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BEEF CATTLE MANAGEMENT STUDY FOR
LASSEN AND SHASTA COUNTIES

1941

A study of income, costs and earnings on 10 beef cattle enterprises in Lassen County and 3 in Shasta County for the record year ending February 28, 1942

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 and Shasta Counties

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BEEF CATTLE MANAGEMENT STUDY FOR
LASSEN AND SHASTA COUNTIES

by

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INTRODUCTION

This is the seventh year that the Agricultural Extension Service of the University of California has conducted a beef management study in Lassen and Shasta counties. During the past year (1941) ten records were completed in Lassen County and three in Shasta. This report shows a comparison between the profit-determining factors for the past seven years, (tables 1 to 3 inclusive) and also an analysis of each record for the record year 1941 (tables 4 to 7 inclusive). The data presented are for typical beef ranches in these two counties. The sample is so small, however, that the authors do not present these figures as averages for the district, although they are typical of the better managed beef enterprises. The purpose of these studies is to develop information which will be useful to the individual cattlemen in determining the most profitable practices to use in their own operations.

Relation of Beef Cattle to Other Enterprises

The material in this pamphlet deals with the beef enterprise only. On most of the ranches included in the study, there were other farming enterprises, which contributed to the total income of the operator. Some of the other enterprises, such as the production of hay or pasture, are carried on for the purpose of furnishing needed materials for growing of livestock, while other enterprises, such as poultry raising or grain raising, may not have any relation to the cattle business. It is, therefore, necessary to departmentalize the farm accounts so that the beef enterprise will be charged with the proper expenses and credited with the proper expenses, in order to have a satisfactory analysis of the management factors responsible for success or failure in the beef enterprise. All man labor, field power, cash and overhead expenses, such as taxes, depreciation and interest on investment incurred in producing hay or other feeds are charged to these crops and become a cattle cost when used for beef production. All labor used in feeding is charged as a cattle expense, not as a feed cost.

Basis of Comparison

In order to make an understandable comparison of the different items of income and expense between different operators, some uniform standard must be set up.

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Most cattlemen think of the breeding cow as the appropriate unit for measuring items of input and receipts. The breeding cow is a satisfactory unit for measuring some production factors, such as the percentage of calf crop, but does not serve well as a unit of measure when herds vary widely in proportion of cows to other stock. The "animal unit" or mature head equivalent is the most suitable unit with which to measure production factors, as all types of operations can be compared one with another. An animal unit is defined as the equivalent of a mature beef animal, a bull, a cow, or steer over two years of age. Yearlings, animals from 1 to 2 years of age, are considered .75 of an animal unit and calves from birth to 1 year are .50 an animal unit each. One and one-third yearlings and two calves thus make one animal unit.

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 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 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 and Shasta Counties Beef Cattle Management Records for 1941 with comparisons of Lassen County records 1935-1940.

Record Year	1935	1936	1937	1938	1939	1940	1941	Seven year Average
Number of herds in study	10	11	9	9	11	12	13	74
Breeding cows per herd	303	305	276	181	353	210	302	276
Average number animal units per herd	639	657	558	356	665	377	616	553
Average an. units per 100 breeding cows	210.6	216.1	202.3	196.5	188.6	179.2	204.0	200.5
Calves raised per 100 breeding cows	74.9	76.7	68.0	75.2	72.4	77.9	81.4	75.6
Number of animals died or lost	5.2	4.5	7.1	4.8	2.4	3.4	2.3	4.2
Net head raised per 100 br. cows	69.7	72.2	60.9	70.4	70.0	74.5	79.1	71.0
Net head raised per 100 A.U.	33.1	35.5	30.1	35.8	37.1	41.6	38.8	36.0
Pounds beef produced per cow	591	599	486	586	521	545	608	562
Pounds beef produced per A.U.	281	277	240	298	276	304	298	282
Pounds beef sold per A.U.	243	212	287	410	278	271	268	281
Hay fed per A.U. pounds	1939	1926	1952	1576	1762	2183	2513	1979
Grain fed per A.U. pounds	34	16	24	45	56	34	28	34
Salt fed per A.U. pounds	10	8	7	10	13	--	8	9
Hours hired labor per A.U.	5.1	3.7	5.5	4.4	5.2	5.2	4.1	4.7
Hours operators labor per A.U.	2.3	2.4	3.2	3.5	1.6	3.0	1.9	2.6
Total man hours labor per A.U.	7.4	6.1	8.7	7.9	6.8	8.2	6.0	7.3
Value of hay per ton	\$ 5.57	5.68	6.23	5.56	6.06	6.08	7.00	6.03
Value of concentrates per cwt.	\$ 1.18	1.92	2.04	1.54	1.96	1.64	1.91	1.74
Value per hour hired labor	\$ 26.6	29.0	22.4	23.6	28.5	28.9	30.4	27.1
Value per hour operator's labor	32.0	38.0	22.5	25.7	36.3	31.4	43.2	32.7
Gross income per breeding cow	\$ 36.84	41.15	35.95	45.79	34.00	41.41	53.66	41.26
Gross income per animal unit	\$ 17.49	19.07	17.77	23.30	18.02	23.12	26.31	20.73
Gross income per cwt. of beef raised	\$ 6.23	6.87	7.34	7.81	6.53	7.60	8.83	7.32
Management income per animal unit	\$.32	2.11	-.11	2.21	.33	4.19	4.61	1.95
Farm income per animal unit	\$ 3.37	5.20	2.90	5.57	3.19	7.41	8.01	5.09
Farm, beef, and range income per A.U.	\$ 5.69	6.81	3.93	7.16	5.33	9.18	9.82	6.85
Management income per cwt. beef	\$.11	.76	-.04	.74	.12	1.38	1.55	.66
Farm income per cwt. beef	\$ 1.20	1.88	1.20	1.86	1.15	2.44	2.69	1.77
Farm, beef and range income per cwt.	\$ 2.03	2.46	1.63	2.39	1.93	3.02	3.30	2.39

Table 2. General summary of Lassen-Shasta Counties Beef Cattle Management 1941 (continued)

	1935	1936	1937	1938	1939	1940	1941	Seven year Average
<u>Cost per animal unit of producing beef</u>								
Rented grazing land	.52	.82	1.10	1.10	.80	.90	1.02	.89
Temporary farm pasture	1.13	.97	.57	.77	.77	.75	.86	.83
Owned permanent pasture and range	2.03	1.49	1.22	1.90	2.85	2.14	2.29	1.99
Total pasture cost	3.68	3.28	2.89	3.77	4.42	3.79	4.17	3.71
Value of hay used	5.40	5.47	6.08	4.38	5.34	6.63	8.80	6.02
Value of concentrates and grain	.40	.31	.49	.69	1.10	.55	.53	.58
Value of salt and minerals	.09	.09	.08	.09	.14	.12	.11	.10
Total feed cost	9.57	9.15	9.54	8.93	11.00	11.09	13.61	10.41
Hired labor cost	1.35	1.22	1.23	1.03	1.49	1.50	1.25	1.30
Value of operator's labor	.73	.71	.73	.91	.56	.95	.84	.77
Value of horse labor	.42	.43	.42	.38	.41	.39	.42	.41
Auto and truck expense	.22	.20	.21	.22	.24	.28	.24	.23
Miscellaneous, taxes, etc.	.50	.52	.41	.47	.46	.74	.61	.53
Depreciation	.36	.34	.34	.51	.41	.46	.37	.40
Interest on investment	2.32	2.38	2.28	2.45	2.30	2.27	2.72	2.39
Total cost per animal unit	15.47	14.95	15.16	14.90	16.87	17.68	20.06	16.44
Less miscellaneous income	.10	.12	.12	-	.01	.14	.06	.08
Net cost of production per A.U.	15.37	14.83	15.04	14.90	16.86	17.54	20.00	16.36
Total value of beef produced	15.69	16.94	14.93	17.11	17.19	21.73	24.61	18.31
Management income per A.U.	.32	2.11	-.11	2.21	.33	4.19	4.61	1.95
Plus operator's labor	.73	.71	.73	.91	.56	.95	.68	.75
Labor and management income	1.05	2.82	.62	3.12	.89	5.14	5.29	2.70
Plus interest on investment	2.32	2.38	2.28	2.45	2.30	2.27	2.72	2.39
Farm income, beef cattle only	3.37	5.20	2.90	5.57	3.19	7.41	8.01	5.09
Plus interest on range owned	2.32	1.61	1.03	1.59	2.14	1.77	1.81	1.75
Beef and range income per A.U.	5.69	6.81	3.93	7.16	5.33	9.18	9.82	6.84
Capital and management income	2.64	4.49	2.17	4.66	2.63	6.46	7.33	4.34
Per cent earned on investment	5.7	9.4	4.8	9.5	5.7	14.2	13.5	9.0
Labor and management income per hr.	.46	1.18	.19	.89	.56	1.71	2.78	1.11
Hours of operator's labor	2.3	2.4	3.2	3.5	1.6	3.0	1.9	2.6

Table 3. General summary of Lassen and Shasta Counties Beef Cattle Management 1941 (continued)

	1935	1936	1937	1938	1939	1940	1941	Seven year averages
<u>Cost per hundred weight of producing beef</u>	\$							
Range and pasture	1.31	1.18	1.19	1.26	1.60	1.25	1.40	1.31
Value farm hay	1.93	1.97	2.51	1.47	1.93	2.18	2.95	2.13
Grain and concentrates	.14	.11	.20	.23	.40	.18	.18	.21
Salt and minerals	.03	.03	.04	.03	.05	.04	.04	.04
Total feed cost	3.41	3.29	3.94	2.99	3.98	3.65	4.57	3.69
Hired labor	.48	.44	.51	.35	.54	.49	.47	.47
Operator's labor	.26	.26	.30	.30	.20	.31	.23	.26
Horse labor	.15	.16	.17	.13	.15	.13	.14	.15
Auto and truck	.08	.07	.09	.07	.09	.09	.08	.08
Miscellaneous, taxes, etc.	.18	.19	.17	.16	.17	.24	.21	.19
Depreciation	.13	.12	.14	.17	.15	.15	.12	.14
Interest on investment	.83	.86	.94	.82	.83	.75	.91	.85
Total production cost	5.51	5.39	6.26	4.99	6.11	5.81	6.73	5.83
Less miscellaneous income	.03	.04	.05	--	--	.04	.02	.03
Net cost per hundredweight	5.48	5.35	6.21	4.99	6.11	5.77	6.71	5.80
Average value of beef produced	5.59	6.11	6.17	5.73	6.23	7.15	8.26	6.46
Management income per cwt.	.11	.76	.04	.74	.12	1.38	1.55	.66
Plus operator's labor	.26	.26	.30	.30	.20	.31	.23	.26
Labor and Management income	.37	1.02	.26	1.04	.32	1.69	1.78	.92
Plus interest on investment	.83	.86	.94	.82	.83	.75	.91	.85
Farm income beef only per cwt.	1.20	1.88	1.20	1.86	1.15	2.44	2.69	1.77
Plus interest on range owned	.83	.58	.43	.53	.78	.58	.61	.62
Beef and range income per cwt.	2.03	2.46	1.63	2.39	1.93	3.02	3.30	2.39
Average price received beef sold	5.86	6.48	6.14	5.68	6.48	7.52	8.80	6.71

Table 4. General Summary Individual Records on Animal Unit Basis Lassen-Shasta Counties 1941

Ser. No.	Per 100 Animal Units		Main animals sold in 1941 aside from cows				Lbs. Produced Per A.U.	Value Per Cwt. Prod.	Dollars per Animal Unit					
	Net Hd. Raised	Head Died	Kind	Av. Weight	Value Per Hd.	Price Per Cwt.			Value Produced	Cost of Prod.	Management Income	Labor Income	Farm Income	Farm Beef Range
111	64	1	Calves	436	51.52	11.82	337	9.40	31.69	12.24	\$19.45	20.64	23.18	24.40
113	46	2	St 2-3	775	77.50	10.00	332	9.77	32.43	17.68	14.75	15.75	18.49	18.95
154	30	1	St 3+	1081	104.36	9.65	332	9.81	32.59	18.82	13.75	15.33	17.78	17.97
106	44	-	St 1-2	707	67.18	9.50	307	8.62	26.48	16.54	9.94	10.72	13.35	14.96
117	34	1	St 3+	1100	109.98	10.00	311	8.56	26.63	17.44	9.19	9.87	12.40	13.45
116	31	2	St 1-2	744	69.88	9.39	298	7.35	21.88	14.59	7.29	9.00	11.47	12.60
104	37	1	St 1-2	761	57.13	7.51	310	7.23	22.43	16.68	5.75	6.45	9.23	11.61
140	24	1	St 3+	1002	95.15	9.50	243	8.35	20.29	15.42	4.87	5.50	8.08	8.08
110	58	3	Calves	365	40.55	11.11	273	8.70	23.74	19.22	4.52	6.38	9.15	11.29
102	63	1	"	469	47.79	10.20	319	9.26	29.53	25.59	3.94	5.76	8.72	8.72
107	41	2	St 1-2	851	84.86	9.98	347+	8.15	28.24	25.36	2.88	6.24	9.26	10.69
153	37	3	St 2-3	984	94.98	9.65	230+	8.73	20.10	19.15	.96	3.27	5.53	7.75
115	36	1	St 1-2	724	68.45	9.45	289	7.68	22.22	23.75	1.53	1.53	1.28	4.17
Avg.	39	1	xxx	769	74.56	9.83	298	8.26	24.61	20.00	4.61	5.29	8.01	9.82

A general summary of the 13 herds included in the 1941 Beef Management Study for Lassen and Shasta Counties are shown in the above table. These records are arranged from the top to the bottom of the table on the basis of the management income, which is shown in the fourth from last column.

During the 1941 season all records but one showed an income above all costs. Record #111, which topped the list with highest management income, was so because of better than average production, with higher than average price coupled with a very low cost. Number 115, which was the least profitable of the cattle enterprises, was at the bottom of the list on account of high costs together with the light weight of cattle and not too good a price received.

Three of the operators sold weaner calves; five of them yearling steers; two of them two year old steers and three of them 3 year old steers. There was considerable variation in the important profit-determining factors. The number of pounds of beef produced per animal unit varied from a high of 347# for record #107 to a low of 230# for Record #153. The income from beef produced varied from a high of \$9.81 per cwt. for record #154 to a low of \$7.23 per cwt. for record #104.

We also find that the total cost of production for the high record of \$25.59 per animal unit was a little more than double that of the cost of the low record, which was \$12.24 per animal unit.

By tracing each record through the following tables, each operator can determine for himself wherein his particular record was strong or weak from a management standpoint.

Table 5. Analysis of pasture costs and some other inputs in the individual records of the beef management study for Lassen and Shasta counties, 1941.

Serial Number	Pasture Cost Per Animal Unit					Hay Fed		Concentrates		Hours Labor Per A. U.		Cost Per Hr. Hired Labor	Investment Per An. Unit	
	Nt'l For., Tir. Grazing	Other Rented	Own Land		Total Cost	Pounds Per A.U.	Price Per Ton	Pounds Per A.U.	Price Per Cwt.	Hired	Opera-tor		Hired Labor	Beef Enterp.
			Crop Aft'mth	Permn't Pasture										
111	\$0.66	\$0.99	\$0.45	\$0.92	\$3.02	753	\$4.74	24	\$1.58	3.0	3.0	\$0.36	50.85	24.50
113	.35	.06	.78	.60	1.79	2361	7.00	89	1.97	1.8	2.5	.33	54.79	9.20
154	.14	2.45	1.17	.25	4.01	2340	7.00	2	1.75	2.0	4.2	.28	49.06	3.90
106	.41	.50	.60	1.93	3.44	2335	5.74	22	1.75	4.0	2.0	.28	52.58	32.20
117	.28	.38	1.05	1.29	3.00	2259	7.00	--	--	5.7	2.0	.31	50.52	20.92
116	.58	--	.38	1.28	2.24	1252	6.52	--	--	7.8	3.4	.29	49.51	22.61
104	.22	.26	1.03	2.85	4.36	1675	7.00	36	2.05	2.0	1.6	.31	55.56	47.55
140	.66	2.59	.30	.90	4.45	1637	8.29	--	--	1.3	2.1	.22	51.62	--
110	.37	.26	.56	2.79	3.98	2011	7.00	29	2.15	2.3	4.6	.29	55.42	42.80
102	.02	2.75	.56	--	3.33	2788	9.59	50	1.38	3.3	4.5	.29	59.26	--
107	.75	--	.45	1.78	2.98	3951	5.79	42	1.62	7.3	8.4	.29	60.38	28.50
153	--	5.94	--	2.72	8.66	250	8.68	20	1.24	1.4	5.8	.31	45.27	44.47
115	.26	.14	1.14	3.60	5.14	3269	7.01	28	2.01	5.4	.5	.31	56.30	57.82
Avg.	.30	.72	.86	2.29	4.17	2513	7.00	28	1.91	4.1	1.9	.30	54.34	36.13

In the above table is shown the most important costs for individual operators in the 1941 Lassen-Shasta beef management study. On the average, hay and pasture represented almost 65 per cent of the total production expense. The pasture costs have been broken down into operator-owned pasture and rented pasture. Rented pasture was charged at actual rental payment. The charge for owned permanent pasture was based on 5 per cent interest on appraised value, plus taxes and other direct expense. Crop aftermath was figured at sale value to other cattlemen. Hay was almost double pasture charges. It should be pointed out that cattlemen raise practically all of the hay fed, and the hay charge is based on average farm value over the year. At the figures shown in this table most cattlemen will make a farm income of from \$1.50 to \$2.00 per ton when selling hay through cattle at prices quoted.

Ten of the thirteen operators fed concentrates, although one of these, No. 154, used a very small quantity. On the average it required 6.0 hours of man labor per animal unit to carry on the business on these 13 ranches. Two-thirds of this labor was hired and one-third was furnished by the operator. In the last two columns of the table investment per animal unit is shown. The range and pasture investment is rather low for the reason that all operators rented outside range.

Table 6. Expenses per animal unit in detail for individual records, Beef Management Study for Lassen and Shasta counties, 1941.

Serial Number	Hay	Concentrates	Range and Pasture	Salt and Minerals	Total Feed Cost	Hired Labor	Operator's Labor	Horses and Dogs	Autos and Trucks	Miscellaneous, Taxes, Etc.	Depreciation	Interest on Investment	Total Production Expense	Miscellaneous Income
111	1.79	.38	3.02	.35	5.54	1.07	1.19	.37	.35	.60	.58	2.54	12.24	--
113	8.26	1.76	1.79	.18	11.99	.59	1.00	.51	.16	.57	.40	2.74	17.96	.28
154	8.19	.03	4.01	.04	12.27	.55	1.58	.79	.29	.40	.49	2.45	18.82	--
106	6.70	.39	3.44	.05	10.58	1.13	.78	.38	.08	.59	.37	2.63	16.54	--
117	7.90	--	3.00	.15	11.05	1.77	.68	.51	.25	.55	.10	2.53	17.44	--
116	4.08	--	2.24	.08	6.40	2.27	1.71	.53	.24	.73	.32	2.47	14.67	.08
104	5.87	.74	4.36	.04	11.01	.62	.70	.24	.20	.48	.65	2.78	16.68	--
140	6.78	--	4.45	.03	11.26	.29	.63	.25	.02	.26	.13	2.58	15.42	--
110	7.04	.62	3.98	.08	11.72	.67	1.86	.40	.14	.65	1.01	2.77	19.22	--
102	13.36	.70	3.33	.30	17.69	.95	1.82	.46	.82	.63	.26	2.96	25.59	--
107	11.45	.68	2.98	.06	15.17	2.12	3.36	.55	.32	.68	.59	3.02	25.81	.45
153	1.09	.25	8.66	.13	10.13	.43	2.31	.37	2.63	.61	.41	2.26	19.15	--
115	11.46	.56	5.14	.10	17.26	1.68	.37	.42	.16	.75	.33	2.81	23.78	.04
Avg.	8.80	.53	4.17	.11	13.61	1.41	.68	.42	.24	.61	.37	2.72	20.06	.06

We have brought together in this table a statement showing each class of charge made against the cattle business on all 13 records in this study. On the average all feed costs represented a little over 68 per cent of the total expense. Man labor accounted for slightly more than 10 per cent, while horse labor, auto and truck charges, miscellaneous items and depreciation made up another 8 per cent of the total. Interest on investment in the cattle business, exclusive of capital involved in the ownership of range, pasture and hay land, made up a little over 13 per cent of the total cost. Total production expense ranged from a high of \$25.81 for record No. 107 to a low of \$12.24 per animal unit for record No. 111.

Data from table 2 indicates that total costs in beef cattle production have increased from \$15.47 per animal unit in 1935 to \$20.06 in 1941. This is an increase of almost 30 per cent in 7 years. It should be pointed out, however, that there has also been a steady increase in the value of beef produced per animal unit since 1935. This increase has amounted to \$8.92 per animal unit, which is about 57 per cent greater than the value of beef produced in that year.

Table 7. Costs, value, and net income per hundredweight of beef produced for Lassen and Shasta Counties, 1941.

Serial Number	Hay Cost	Concentrate Cost	Range and Pasture	Salt and Minerals	Total Feed Cost	Hired Labor	Operator's Labor	Horse Auto and Misc.	Depreciation	Interest on Investment	Total Cost of Production	Average value per Cwt. Produced	Management Income	Farm Income
111	.53	.12	.90	.10	1.65	.32	.35	.39	.17	.75	3.63	9.40	5.77	6.87
113	2.49	.53	.54	.05	3.61	.18	.30	.37	.12	.83	5.41	9.77	4.44	5.57
154	2.47	.01	1.21	.01	3.70	.16	.47	.45	.15	.74	5.67	9.81	4.14	5.35
106	2.18	.13	1.12	.02	3.45	.37	.25	.34	.12	.85	5.38	8.62	3.24	4.34
117	2.54	--	.96	.05	3.55	.57	.22	.43	.03	.81	5.61	8.56	2.95	3.98
116	1.37	--	.75	.03	2.15	.76	.57	.51	.11	.83	4.93	7.35	2.45	3.85
104	1.89	.24	1.41	.01	3.55	.20	.23	.29	.21	.90	5.38	7.23	1.85	2.98
140	2.80	--	1.83	.01	4.64	.12	.26	.22	.05	1.06	6.35	8.35	2.00	3.32
110	2.58	.22	1.46	.03	4.29	.25	.68	.44	.37	1.01	7.04	8.70	1.66	3.35
102	4.19	.22	1.04	.09	5.54	.30	.57	.60	.08	.93	8.02	9.26	1.24	2.74
107	3.30	.20	.86	.02	4.38	.61	.97	.45	.17	.87	7.45	8.15	.83	2.67
153	.47	.11	3.76	.06	4.40	.19	1.00	1.56	.18	.98	8.31	8.73	.42	2.40
115	3.96	.19	1.78	.03	5.96	.58	.13	.47	.11	.97	8.22	7.68	-.52	.45
Avg.	2.95	.18	1.40	.04	4.57	.47	.23	.43	.12	.91	6.73	8.26	1.55	2.69

The cost of production of beef per hundredweight depends upon the relationship between the cost and the pounds of beef produced per animal unit. It will be noted in third from last column in this table that a high value per hundredweight of beef produced does not always result in a high farm income. High production costs often consume most of the selling price. For example, take record No. 102 which ranked fourth in average value per hundredweight produced, but ranked tenth in management income. This is only further proof that management to achieve efficient production is as important as selling to best advantage.

In connection with the selling angle, it should be pointed out that average value per hundredweight beef produced ranged from a high of \$9.81 per hundredweight to a low of \$7.23. This is a difference of \$2.58 per hundredweight. Such a variation as this is of course not always caused by the operator being unfamiliar with market trends. The relative proportion of different age animals, condition of animals, and time of year sold are some of the other factors that determine average value per hundredweight of beef produced. It should be pointed out here that value of beef per hundredweight has increased 50 per cent since these records were started in 1935 (See table 3).

Table 8. General Summary of Individual Records on a Breeding Cow Basis Beef Management Study, Lassen and Shasta Counties, 1941.

Serial Number	Animal Units Per Cow	Calves Raised Per 100 Cows	Beef Produced Per Cow	All Stock Sold			Stock Sold Per Cow	Stock Bought Per Cow	Income Per Cow	Cost of Production Per Cow	Management Income Per Cow	Labor Income Per Cow	Farm Income Per Cow	Farm Beef Range Income
				Av. Wt. Per Head	Av. Val. Per Head	Av. Price Per Cwt.								
111	1.42	92	477	478	53.36	11.17	47.13	8.12	44.87	17.33	27.54	29.22	32.82	34.55
113	1.89	91	628	727	72.45	9.97	60.20	--	61.36	33.44	27.92	29.80	34.98	35.85
154	2.37	74	788	946	88.08	9.32	85.63	--	77.32	44.68	32.64	36.38	42.20	42.66
106	1.85	82	570	789	69.25	8.77	41.34	--	49.10	30.67	18.43	19.88	24.75	27.74
117	2.26	79	704	1019	96.09	9.43	47.31	--	60.31	39.50	20.81	22.36	28.08	30.45
116	2.23	74	665	818	67.46	8.25	45.74	1.70	48.87	32.58	16.29	20.10	25.63	28.16
104	2.24	85	694	811	63.18	7.79	57.85	12.13	50.20	37.33	12.87	14.44	20.66	25.98
140	2.78	70	676	923	81.09	8.78	58.45	2.42	56.49	42.94	13.55	15.31	22.50	22.50
110	1.49	90	406	445	45.49	10.22	27.29	2.40	35.33	28.60	6.73	29.49	13.61	16.80
102	1.52	98	485	533	49.93	9.37	40.00	1.86	44.90	38.90	6.00	8.76	13.26	13.26
107	1.89	81	657	926	80.18	8.65	45.41	--	53.51	48.05	5.46	11.83	17.55	20.25
153	2.08	84	479	839	80.00	9.54	44.93	10.62	41.81	39.83	1.98	6.79	11.50	16.12
115	2.07	78	600	850	70.44	8.29	44.10	3.19	46.08	49.25	- 3.17	- 3.17	2.67	8.67
Av.	2.04	81	608	794	69.85	8.80	48.07	3.13	50.19	40.80	9.39	10.80	16.34	20.02

As has been pointed out in the beginning of this pamphlet, the breeding cow unit is not a satisfactory basis for measuring many of the in-put or out-put factors of production. For the average cattleman, who runs a breeding cow herd under the usual feeding and marketing conditions, the breeding cow figures on costs or income are excellent guides as to what he may expect. Some of these items are shown on a breeding cow basis in table 8. The seventh from last column "Stock Bought per Cow" indicates the extent to which purchased animals entered into the operations. Only three of the thirteen herds purchased much stock.

Another column of figures of special interest is the "Calves Raised per 100 Cows". Not many years ago a calf crop (raised to weaners) of 70 per cent was not uncommon. This year only five of the thirteen records showed a calf crop below 80 per cent. One herd, No. 102, had almost a 100 per cent calf crop. It is also interesting to note the variation in the average selling price per hundredweight of beef sold. The range was from a high of \$11.17 to a low of \$7.79.