WHAT DOES A RANGE CALF COST?

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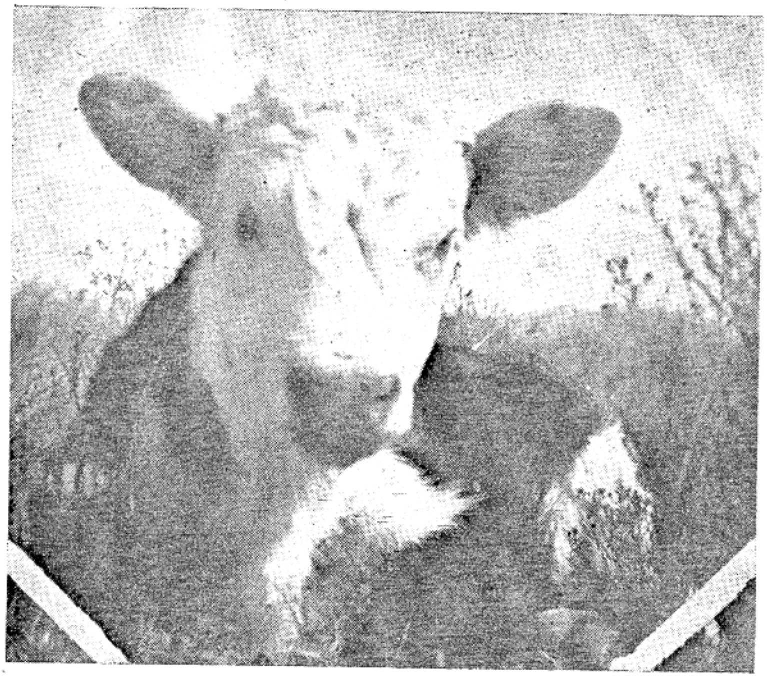

'ARTIME demands for beef and hides are ;reat. Market prices for live animals have ɔeen extremely favorable. How long they remain so is questionable in view of the ıense numbers of livestock on hand and extreme shortages in feed supplies and ein supplements. Reduction of breeding s to the point where they can be maintained entirely on range forage is imperative. In view of the present shortages of supplies and equipment and rising costs of labor and taxes, it is also imperative for the rancher to make a close scrutiny of his operational expenses. An analysis of operating expenses will give a detailed picture of the cost of each item produced. Such an analysis is often helpful in indicating the adjustments necessary in order to increase efficiency and economy.

1-Maintained by the Forest Service, U. S. Department of Agriculture, for Arizona, New Mexico, and West Texas, with headquarters at Tucson, Ariz.

The cost of producing calves on the Jornada Experimental Range is an example of this.

The Jornada Experimental Range

The Jornada Experimental Range consists of 193,000 acres of typical southwestern semidesert range land located in south central New Mexico. It is grazed by cattle owned by Mr. B. A. Christmas, a practical rancher operating under a cooperative agreement with the Forest Service, U. S. Department of Agriculture. Mutual cooperation has made possible the collection of data on costs, losses, calf crops, and other related phases of livestock handling and range management. This information is presented in order to indicate how some of the problems peculiar to a ranching operation in the Southwest may be solved and how efficient range use necessitates a moderate degree of stocking.

The Period of Study

The 15-year period 1928 to 1942 included in the study embraced climatic and economic extremes. Rainfall during the period involved was slightly below average and the record-breaking drought of 1934 was an important factor affecting production. In 1928 prices of cattle reached their highest peak since the first world war slump, but during the depression of 1929-31 they were unusually low. The 15-year period also included a change of cooperators on the Jornada Experimental Range, resulting in a complete change of the experimental herd. Then too, the forced li-

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quidation brought about by the 1934 drouth caused heavy financial losses and greatly reduced inventory values. Only the conservative use policy, which had been practiced for years on the Jornada prevented extensive damage to the range and made possible a quick recovery after this severe drouth. More favorable conditions, both climatic and economic, since 1934 have made financial recovery possible.

Investments Per Cow and Calf

The average breeding herd for the 15-year period was 882 cows, exclusive of replacement heifers. These cows produced an average of 652 calves each year during the period, or a 73.9-percent calf crop. This is somewhat above the 25-year average calf crop for the Jornada because, while it includes the drought year of 1934 and the recovery year following, it also includes a group of years from 1936 to 1942 during which an average calf crop of 81.4 percent was obtained.

The total capital invested per calf on the Jornada is based on the annual calf crop for the 15-year period and is shown in table 1. Improvements and equipment listed include no more than would be considered necessary for the efficient management of any southwestern cattle ranch. Livestock included are the necessary work and saddle horses, bulls, cows, and replacement heifers. The amount of land formerly owned by the cooperator, but which has since been acquired by the Government, totaled only 320 acres in scattered 40-acre tracts on which were located most of the permanent watering places.

Cost and Returns Per Calf

Table 2 presents the various items which have been considered in determining the cost of a calf. The general practice followed on the Jornada is to top the calves for market in the fall (November) and hold over the short-aged calves until spring (April-May).

The value of tabulating costs in this way lies in the picture it gives of the enterprise. It tells, for instance, that most of the money goes for three items, i. e., grazing charges, labor, and depreciation.

Table 1.—Investment and return on investment per calf for the period 1928 to 1942

A. Investment per calf (652 calves average)	
1. Livestock	$ 85.63
2. Water development	38.24
3. Fences	31.29
4. Headquarters buildings	2.38
5. Equipment	1.28
6. Land	.69
7. Total investment	$159.51
8. Indebtedness (1)	[illegible]
9. Operator's equity	$154.[illegible]
B. Return on investment per calf	
1. Excess of income over expense (see table 2)	$ 14.04
2. Less interest at 4 percent on owner's equity (see line 9 above)	6.1[illegible]
3. Balance owner's compensation	$ 7.[illegible]

(1) Average amount borrowed each year for current operating expenses.

Table 2.—Average annual costs and income per calf, Jornada Experimental Range, 1928-42

Item No.	
Gross Receipts and Income Per Calf	
1. Gross receipts from all cattle sales per calf	$ 51.63
2. Inventory increase per calf (1)	.74
3. Total receipts per calf	52.37
4. Less total cattle purchases per calf	24.63
5. Gross income per calf (line 3 less line 4)	27.74
Costs of Livestock Operations Per Calf	
6. Labor, cash	2.95
7. Grazing charges	3.06
8. Supplies (chuck)	.30
9. Supplemental feed and salt	1.59
10. Cattle supplies	.11
11. General ranch expense	.41
12. Taxes	.77
13. Repairs to buildings	.22
14. Gas, oil and grease	.21
15. Repairs to equipment	.08
16. Repairs to automobiles	.13
17. Interest	.51
18. Depreciation of improvements	2.28
19. Depreciation of equipment	.56
20. Depreciation of automobiles	.14
21. Depreciation of buildings	.04
22. Total outlay per calf	13.70
23. Net income per calf (line 5 less line 22)	14.04

(1) Value of excess cattle numbers at close of study December 31, 1942, over that of cattle numbers at beginning of study period.

The first and last items are fixed costs but labor costs can be reduced by taking advantage of short cuts and more efficient management methods. The feed and salt bill is this case runs higher than usual because, beginning in 1939, all weaner calves held over in the winter were provided supplemental feed. This, therefore, is a variable cost which might be reduced. Equipment and other repair costs can often be reduced by using better maintenance methods and exercising greater care. The items of cattle supplies and general ranch expense cover all expenditures for items such as vaccine, worm medicine, freight and hauling, telephone and telegraph, and association fees.

Table 2 shows that the total cost of producing a calf is $13.70, the gross income $27.74, and the net income after deducting costs is $14.04 per calf. As there is an average of 652 calves, the average total net annual income is $9,154.08. A 4-percent return on the owner's equity (line 9 of table 1) takes $4,029.36 of this amount, leaving a balance of $5,124.72 as the compensation for his time, labor, and managerial ability.

The underlying reason for success in the Jornada ranching operation is strict adherence to a moderate stocking policy.

Each fall at the end of the summer growing season stocking is adjusted so that adequate forage is provided until the following summer. Moderate stocking results in holding over until July at least 25 percent of the previous year's forage crop. This surplus is maintained for insurance against drouth years. Stocking on such a basis has resulted in good calf crops, low death losses, and maintenance of animals in top condition.

As every cowman knows, it is comparatively easy any time to market an animal in good condition, whereas it is often downright difficult to sell thin animals.