.14
Auto and truck	.08	.07	.09	.07	.09	.09	.08	.06	.09	.08
Miscellaneous, taxes, etc.	.18	.19	.17	.16	.17	.24	.21	.20	.20	.19
Depreciation	.13	.12	.14	.17	.15	.15	.12	.14	.12	.14
Interest on investment	.83	.86	.94	.82	.83	.75	.91	.92	.90	.86
Total production cost	5.51	5.39	6.26	4.99	6.11	5.81	6.73	7.15	6.77	6.08
Less miscellaneous income	.03	.04	.05	--	--	.04	.02	.01		.02
Net cost per hundredweight	5.48	5.35	6.21	4.99	6.11	5.77	6.71	7.14	6.77	6.06
Average value of beef produced	5.59	6.11	6.17	5.73	6.23	7.15	8.26	10.26	10.46	7.33
Management income per cwt.	.11	.76	-.04	.74	.12	1.38	1.55	3.12	3.69	1.27
Plus operator's labor	.26	.26	.30	.30	.20	.31	.23	.51	.43	.31
Labor and Management income	.37	1.02	.26	1.04	.32	1.69	1.78	3.63	4.12	1.58
Plus interest on investment	.83	.86	.94	.82	.83	.75	.91	.92	.90	.86
Farm income beef only per cwt.	1.20	1.88	1.20	1.86	1.15	2.44	2.69	4.55	5.02	2.44
Plus interest on range owned	.83	.58	.43	.53	.78	.58	.61	.43	.29	.56
Beef and range income per cwt.	2.03	2.46	1.63	2.39	1.93	3.02	3.30	4.98	5.31	3.00
Average price received beef sold	5.86	6.48	6.14	5.68	6.48	7.52	8.80	10.09	11.56	7.62

Table 4. General Summary of Individual Records on an Animal Unit Basis, Lassen County, 1943

Item	Serial No. 111	Serial No. 113	Serial No. 117	Serial No. 106	Serial No. 104	Serial No. 110	Serial No. 102	Average all Records
Pounds of beef produced per A.U.	355	340	287	297	305	319	340	313
Pounds beef sold per A.U.	335	326	231	176	318	309	361	276
Value per cwt. beef produced	11.73	10.80	11.09	9.57	9.54	10.22	11.26	10.46
Value per cwt all beef sold	12.70	11.61	12.36	11.72	10.64	10.12	11.78	11.56
Net head raised per 100 A.U.	65	49	32	38	38	60	61	44
Head died per 100 A.U.	.4	1.3	3.8	.8	2.1	.5	2.6	1.9
Main animals sold in 1943			Steers	Steers				
Kind	Calves	Calves	2-3	1-2	Cows	Calves	Calves	Calves
Average weight - pounds	464	360	1050	833	1051	373	396	393
Value per head	59.97	46.39	130.00	104.18	104.04	46.04	48.06	49.50
Price received per cwt.	12.92	12.88	12.38	12.50	9.90	12.36	12.15	12.60
Dollars per Animal Unit								
Value of beef produced	41.58	36.71	31.79	28.42	29.08	32.63	38.26	32.71
Cost of production	19.07	16.25	20.07	20.68	22.29	26.52	33.92	21.18
Management income	22.51	20.46	11.72	7.74	6.79	6.11	4.34	11.53
Labor income	23.59	21.98	12.82	8.80	7.40	9.38	7.90	12.90
Farm income	26.44	24.94	15.38	11.59	10.32	12.16	10.74	15.70
Farm income, beef and range	27.10	25.86	16.17	12.90	11.26	13.62	10.74	16.62

A general summary of the 7 beef management records, which were finished in Lassen county in 1943, is shown in the above table. The records are arranged from left to right in order of management income per animal unit. All cooperators in the study showed a substantial management income (net profit) after all expenses had been met, including pay for the actual labor performed by the operator, depreciation on equipment and improvements, and a capital rental of 5 per cent on the money invested in the cattle enterprise. The wide variation in management income indicated in this table was due to two causes; (1) the variation in beef income, and (2) the variation in costs of production per animal unit.

As in past years, there was a wide difference in the profit-determining factors between the individual records. It is of interest to note that the highest and the lowest profit operators produced exactly the same quantity of beef per animal unit. Furthermore, the total income from beef produced was almost the same. There was, however, a wide difference in the total cost of production. The items of expense in which these differences occurred can be traced by reference to the subsequent tables of this pamphlet.

Table 5. Analysis of Pasture Costs and Other Inputs for Individual Records, Beef Management Study, Lassen County, 1943

Item	Serial No. 111	Serial No. 113	Serial No. 117	Serial No. 106	Serial No 104	Serial No. 110	Serial No. 102	Average All Records
<u>Pasture Costs per A.U.</u>								
National Forest, Public Domain, etc.	1.03	.49	.33	.43	.02	.72	.48	.40
Other rented range	.04	.08	1.65	--	.08	.45	5.90	.84
Crop aftermath	.82	1.59	.80	.98	1.12	1.28	--	1.01
Permanent pasture	1.87	1.19	.97	1.59	2.63	3.06	--	1.57
Total pasture cost	3.76	3.35	3.75	3.00	3.85	5.51	6.38	3.82
<u>Hay Fed</u>								
Pounds per animal unit	1522	1095	1763	2200	2382	1811	2755	1905
Price per ton	10.00	10.00	10.43	10.00	10.00	10.00	10.19	10.10
Hay cost per animal unit	7.62	5.48	9.20	11.00	11.91	9.05	14.03	9.63
<u>Concentrates</u>								
Pounds per animal unit	27	54	--	5	25	77	177	30
Price per cwt.	2.05	1.87	--	2.20	3.07	2.76	2.59	2.41
Concentrate cost per A.U.	.55	.98	--	.11	.77	2.13	3.04	.73
<u>Hours of Labor per A.U.</u>								
Hired labor	1.07	.39	2.14	1.26	.73	.48	1.30	1.13
Operator's labor	1.08	1.52	1.10	1.06	.61	3.27	3.56	1.37
Total labor	2.15	1.91	3.24	2.32	1.34	3.75	4.86	2.50
Cost per hour hired labor	.45	.45	.40	.25	.45	.50	.45	.37
<u>Investment per animal unit</u>								
Beef enterprise only	56.95	59.14	47.88	55.88	68.90	55.71	56.74	56.11
Range and pasture	26.77	18.30	15.79	26.19	43.89	42.06	Rented	24.95
Total	83.72	77.44	63.67	82.07	112.79	97.77	56.74	81.06

Above is a brief analysis showing the cost elements for each individual cooperator during 1943 in the Lassen county beef cattle management study. The average pasture cost of \$3.82 per animal unit made up a little less than 27 per cent, while the hay cost of \$9.63 constituted a little more than 67 per cent of the total feed cost. The rented pasture charge is based on actual payments made by cooperator. Crop aftermath pasture charge is based on rental value of grain or hay stubble, and permanent owned pasture is based on 5 per cent interest on appraised value of range land, plus taxes and other direct expenses. Hay costs, which were based on an average farm value of \$10.10 per ton, were a little more than 2½ times the pasture charge. It should be remembered that cattlemen raise practically all the hay they feed and that the average of \$10.10 is based on the average farm for the entire year. During 1943, this figure was somewhat below the farm value of the small amount of hay sold by cattlemen who had a surplus above their needs. It would be unfair, however, to charge the cattle enterprise with hay prices based on sales of a very small portion of the total crop. Based on estimated costs, the sale price of \$10.10 per ton for hay would yield the operator from \$2.50 to \$2.75 per ton farm income.

Table 6. Expense per Animal Unit in Detail for Individual Records, Beef Management Study, Lassen County, 1943.

Item	Serial No. 111	Serial No. 113	Serial No. 117	Serial No. 106	Serial No. 104	Serial No. 110	Serial No. 102	Average All Records
Hay	7.62	5.48	9.20	11.00	11.91	9.05	14.03	9.63
Concentrates	.55	.98	--	.11	.77	2.13	3.04	.73
Range and pasture	3.76	3.35	3.75	3.00	3.85	5.51	6.38	3.82
Salt and minerals	.30	.10	.04	.07	.02	.12	.14	.08
Total feed cost	12.23	9.91	12.99	14.18	16.55	16.81	23.59	14.26
Hired labor	1.07	.39	2.14	1.26	.73	.48	1.30	1.13
Operator's labor	1.08	1.52	1.10	1.06	.61	3.27	3.56	1.37
Horses, etc.	.32	.29	.42	.29	.26	.77	.29	.34
Autos and trucks	.30	.11	.33	.14	.10	.12	1.40	.27
Miscellaneous, Taxes, etc.	.62	.72	.45	.66	.52	1.34	.68	.64
Depreciation	.60	.38	.08	.30	.60	.95	.26	.38
Interest on investment	2.85	2.96	2.56	2.79	2.92	2.78	2.84	2.80
Total production expense	19.07	16.28	20.07	20.68	22.29	26.52	33.92	21.19
Less miscellaneous income	---	.03	---	---	---	---	---	.01
Net production expense	19.07	16.25	20.07	20.68	22.29	26.52	33.92	21.18

Items of expense for the individual cooperators, who finished the 1943 beef management study, have been brought together in the above table. The total production expense has been segregated into the eleven most important items for the purpose of studying their relative importance and in order to make comparisons between the individual cooperators. It will be seen from this array of items that the total production cost includes farm value of all feeds, labor, overhead items, and interest at 5 per cent on average investment for the year. The feed cost, which represented 67.3 per cent of the total, was the most important item of expense. Of the expense items other than feed, interest on investment constituted the heaviest charge (\$2.80 per animal unit). Family and hired labor made up the third most important charge with \$2.50 per animal unit, which represented 11.8 per cent of the total cost of production. All other costs, including horse labor, auto, and truck hire, taxes and other miscellaneous items, and depreciation accounted for the other expenses, which were but 7.6 per cent of the total.

There was a wide variation in the total cost per animal unit between the various individuals in this study. A study of past records indicate that feed costs have increased almost 50 per cent since our records were started in 1935. At the same time total costs have gone up only 37 per cent.

Table 7. Cost, Value and Net Income per Hundredweight of Beef Produced, Beef Cattle Management Studies, Lassen County, 1943

Item	Serial No. 111	Serial No. 113	Serial No. 117	Serial No. 106	Serial No. 104	Serial No. 110	Serial No. 102	Average All Records
Pounds beef produced per A.U.	355	340	287	297	305	319	340	313
<u>Cost per cwt. of beef produced</u>								
Hay	2.15	1.61	3.21	3.70	3.91	2.84	4.13	3.08
Concentrates	.16	.29	--	.04	.25	.67	.90	.23
Range and pasture	1.06	.98	1.31	1.01	1.26	1.73	1.88	1.23
Salt and minerals	.08	.03	.01	.02	.01	.03	.04	.02
Total feed cost	3.45	2.91	4.53	4.77	5.43	5.27	6.95	4.56
Hired labor	.30	.12	.75	.42	.24	.15	.38	.36
Operator's labor	.31	.45	.38	.35	.20	1.03	1.05	.43
Horses and dogs	.09	.09	.15	.10	.09	.24	.08	.11
Auto and truck	.08	.03	.12	.05	.03	.03	.41	.09
Miscellaneous, taxes, etc.	.18	.21	.15	.23	.17	.42	.20	.20
Depreciation	.17	.11	.03	.10	.19	.30	.08	.12
Interest on investment	.80	.87	.89	.94	.96	.87	.83	.90
Total cost of production	5.38	4.79	7.00	6.96	7.31	8.31	9.98	6.77
Average value beef produced	11.73	10.80	11.09	9.57	9.54	10.22	11.26	10.46
Management income	6.35	6.02	4.09	2.61	2.23	1.91	1.28	3.69
Farm income, beef only	7.46	7.34	5.36	3.90	3.39	3.81	3.16	5.02
Farm, beef and range, inc.	7.64	7.61	5.64	4.34	3.70	4.27	3.16	5.31

This table shows the details of the cost, value, and net income per hundredweight of beef produced in the 1943 Lassen Co. beef cattle management study. The cost per hundredweight depends upon the relationship between the cost and the pounds of beef produced per animal unit. A comparison of serial numbers 113 and 102 in the above table is a very good example. Each of these cattle raisers produced 340 pounds of beef per animal unit. There was, however, a very great difference in the total cost per hundredweight of beef produced. Very often high production costs cancel out both high prices and yields per animal unit. For this reason efficient management practices may be just as important as selling beef produced at a high market value.

There was quite a variation from record to record in the total cost per pound of beef produced. The widest range was between records number 113 and number 102. On the other hand, the average value per hundredweight of beef produced was about the same for all records. When measured in terms of farm, beef and range income, however, there was quite a divergence. For example, it required the keeping of 131 animal units per \$1,000 farm, beef and range income for record number 111; whereas, for the same income, it required 316 animal units for record number 102.

Table 8. General Summary of Individual Records on Breeding Cow Basis, Beef Cattle Management Study, Lassen County, 1943.

Item	Serial No. 111	Serial No. 113	Serial No. 117	Serial No. 106	Serial No. 104	Serial No. 110	Serial No. 102	Average All Records
Calves raised per 100 cows	95	82	82	82	82	90	91	85
Pounds beef produced per breeding cow	514	555	655	632	618	474	491	582
Animal units per cow	1.449	1.633	2.285	2.128	2.028	1.484	1.444	1.861
<u>All stock sold</u>								
Average weight per head	lbs. 499	649	1009	902	804	499	478	695
Average value per head	63.41	75.34	124.62	105.75	85.61	50.53	56.30	80.32
Av. price received per cwt.	12.70	11.61	12.36	11.72	10.64	10.12	11.78	11.56
<u>Per breeding cow</u>								
Total income	63.48	67.49	72.67	63.80	68.69	51.05	61.50	64.54
Total expense	30.86	34.07	45.87	47.34	54.91	41.99	55.23	43.08
Management income	32.62	33.42	26.80	16.46	13.78	9.06	6.27	21.46
Management and labor income	34.18	35.90	29.31	18.71	15.01	13.91	11.41	24.01
Farm income	38.31	40.73	35.15	24.66	20.93	18.04	15.50	29.23
Farm and range income	39.27	42.23	36.96	27.45	22.84	20.21	15.50	30.94

It was pointed out in the beginning of the report that the "breeding cow" is not an altogether satisfactory unit of measurement of input or output factors of production. However, for the average cattleman, who runs a herd of breeding cows and does not buy or sell cattle as a part of his operations, the breeding cow figures on costs and income from year to year are excellent guides as to what may be expected. For this reason we are presenting the above table in which some income and expense items are measured on a "breeding cow" basis. In this compilation breeding cows are considered to be those animals of the herd subjected to bull service, in order to produce the current calf crop. These figures are adjusted, if pregnant cows are either bought or sold prior to calving, or when yearling heifers are unintentionally bred.

One of the most significant lines in the above array of figures is the one showing the number of calves raised per 100 breeding cows. Not so many years ago a calf crop of 70 calves raised per 100 breeding cows was not uncommon. Under present conditions, however, we seldom have an experienced cattleman reporting so low a calf crop. Of the seven cooperators in this study four of them reported 82 calves raised per 100 cows. The other three reported 90 or more. The same wide variation in farm and range income between the different records shows in this table, as in some of the preceding figures. This figure of farm and range income is the amount of money per breeding cow that each operator had to meet his living expenses and other financial obligations without depleting inventory values or using up money which should be set aside for depreciation reserves.