

BEEF CATTLE SAMPLE COSTS

FOR A COW AND CALF OPERATION SELLING WEANERS
In Napa County, California
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The cow and calf beef cattle operation in which weaner calves are sold is the most popular type in Napa County. Popularity of this type of operation is due to these factors:

1. It is well suited to wooded and brushy rangeland with rugged topography.
2. Relatively less capital is required for year to year operation costs.
3. Less risk than stocker type operations.
4. Gross income tends to be relatively stable.
5. It is more likely to be profitable than a strictly registered beef cattle operation.

An important disadvantage of a cow and calf operation is that it makes less efficient use of available feed, as compared to a stocker type operation. This is because each cow eats forage twelve months of the year while producing no salable weight, except the approximately .85 of a calf produced per cow. In a stocker operation more beef can be produced per acre. But if a large enough negative margin exists between purchase and sale price per pound, the advantage of a stocker operation can be wiped out.

The following material will help clarify the terms used in the sample costs which appear on pages 3 and 4.

SECTION I

20% replacement: It is assumed that 20% of the cows in the herd will be replaced by heifers each year.

2% mortality: It is assumed that 2% of the cows will die each year. The remaining 18% of the cows to be replaced will be sold.

SECTION II

Cost/Cow In Total Herd: Total cost \div 200 (the number of cows in breeding herd).

Your Cost: Supply your own figures for the particular ranch you have in mind.

A.U. = animal unit(s): An A.U. is the equivalent of an average-sized beef cow (1000 - 1200 pounds). Smaller or larger animals are rated in animal units approximately by their weight in relation to 1000 lbs.
Example: A 400 pound steer or heifer would be counted as 0.4 of an A.U. An 1800 pound bull would be counted as 1.8 A.U.

1.5 A.U./cow: Most cow-calf enterprises raise part or all their replacement heifers. At any one time such a ranch will have the cows of breeding age plus yearling heifer replacements plus steer and heifer calves plus bulls. These various classes of animals are rated as to animal units. All animal units are added and divided by the number of cows in the breeding herd. On a ranch where sufficient heifers are saved each year to replace 20% of the cows annually, the total animal units divided by the number of cows will be close to 1.5 A.U.

SECTION II (continued)

Average value of bulls and horses: These are estimates of the depreciated value of each item. A bull bought for \$600 and sold three years later for \$300 would have a depreciated value of \$400 at the end of the second year. If a rancher had two bulls valued at \$600, three at \$500, two at \$400 and three at \$300, the average value per bull would be $\$4400 \div 10 = \440 .

Average value of fences, corrals, buildings and equipment: For each item the cost and salvage value (if any) at the end of its estimated useful life are added together and divided by 2.

Example: A pickup costs \$2000 new. Ten years later it is scrapped. The average value during each year of its ownership by the rancher is $\$2000 \div 2 = \1000 .

SECTION IV

Depreciation: All depreciation is calculated by the straight line method. In all cases shown in this example, no salvage value was assumed. You may wish to assign a salvage value for some items.

Interest On Investment: If the land is wholly owned by the operator, the market value of the land should be earning interest for him. It is usually assumed that an investment should earn a return. A 5% return is assumed here. If the investment is not earning interest, the owner might consider it more profitable to sell the ranch and invest the money in an enterprise which will earn interest. If the operator has borrowed money to buy the ranch, the amount invested should earn interest. In addition the ranch will have to earn enough to pay interest on the loan.

SECTION V

Pounds Per Cow In Total Herd: Total pounds \div 200 (number of cows in breeding herd).

SECTION VI

Price Per Pound: Total cost value shown for any stated item in sections III and IV \div 96,275 (from section V).

Example: Cash Costs: Price per pound = $\$13,946$ (from section III) \div 96,275 = $\$0.1449$ or 14.49¢.

SECTION VII

Per Pound Sold: Total Value - Total Pounds (96,275).

Farm Income: "Total Income" less "Cash and Depreciation Costs." This is what is left for operator's labor and interest on investment.

Net Income: "Farm Income" less "Operator's Labor." This is what is left for interest on investment only.

SAMPLE COSTS

SECTION I

Assumptions: 200 cow herd, owned land, 85% calf crop at weaning, 20% replacement* and 2% mortality* of breeding herd. Cull cows sold in spring and steers the end of August and September. Calving in December, January, and February.

SECTION II

	- Cost/Cow	
	Total Cost	In Total Herd*
		Your Costs*
<u>Investment:</u>		
Land: Range, 20 acres/A.U.* (with 1.5 A.U./cow* = 6000 acres @ \$75/acre	\$450,000	\$2,250
<u>Stock:</u>		
Cows: 200 @ \$185 average value	37,000	185
Replacement heifer calves: 41 @ \$125	5,125	26
Yearling replacement heifers: 40 @ \$165	6,600	33
Bulls: 10 @ original cost of \$600 (average value \$440*)	4,400	22
Horses and saddles: 2 @ \$600 (average value \$500*)	1,000	5
Fences: \$12,000 cost, 20 year life. Average value*:	6,000	30
Corrals: 2 @ \$1,500 = \$3,000; Bldgs. \$3000. Total Av. value*:	3,000	15
Equipment: (pickup, scale, misc.) \$4800 cost. Average value*:	2,400	12
TOTAL INVESTMENT	\$515,525	\$2,578

SECTION III

<u>Cash Costs:</u>		
Bull replacements - 2 @ \$600	1,200	6.00
Feed purchased: 250 tons hay or equivalent @ 25 average 1/	6,250	31.25
Hired labor (trade labor with neighbors)	-	-
<u>County taxes:</u>		
Range @ 45¢ per acre	2,700	13.50
Cows @ \$2.75; bulls @ \$6; heifers @ 2.15; horses @ \$6	796	3.98
Misc: (gas, repairs, vet, salt, pickup, stock transportation)	3,000	15.00
TOTAL CASH COSTS	\$ 13,946	\$69.73

SECTION IV

<u>Depreciation*:</u>		
Horses and saddles: cost \$1,200 - 12 year life	100	.50
Fences: cost \$12,000 - 20 year life	600	3.00
Corrals and buildings: cost \$6000 - 20 year life	300	1.50
Pickup, scale and misc: cost \$4800 - 10 year life	480	2.40
TOTAL DEPRECIATION	1,480	7.40
TOTAL CASH AND DEPRECIATION COSTS	15,426	77.13
Operator's Labor (estimated)	5,400	27.00
TOTAL CASH, DEPRECIATION AND OPERATOR'S LABOR	20,326	104.13
Interest on Investment @ 5% *	25,776	128.88
TOTAL COSTS OF PRODUCTION	46,602	233.01

1/ Part of the supplemental forage requirements probably would be provided by aftermath grazing of grain stubble and hay at a lower cost per ton of hay equivalent.

* = items which are explained on pages 1 and 2.

SECTION V

BEEF PRODUCED FOR SALE

	Number		Pounds Average Weight		Total Pounds		Pounds Per Cow In Total Herd*	
	Sample	Yours	Sample	Yours	Sample	Yours	Sample	Yours
Weaner steers	85		475		40,375		202	
Weaner heifers	44		425		18,700		93	
Cull cows	36		950		34,200		171	
Cull bulls	2		1,500		3,000		15	
TOTAL FOR SALE	167				96,275		481	

SECTION VI

AVERAGE PRICE REQUIRED TO PAY COSTS

	Price Per Pound*	
	Sample	Yours
Cash costs	14.49¢	
Cash and depreciation	16.02¢	
Cash, depreciation, and operator's labor	21.63¢	
Total costs including interest	48.40¢	

SECTION VII

INCOME AND EARNINGS AT SPECIFIED CATTLE PRICES 1/

	Total Pounds	Price Per Pound	Total Value	Value Per Cow	Per Pound Sold*	Your Total Value
Weaner steers	40,375	25 ¢	\$10,094	\$ 50.47	-	
Weaner heifers	18,700	22½¢	4,208	21.04	-	
Cull cows	34,200	16 ¢	5,472	27.36	-	
Cull bulls	3,000	18½¢	555	2.78	-	
TOTAL INCOME	96,275		\$20,329	\$101.65	21.12¢	
Less Cash and Depreciation Costs			15,426	77.13	16.02¢	
FARM INCOME			4,903	24.52	5.10¢	
Less Operator's Labor			5,400	27.00	5.61¢	
NET INCOME			-497	-2.49	-.51¢	
RATE EARNED ON INVESTMENT			-	-	-	

1/ An average change of 1¢ per pound for all stock sold would increase or decrease earnings accordingly by \$963 or \$4.82 per cow (96,275 x 1¢ = \$963;
 $\$963 \div 200 = \4.82)

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