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CO-OPERATIVE EXTENSION WORK  
IN  
AGRICULTURE AND HOME ECONOMICS  
STATE OF CALIFORNIA

UNIVERSITY OF CALIFORNIA  
COLLEGE OF AGRICULTURE  
AND  
UNITED STATES DEPARTMENT OF AGRICULTURE  
CO-OPERATING

EXTENSION SERVICE  
FARM ADVISOR WORK  
AGRICULTURE CLUB WORK  
HOME DEMONSTRATION WORK

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College of Agriculture  
Berkeley, California  
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SAN JOAQUIN VALLEY  
BEEF CATTLE MANAGEMENT STUDY  
1940

A study of income, costs, and net income  
of 20 beef cattle enterprises in the eastern parts  
of San Joaquin, Merced, Fresno, Tulare, and Kern Counties

Compiled by  
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## INTRODUCTION

This is the first annual progress report on the beef management study conducted in a number of San Joaquin Valley counties. This report presents the 1940 records in detail, this year being the third year of the study in this region. A summary of 1938 records from this region was included in a state-wide summary for that year, and the 1939 records were summarized only in local reports in the individual counties. This report, however, brings together in tables 1 to 5 certain selected data for all 3 years of this study.

The study is being conducted by the Agricultural Extension Service in cooperation with a number of progressive cattlemen located along the east side of the San Joaquin Valley. Although feed conditions and management practices vary widely from ranch to ranch, these separate enterprises are representative enough so that a summary of them will present a picture of beef production in this region. It is hoped that an analysis and study of these records will not only assist the cooperating cattlemen but will also disclose principles of profitable management of value to the local cattle industry as a whole.

These studies are conducted by local farm advisers in the counties covered by means of annual inventories and monthly income and expense reports. The following have participated in conducting the study in this region:

San Joaquin County	W. C. Fleming, Assistant Farm Advisor
Merced County	S. D. Nelson, Assistant Farm Advisor
Madera County (1938 only)	E. L. Garthwaite, Farm Advisor
Fresno County	C. E. Wurth, Assistant Farm Advisor
Tulare County	C. L. Pelissier, Assistant Farm Advisor
Kern County	H. T. Strong, Assistant Farm Advisor

Records over the 3 years were completed and summarized by L. W. Fluharty, Extension Specialist in Farm Management, who is temporarily on leave and has turned the preparation of this report over to the author.

### Beef Cattle Enterprise a Part of Cattle Ranching Business

In order to understand this study it is necessary to consider a cattle ranch as divided into several enterprises, one of which is the beef cattle enterprise. Data and figures in this report pertain to the beef enterprise only, as separate from the ranching business, which may involve the production of hay, pasture, and other products. The beef enterprise is charged only with expenses for the beef cattle. Taxes on land and labor in the growing of hay and other crops are charged to those items, rather than to the cattle enterprise. However, the pasture charge for the use of owned range includes taxes on the land, as well as other costs making up a fair rental charge. Likewise, other home-grown feeds, such as hay and grain are charged to the beef enterprise at farm value, which is the estimated net amount they would bring if sold. These values usually result in some earnings to the operator in addition to those from the beef enterprise shown in this report.

The charging of all direct and non-direct expenses to the beef enterprise and crediting it with all income produced (whether sold or not) provides for a statement of profit and loss or an analysis and comparison of incomes and expenses. Such an enterprise statement is valuable for comparisons on the farm with other enterprises or with the same enterprise from year to year, and also valuable in making comparison with similar enterprises on other farms. Such comparisons disclose weak and strong points in the management of an enterprise and usually indicate where effort should be applied to render the enterprise more profitable.

### Animal Unit Basis of Comparison

To compare beef enterprises on different farms, production costs, income, etc., must be computed for a uniform unit. The "animal unit" or mature head equivalent is the most suitable unit in which to measure or express the size of a herd, since it best represents the feed-consuming needs of the herd. Cattlemen think in terms of a breeding cow, which is the appropriate unit for measuring calf crop, but doesn't serve very well as a unit of measure when herds vary so widely in the proportion of cows to all stock.

An animal unit is the equivalent of a mature beef animal, a bull, cow, or steer over two years of age. Yearlings (animals from 1 to 2 years) are .75 animal units per head, or it takes 1-1/3 head of yearlings to equal 1 animal unit. Calves under a year are 1/2 animal unit each, or it takes 2 calves to make an 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, less 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 this skill in management after all other expenses have been met. If a loss occurs, it will be indicated by a minus sign (-) in front of the loss.

Labor and Management Income is the management income plus the 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 him for his 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 and Net Income per Animal Unit

	1940 Records			1939	1938
	High Group	Low Group	Av.		
Number of records	11	9	20	20	23
Av. number of animal units per record	468	314	398	432	512
Cows per 100 animal units	57.0	56.3	56.7	54.0	47.6
Calves raised per 100 cows	66.2	72.7	68.5	70.2	77.4
Calves raised per 100 animal units	37.7	40.9	38.9	37.9	36.9
Head died per 100 animal units	1.6	1.7	1.7	1.6	2.0
Net head raised per 100 animal units	36.1	39.2	37.2	36.3	34.9
Pounds of beef produced per animal unit	266	272	268	257	285
Pounds of beef sold per animal unit	352	293	331	329	318
Av. price per cwt. beef sold	\$7.71	\$7.83	\$7.75	\$7.14	\$6.37
Av. value per cwt., all beef produced	7.38	7.75	7.51	7.27	6.07
Net cost of production per cwt.	5.04	8.37	6.24	6.43	5.77
Management income per cwt.	2.34	-0.62	1.27	.84	.30
Income per Animal Unit from Sale of:					
Bulls	\$0.67	\$0.73	\$0.69	\$0.44	\$0.38
Cows and 2 yr. heifers	5.74	4.52	5.31	5.68	3.67
Calves	4.52	7.07	5.43	4.66	4.15
Heifers 1 to 2	1.74	.11	1.16	.99	.88
Steers 1 to 2	5.14	3.57	4.58	3.90	2.12
Steers 2 to 3	4.01	1.57	3.14	2.56	3.04
Steers over 3	5.29	5.39	5.33	5.28	6.01
Total stock sold	27.11	22.96	25.64	23.51	20.25
Increase in stock inventory	8.06		5.11	--	--
Less cost of stock bought	15.58	1.63	10.62	4.40	2.54
Less decrease in stock inventory	--	.23		.42	.38
Value of beef produced per an. u.	19.59	21.10	20.13	18.69	17.33
Net cost of production per an. u.	13.37	22.78	16.72	16.55	16.46
Management income per an. u.	6.22	-1.68	3.41	2.14	.87
Plus-value operator's labor	.86	1.21	.99	.98	.65
Labor income	7.08	-.47	4.40	3.12	1.52
Plus-interest on beef ent. investment	2.68	2.88	2.75	2.56	2.47
Farm income	9.76	2.41	7.15	5.68	3.99
Plus-interest on investment in range	2.19	5.72	3.45	3.23	3.90
Total farm income	11.95	8.13	10.60	8.91	7.89

The 20 1940 records have been divided into two groups, a high profit and a low profit group, averages for which appear in front of or above the averages for all 20 records in tables 1 to 10. The high profit group shows more profit because of lower costs and in spite of lower calving percentage, lower prices, and lower pounds of beef produced per animal unit.

The 1940 records show as a group better net income because of better prices but with costs and production per animal unit about the same as in the 2 previous years. The per cent of income from sales of 3 year steers has declined while that from calves has increased since 1938. This indicates a trend toward the sale of beef cattle at younger ages from these ranches.

Table 2. Inputs, Prices and Expenses per Animal Unit

	1940 Records			Av. 1939	Av. 1938
	High	Low	Av.		
Head months pasture on national forests and public domain per a. u.	2.5	1.1	2.0	1.6	1.1
Acres owned range per animal unit	5.2	9.1	6.6	6.7	6.7
Acres rented range per animal unit	3.5	1.0	2.6	3.2	2.8
Acres crop, stubble, & irrigated pasture	0.2	0.9	0.4	0.5	0.6
Av. rental value per A owned range	\$0.52	\$0.63	\$0.58	\$0.53	\$0.62
Av. rent per A. rented range	0.53	0.51	0.52	0.48	0.40
Av. rental value per A. other pasture	1.61	5.65	4.12	3.40	4.03
Pounds of hay fed per animal unit	298	479	362	233	265
Pounds of concentrates	57	64	60	69	76
Av. cost or value of hay per ton	\$8.02	\$8.03	\$8.02	\$9.06	\$7.07
Av. cost or value of concentrates per cwt.	1.23	1.11	1.19	1.15	1.17
Hours of hired labor per animal unit	4	7	4	5	5
Hours of operators labor per an. unit	2	3	3	3	2
Total hours of labor per an. unit	6	10	7	8	7
Hay cost per animal unit	1.20	1.92	1.45	1.05	0.94
Concentrate cost	.70	.72	.71	.79	.89
Pasture and range	5.10	10.79	7.12	7.21	7.93
Salt and minerals	.10	.09	.10	.10	.09
Total feed cost per animal unit	7.10	13.52	9.38	9.15	9.85
Hired labor cost	1.01	2.02	1.37	1.56	1.64
Operator's and family labor	.86	1.21	.99	.98	.65
Horse and dog cost	.28	.36	.31	.28	.24
Auto and truck cost	.60	.75	.66	.63	.58
Miscellaneous costs	.49	.98	.66	.71	.84
Depreciation, buildings, fences, etc.	.44	1.15	.69	.70	.66
Interest on investment at 5% (beef ent.)	2.68	2.88	2.75	2.56	2.47
Total cost of production per animal unit	13.46	22.87	16.81	16.57	16.93
Less - miscellaneous income	.09	.09	.09	.02	.47
Net cost of production per animal unit	13.37	22.78	16.72	16.55	16.46

The above table accounts for the lower costs in the high profit group. They used more national forest and public domain range which is less expensive than owned range or rented private lands or irrigated and crop pastures. The low group had more owned and rented range and used considerably more crop and irrigated pastures. The low profit group in general had more high priced sources of pasture or range and also used more hay and a little more grain. This group also shows more labor per animal unit and a larger portion of hired labor. Every item of cost except salt was higher in this group. Depreciation was much higher because of more fences on more owned range and more buildings, etc.

Differences in costs between 1940, 1939, and 1938 are very minor and of little or no significance but with expected continued good beef cattle prices, costs would also be expected to rise. It will still be necessary to watch costs closely in order to keep them below income.

Table 3. Investment per Animal Unit

	1940 Records			Av.	Av.
	High	Low	Av.	1939	1938
Land in lots and corrals	\$0.22	\$0.23	\$0.22	\$0.32	\$0.41
Buildings, fences, & other improvements	6.41	17.33	10.29	10.61	10.65
Equipment	.80	1.42	1.02	1.16	1.23
Feed & miscel. supplies on hand	.99	.95	.98	.56	.51
Stock	45.14	37.64	42.48	38.53	36.61
Total investment beef enterprise	53.55	57.57	54.99	51.18	49.41
Land in range and permanent pasture	43.83	114.16	68.82	64.79	78.08
Total investment, beef & range	97.39	171.73	123.81	115.97	127.49
Acres owned range & pasture per a.u.	5.3	10.2	6.9	7.1	6.7
Av. investment per acre	\$8.30	\$11.20	\$9.98	\$9.15	\$11.63

The investment per animal unit shown above does not reflect the cost of engaging in the cattle business because it shows only the beef enterprise and the range land which is only a part of a complete cattle ranching unit. Also the investment in improvements and equipment is at current depreciated values rather than the cost of new facilities. The new cost of facilities would probably be at least twice as much as the current value. Buildings and other improvements shown above included only those chargeable directly to the beef enterprise or that part of the facilities used partly for other purposes. The operator's dwelling and its appurtenances is not included nor are buildings for horses, other livestock, and crop equipment.

Land in range and permanent pasture shown above is only that owned by the operator of the beef herd and does not include land for hay or grain production or for the use of livestock such as sheep, dairy cattle, or hogs. The high group shows a much lower investment in land because they use more rented land and range on public lands. No permanent irrigated pasture is reported in this group while the low profit group uses some higher price valley land in irrigated permanent pasture. Irrigated pasture, because of its location and irrigation costs furnishes feed at a higher cost than natural range, but its use is profitable under certain conditions where it increases efficiency of production and is supplemented by lower cost natural feed. Its use will probably be found most profitable for finishing cattle and for the cow and calf herd where maximum calf crops and rapid growth are obtained.

The last 3 years total farm income per animal unit (including interest on investment in range) averaged a little over \$9. To be safe suppose one counted on only \$8. Then to make an annual income of \$1600 a year he would need 200 animal units which without temporary pastures and other items would involve an investment of \$26,000 at \$130 per animal unit for the beef cattle enterprise and range land. Other facilities and a dwelling would bring the total cattle ranch investment up to about \$30,000 which is a sizeable investment for a family sized farm.

Table 4. Weights and Selling Prices of Beef Cattle Sold by Groups

	1940 Records			Av. 1939	Av. 1938
	High	Low	Av.		
Breeding bulls					
Average weight	1013	1000	1011	1282	755
Value per head	\$89.38	\$90.00	\$89.44	\$95.30	\$60.50
Price per cwt.	8.82	9.00	8.85	7.43	8.05
Beef bulls and stags, av. wt.	1428	1350	1395	1320	1262
Value per head	\$82.30	\$82.85	\$82.53	\$83.96	\$71.83
Price per cwt.	5.76	6.14	5.92	6.36	5.69
Cows, av. weight	933	1012	955	939	935
Value per head	\$55.70	\$57.55	\$56.22	\$50.39	\$43.35
Price per cwt.	5.97	5.69	5.89	5.37	4.64
Calves, av. weight	419	458	436	386	423
Value per head	\$40.49	\$42.48	\$41.39	\$31.88	\$27.61
Price per cwt.	9.67	9.28	9.49	8.26	6.53
Heifers 1 to 2, av. weight	578	535	576	564	646
Value per head	\$47.54	\$38.53	\$47.17	\$40.10	\$39.64
Price per cwt.	8.23	7.20	8.19	7.10	6.13
Steers 1 to 2, av. weight	644	659	648	679	623
Value per head	\$53.05	\$54.99	\$53.57	\$51.68	\$42.25
Price per cwt.	8.24	8.34	8.27	7.63	6.78
Steers 2 to 3, av. weight	916	922	917	796	930
Value per head	\$74.26	\$78.16	\$74.92	\$61.29	\$64.29
Price per cwt.	8.11	8.48	8.17	7.70	6.92
Steers over 3, av. weight	1103	1143	1116	1110	1139
Value per head	\$89.24	\$94.41	\$91.04	\$86.69	\$80.97
Price per cwt.	8.09	8.26	8.15	7.81	7.11
Heifers 2 to 3, av. weight	785	679	726	770	784
Value per head	\$53.21	\$51.84	\$52.45	\$55.64	\$49.46
Price per cwt.	6.78	7.63	7.22	7.23	6.31
Av. weight per head, all stock sold	749	734	744	708	737
Av. value per head	\$57.72	\$57.47	\$57.64	\$50.57	\$46.90
Av. price per cwt.	7.71	7.83	7.75	7.14	6.37

The average price per hundredweight of all stock sold varies with the prices for each class of stock and also with the proportion of sales from each class. Table 1 shows the income per animal unit from each class while the above table shows average weights and prices. Calves bring the highest price per hundred weight and in number sold calves exceed any other class for the study as a whole although they are not as great in number as all steers over 1 year of age. Some herds sell more calves, some sell more older steers at various ages as shown in table 6. There probably is no single age at which it is most profitable to sell stock in this region - that being an individual matter that varies with the feed resources and other management factors for each ranch. Where cattle can be fed well enough to grow rapidly it is advantageous to sell from range enterprises at as early an age as possible - usually before steers are 3 years old and sometimes before they are two, if not as calves.

Table 5. Inputs and Costs per Hundredweight of Beef Produced

	1940 Records			Av. 1939	Av. 1938
	High	Low	Av.		
Acres of owned and rented range	3.3	4.0	3.5	4.0	3.3
Pounds of hay	112	175	135	95	93
Pounds of concentrates	21	23	22	28	27
Hours of labor	2.2	3.5	2.7	3.2	2.5
Hay cost per cwt. of beef produced	\$0.45	\$0.71	\$0.54	\$0.41	\$0.33
Concentrate cost	.26	.26	.26	.31	.31
Range and pasture	1.92	3.97	2.66	2.80	2.78
Salt and minerals	.04	.03	.04	.04	.03
Total feed cost per cwt. of beef	2.67	4.97	3.50	3.56	3.45
Cost of hired labor	.38	.74	.51	.61	.58
Value of operator's labor	.33	.44	.37	.38	.23
Horse and dog cost	.10	.13	.11	.11	.08
Auto and truck	.23	.28	.24	.25	.20
Miscellaneous, taxes, etc.	.18	.36	.25	.27	.29
Depreciation	.17	.42	.26	.27	.23
Interest on investment	1.01	1.06	1.03	.99	.87
Total cost of production	5.07	8.40	6.27	6.44	5.93
Less miscellaneous income	.03	.03	.03	.01	.16
Net cost of production per cwt.	5.04	8.37	6.24	6.43	5.77
Av. value all beef produced	7.38	7.75	7.51	7.27	6.07
Management income per cwt.	2.34	-.62	1.27	.84	.30
Labor income	2.67	-.18	1.64	1.22	.53
Farm income	3.68	.88	2.67	2.21	1.40
Total farm income, beef & range	4.50	2.98	3.95	3.46	2.77

The beef produced during a year is spread over the entire herd - calves, yearlings, 2-year olds, etc. Some of it is sold but a considerable portion is held over for sale in the following year or is on animals which may be used for breeding for several years before they are ultimately sold. On the other hand beef cattle sold are composed of production of previous years as well as the current year. In these records no attempt is made to figure costs for the animals actually sold since costs are more significant if computed for the quantity produced. The quantity produced is computed from sales plus closing inventory minus purchases and closing inventory for both weights and values. Hence inventory values at beginning and end of year and the cost of stock purchased enters into the value of stock produced along with actual sales. Care is taken in estimating inventory weights and values to avoid any paper profits or losses due to unsound valuations.

The above table shows costs as computed for each hundredweight of beef animals produced along with the value and net income of this production. If values per hundredweight are compared with prices per hundredweight for stock sold in table 4 it will be seen the average values of stock produced were slightly below selling prices in 1940 and 1938 and slightly above in 1939. The high profit group in 1940 shows much lower cost of production per hundredweight of beef produced than the low profit group because of much lower costs per animal unit.

Table 7. Prices and Quantities of Inputs per Animal Unit in Individual Records

Ser. no.	Hd. Mo. pasture nat'l for.etc.	Other range owned & rented		Acres crop & irrig. pasture	Hay fed		Concentrates		Lbs. salt & minerals	Hours labor per an. unit		Cost per hr. hired labor	Investment per An. Unit	
		Acres	Cost per A.		Lbs. per a.u.	Price per ton	Lbs. per a.u.	Price per cwt.		Hired	Operator & family		Beef cwt.	Range & past.
252	1.9	9.3	\$0.56	-	18	\$4.00	124	\$0.94	5	1.5	5.5	28.5¢	\$47.44	\$81.12
250	6.0	6.9	.24	.1	599	8.12	91	1.27	4	4.5	1.1	28.5¢	35.65	16.81
292	-	4.4	1.56	2.7	1143	8.67	182	1.04	4	1.4	4.8	30.8¢	77.22	73.64
238	3.6	9.6	.52	-	207	11.60	-	-	10	3.5	3.7	26.5¢	79.16	57.81
240	-	12.1	.40	-	1031	5.75	30	1.10	12	2.7	4.4	26.5¢	55.01	78.25
198	-	8.4	.44	1.8	214	8.00	11	1.32	11	-	.9	-	65.47	85.32
231	-	10.4	.60	-	73	10.00	-	-	9	2.7	3.5	30.9¢	63.34	82.23
195	1.7	8.4	.55	-	45	10.24	20	1.88	14	5.0	.9	27.0¢	57.37	16.51
190	-	11.9	.64	3.3	151	8.85	66	1.07	20	-	2.1	-	60.56	143.41
193	-	16.7	.55	-	341	10.25	77	1.40	10	-	4.2	-	65.80	174.01
239	-	9.5	.69	-	229	8.57	106	1.15	18	2.2	3.7	32.7¢	52.42	72.86
254	-	22.8	.38	-	79	10.00	-	-	9	1.2	1.5	27.6¢	54.26	136.71
220	-	5.6	.88	1.7	444	6.99	36	1.21	6	3.2	.6	38.0¢	47.53	122.61
253	-	15.9	.44	-	803	8.01	100	1.23	13	1.2	2.5	28.0¢	65.61	81.00
293	-	2.8	2.00	3.3	1218	7.00	-	-	8	6.1	2.5	40.0¢	60.62	98.68
191	4.7	12.5	.57	-	143	10.41	7	1.00	15	19.2	3.9	27.8¢	67.47	123.29
192	-	13.2	.45	-	830	7.55	44	1.45	20	2.7	8.0	25.0¢	57.15	110.62
237	-	17.6	.54	-	882	10.00	316	.99	17	1.7	7.1	30.0¢	66.17	77.16
291	-	4.5	1.49	.2	722	8.33	369	1.01	3	.4	10.4	30.2¢	51.95	82.96
236	-	19.7	.42	-	640	9.28	82	1.33	15	.9	3.7	26.1¢	72.85	114.54
High	2.5	8.7	.53	0.2	298	8.02	57	1.23	11	3.6	2.3	27.9¢	53.56	43.83
Low	1.1	10.1	.62	0.9	479	8.03	64	1.11	10	6.6	2.8	30.3¢	57.57	114.16
Av.	2.0	9.2	.56	0.4	362	8.02	60	1.19	11	4.7	2.5	29.1¢	54.99	68.82

Since costs are the most important factor in accounting for the difference between the more and less profitable groups in this study, the above table is prepared to provide for the detailed study of costs. The first column shows the head months of pasture obtained from national forest or public domain lands, this pasture being in addition to that shown under the other headings. The next column shows the acres of owned and rented range per animal unit. This varies from 2.8 acres in no. 293 to a high of 22.8 in no. 254. The acres of crop and irrigated pasture includes all stubble, alfalfa and other crop and irrigated pastures. The quantity of hay fed varies from a low of 18 pounds per animal unit in no. 252 to 1218 pounds in no. 293.

Table 8. Expense per Animal Unit in Detail in Individual Records.

Ser. no.	Hay	Concentrates	Range and pasture cost	Salt and minerals	Total feed cost	Hired Labor	Operator's labor	Horses and dogs	Auto and truck	Miscel. taxes etc.	Depreciation	Interest on Investment	Total expense of production	Miscellaneous Income
252	\$0.04	\$1.16	\$6.85	\$0.04	\$8.09	\$0.43	\$1.64	\$0.42	\$0.25	\$0.44	\$0.46	\$2.37	\$14.10	.76
250	2.43	1.15	3.00	.05	6.63	1.27	.43	.23	.09	.51	.05	1.78	10.99	-
292	4.95	1.90	9.53	.05	16.43	.42	1.56	-	1.36	.75	2.26	3.86	26.64	-
238	1.20	-	5.64	.08	6.92	.93	1.12	.25	1.32	.36	.80	3.96	15.66	-
240	2.97	.33	4.88	.12	8.30	.72	1.82	.09	1.00	.86	.76	2.75	16.30	-
198	.86	.14	4.66	.08	5.74	-	.31	.09	.19	.52	1.78	3.27	11.90	-
231	.37	-	6.19	.09	6.65	.84	1.41	.39	.66	.79	1.04	3.17	14.95	.89
195	.23	.38	4.95	.12	5.68	1.33	.54	.28	.73	.39	.22	2.87	12.04	-
190	.67	.71	9.34	.16	10.88	-	.52	.20	.33	.44	1.45	3.03	16.85	-
193	1.75	1.08	9.31	.09	12.23	-	1.67	.39	.46	.49	2.18	3.29	20.71	-
239	.98	1.21	6.52	.17	8.88	.71	1.24	.41	.76	.56	.49	2.62	15.67	-
254	.40	-	8.72	.09	9.21	.33	.45	.25	.07	.54	1.04	2.71	14.60	-
220	1.55	.44	14.64	.06	16.69	1.23	.73	.37	.59	1.34	.60	2.38	23.93	.06
253	3.21	1.23	7.04	.05	11.53	.35	.75	.19	.33	.43	2.04	3.28	18.90	-
293	4.26	-	7.27	.07	11.60	2.46	.74	.29	.59	.77	2.83	3.03	22.31	-
191	.74	.07	8.00	.12	8.93	5.35	1.31	.55	.51	.76	1.36	3.37	22.14	-
192	3.13	.64	6.00	.20	9.97	.66	2.39	.21	.45	.50	2.02	2.85	19.05	-
237	4.41	3.14	9.54	.21	17.30	.52	2.83	.23	3.15	.80	1.43	3.31	29.57	.91
291	3.01	3.72	6.86	.02	13.61	.13	4.17	.31	.35	.72	1.12	2.60	23.01	-
236	2.97	1.09	8.20	.12	12.38	.24	1.12	.16	1.56	.79	1.45	3.64	21.34	.14
High	1.20	.70	5.10	.10	7.10	1.01	.86	.28	.60	.49	.44	2.68	13.46	.09
Low	1.92	.72	10.79	.09	13.52	2.02	1.21	.36	.75	.98	1.15	2.88	22.87	.09
Av.	1.45	.71	7.12	.10	9.38	1.37	.99	.31	.66	.66	.69	2.75	16.81	.09

Costs per animal unit are shown in detail in the above table, where they may be carefully compared. Notice the wide range in total feed cost per animal unit, from a low of \$5.68 in No. 195 to a high of \$17.30 in No. 237. No. 191 is high in hired labor cost, while No. 291 is high in operator's labor involved. No. 237 is high in automobile cost and No. 220 is above average in miscellaneous costs. The wide range in depreciation costs is largely the result of the amount of fence involved in the ranching unit. Since feed cost is over half of the total production cost it is the most important item to watch. It is however highly important to provide adequate feed at all times in order to obtain high production. Small expenditures for supplemental feeds if needed will probably increase income considerably more than they increase expense

Table 9. Value, Costs and Net Income per Hundredweight of Beef Produced, 1940 Records.

Ser. No.	Av. val. per cwt. prod.	Hay cost	Con- cen- trate cost	Range and past- ure	Salt & min- eral cost	Total feed cost	Hired labor	Oper- ator's labor	Horse auto & miscel. cost	Deprec- iation	Int. on in- vest- ment	Total cost of prod- uction	Manage- ment income	Total farm income
252	7.12	.01	.30	1.77	.01	2.09	.11	.42	.29	.12	.61	3.64	3.68*	5.76
250	7.82	.93	.44	1.15	.02	2.54	.49	.16	.31	.02	.68	4.20	3.62	4.78
292	10.64	1.47	.56	2.82	.02	4.87	.12	.46	.62	.67	1.15	7.89	2.75	5.45
238	7.38	.37	-	1.73	.03	2.13	.29	.34	.58	.25	1.22	4.81	2.57	5.02
240	8.24	1.09	.12	1.79	.04	3.04	.26	.67	.71	.28	1.01	5.97	2.27	3.75
198	7.24	.35	.06	1.89	.03	2.33	-	.12	.33	.72	1.33	4.83	2.41	5.59
231	6.56	.13	-	2.21	.03	2.37	.30	.50	.66	.37	1.13	5.33	1.55*	4.65
195	7.29	.11	.18	2.34	.06	2.69	.63	.26	.67	.10	1.36	5.71	1.58	3.59
190	6.92	.23	.25	3.26	.06	3.80	-	.18	.34	.51	1.06	5.89	1.03	5.06
193	7.11	.56	.35	3.00	.03	3.94	-	.54	.43	.70	1.06	6.67	.44	4.84
239	6.10	.36	.45	2.41	.07	3.29	.26	.46	.64	.18	.97	5.80	.30	3.07
254	6.07	.16	-	3.63	.04	3.83	.14	.19	.35	.43	1.13	6.07	.00	4.16
220	8.73	.57	.16	5.40	.02	6.15	.45	.27	.86	.22	.87	8.82	-.07*	3.33
253	6.67	1.20	.46	2.62	.02	4.30	.13	.28	.35	.76	1.23	7.05	-.38	2.64
393	7.30	1.47	-	2.50	.02	3.99	.84	.25	.57	.97	1.04	7.66	-.36	2.62
191	6.98	.25	.02	2.71	.04	3.02	1.81	.44	.62	.46	1.14	7.49	-.51	3.16
192	7.01	1.38	.28	2.64	.09	4.39	.29	1.05	.51	.89	1.26	8.39	-1.38	3.36
237	9.13	1.59	1.14	3.44	.07	6.24	.19	1.02	1.50	.52	1.19	10.66	-1.20*	2.40
291	5.86	1.05	1.29	2.38	.01	4.73	.04	1.45	.48	.39	.90	7.99	-2.13	1.66
236	6.10	1.44	.53	3.99	.06	6.02	.12	.55	1.22	.70	1.77	10.38	-4.21*	1.02
High	7.38	.45	.26	1.92	.04	2.67	.38	.33	.51	.17	1.01	5.07	2.34*	4.50
Low	7.75	.71	.26	3.97	.03	4.97	.74	.44	.77	.42	1.06	8.40	-.62*	2.98
Av.	7.51	.54	.26	2.66	.04	3.50	.51	.37	.60	.26	1.03	6.27	1.27*	3.95

\*Management incomes marked with an asterisk are larger than the difference between value of beef produced and total cost of production by the amount of miscellaneous income.

The value per hundredweight of beef cattle produced is affected not only by the selling price of the stock sold but also by inventory values and the cost of stock purchased. The above table shows this figure to have varied from a low of \$5.86 in No. 291 to a high of \$10.64 in No. 292. Costs per hundredweight of beef produced may be seen to vary from a low of \$3.64 in No. 252 to a high of \$10.66 in herd No. 237. Low costs in no. 252 are due to high production per animal unit with reasonably low costs per animal unit.