

BEEF
CATTLE
PRODUCTION

C O S T A N A L Y S I S
of
C O W - C A L F E N T E R P R I S E
(Calves sold at weaning)

University of California
Agricultural Extension Service
TEHAMA COUNTY

UC Cooperative Extension

Doyle Reed

BEEF CATTLE PRODUCTION-COW-CALF ENTERPRISE
(Cows producing calves for sale at weaning time.)

By Ken Ellis, Tehama County Livestock Farm Advisor*

Introduction

The production and sale of beef cattle and calves is the largest single income producing segment of Tehama County's agriculture.

The climate, soils, terrain and vegetation of over one million acres of rangeland in the county create an extensive area suited best for livestock grazing at the present time.

Many cattle are moved from the county for summer grazing to mountain ranges or meadows. While some cattle remain on range during the summer most of those staying in the valley are grazed on irrigated pasture.

The beef cattle population is highest in Tehama County in late winter and early summer when the ranges are at their best for grazing. Rainfall amounts and distribution coupled with temperature patterns determine for the most part carrying capacities from year to year.

Cow-Calf enterprises are usually classed into four types:

- (1) Remain on range in county year around (acres of range required per cow is nearly twice that required for winter grazing only).
- (2) Winter range in county, summer grazing on mountain meadows or range.
- (3) Winter range in county to irrigated pastures in valley for summer grazing.
- (4) Irrigated pasture in summer to winter lot feeding.

About This Cost Study

In a cost study of this type we are assuming no equity and that interest costs are paid on all investments and operating capital. We are also assuming a rent or lease charge for grazing land and facilities. Separate cost studies are available for the costs of owning and maintaining range and irrigated pasture.

Investment and production costs vary widely. The following information is an estimate of the variance in costs of maintaining a cow herd for the production and sale of weaner calves.

Most producers will have costs falling between the high and low figures, some will have all costs on the low side or perhaps lower. Some will have high costs in certain categories but it is readily apparent that cattlemen paying high costs in all categories will be unable to maintain an operation.

The cost and return figures are presented as they are in this leaflet to illustrate that MANAGEMENT IS THE MOST IMPORTANT FACTOR IN DETERMINING PROFIT OR LOSS in beef cattle production today. Management means keeping costs down, but not to the point of affecting production. Management means the extra interest and care towards increasing weaning weights and calf crop percentage. Management means knowing production costs and thus being able to sell on an orderly basis that will allow for a reasonable return.

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ESTIMATED INITIAL INVESTMENT COSTS PER 100 COWS

100 cows (bred and preg. tested @ \$200)	=	\$20,000.00
4 bulls @ \$500	=	2,000.00
2 horses @ \$300	=	600.00
Pickup and Auto	=	2,400.00
Equipment \$50 per head	=	<u>5,000.00</u>
		\$30,000.00

COSTS PER COW

	<u>Low</u>	<u>High</u>
Rent (incl. minimal barns, corrals and fences)		
Summer Grazing (mt. meadows or irrig. past.)*	\$20.00	\$30.00
Winter Grazing (range)	25.00	30.00
Supplement (C.S.M. or alf. hay-Nov. 1, Feb. 1)	11.00	16.00
Labor @ \$2.00 per hour	10.00	22.00
Veterinary and Miscellaneous Health Costs	2.00	4.00
Cash overhead (legal fees, acctg, tele, dues)	2.00	5.00
Equipment (calf chutes, syringes, etc.)	2.00	4.00
Horse Expense (incl. cost of feed and depreciation)	2.00	3.00
Auto and Truck (does not incl. transporting)	1.50	6.00
Transporting (to and from mountains or pasture)	1.00	9.00
Pregnancy Test	.65	.65
Breeding Cost(1 bull/25 cows-avg 3 yr. herd life equals 75 cows bred, \$500 purchase + \$225 - 3 yr. feed costs + \$10 semen test minus \$250 salvage)	6.50	6.50
Operating Costs	\$ 83.65	\$136.15
Taxes - Cow (\$35 taxable value @ \$7.00 tax rate)	\$ 2.50	\$ 2.50
Taxes - Calves (85 hd. @ \$10 tax value)	.60	.60
Taxes - Bull (\$75 taxable value + 25 cows)	<u>.21</u>	<u>.21</u>
Taxes	\$ 3.31	\$ 3.31
Interest on Investment		
Cow (\$200 purchase price @ 7%)	\$14.00	\$14.00
Bull (\$500 purchase price @ 7% + 25 cows)	1.40	1.40
Equipment, Auto and Truck @ 7%	.42	.63
Interest on Operating Capital (grazing, supplements, labor, vet, transport, cash overhead, horse, preg. test, etc.)	5.26	8.24
Total Interest Paid	\$ 21.08	\$ 24.27
Total Carrying Costs Per Cow Per Year	\$108.04	\$163.73

*Public Land Lease - \$3.00 to \$4.50 per head
per summer season (June, July, August, Sept., Oct., 15)

ANNUAL COST OF RAISING REPLACEMENT HEIFERS ON A HERD BASIS

	<u>Low</u>		<u>High</u>
Carrying costs of yearling heifer to 2-year old (2/3 cost of cow)*	\$54.78	73.35	\$91.92
Preg. test yearling heifer	.65		.65
Breeding Cost	6.50		6.50
Carrying cost of weaner heifer (3 months @ 1/2 cow cost)*	10.27		17.24
Interest on investment in yearling heifers (7% on \$125)	8.75		8.75
Interest on investment in bull for heifers	1.40		1.40
Interest on investment in weaner heifers (7% on \$100.00 for 3 months)	1.75		1.75
Interest on carrying costs (weaner to yearling and yearling to 2-year old) @ 7%	5.05		8.14
Taxes on bull for heifers	.21		.21
Taxes on yearling heifers (Taxes on heifer calves charged against cows)	1.75		1.75
Total		\$91.11	\$138.31

*Cow cost minus breeding, taxes, interest,
pregnancy test, taxes on calf

ON A 100 COW HERD BASIS

	<u>Low</u>		<u>High</u>
Cow Costs (100 cows)	\$10,804.00		\$16,373.00
Replacement Heifer Costs (15% replacement rate - see above costs x 15)	1,366.65		2,074.65
Total annual costs for 100 cow herd and replacements		\$12,170.65	\$18,447.65
Minus saving from preg. test culling, summer grazing, 1/2 transport, supple- menting, 1/2 labor, 1/2 interest cost of 8 head open cows sold after preg. test	- 348.00	4.48	- 548.00
Net production costs for 100 cow herd incl. cost of raising replacements		\$11,822.65	\$17,899.00

POSSIBLE RETURNS PER 100 COWS

2% cow mortality, 15% replacement rate, 85% calf crop, 9 months weaning age
 85 calves weaned: 42 steers and 43 heifers, 15 kept for replacements

		<u>Per Head</u>	<u>Total</u>
70 calves sold	42 steers - wean wt. 475# @ 28¢ =	\$133.00	\$5,586.00
	28 heifers - wean wt. 450# @ 24¢ =	108.00	3,024.00
Salvage	13 cows (2 died) wt. 900# @ 18¢ =	162.00	<u>2,106.00</u>
			<u>\$10,716.00</u>

INCREASING GROSS INCOME

An increase of 25# weaning weight per calf increases gross income this way.

42 steers x 25# per head = 1,050# @ 28¢ = \$294.00
 28 heifers x 25# per head = 700# @ 24¢ = 168.00

\$462.00 more gross income

Increase of 5% in calf crop would increase gross income this way in a 100 cow herd.

3 steers x wt. 475 @ 28¢ = \$133.00 x 3 = \$399.00
 2 heifers x wt. 450 @ 24¢ = 108.00 x 2 = 216.00

\$615.00 more gross income

~~Doing both - increasing weaning weight and calf percentage, returns picture looks like this:~~

		<u>Per Head</u>	<u>Total</u>
75 calves sold:	45 steers - wean. wt 500# @ 28¢ =	\$140.00	\$6,300.00
	30 heifers - wean. wt 475# @ 24¢ =	114.00	3,420.00
Salvage	13 cows - wt. 900# @ 18¢ =	<u>162.00</u>	<u>2,106.00</u>
			<u>\$11,826.00</u>

ACTUAL VALUE OF REPLACEMENT HEIFERS AT CALVING TIME

	<u>Low</u>	<u>High</u>
Value at Weaning	\$108.00	\$108.00
Carrying Cost (weaner to yearling)	10.27	17.24
Interest on Investment (weaner to yearling)	1.75	1.75
Carrying Cost (yearling to 2-year old)	54.78	91.92
Interest on Investment (yearling to 2-year old)	8.75	8.75
Taxes on yearling heifer (\$7.00 rate)	1.75	1.75
Breeding Costs	6.50	6.50
Pregnancy Test	.65	.65
Interest on bull investment for one year	1.40	1.40
Taxes on bull for one year	.21	.21
Interest on operating capital	<u>5.05</u>	<u>8.14</u>
Actual Value of Replacement Heifer at time of entering producing herd	<u>\$199.11</u>	<u>\$246.31</u>

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TEHAMA COUNTY FARM ADVISORS OFFICE

P. O. Box 370, Red Bluff, Ca 96080

Office Upstairs, Post Office Bldg.

Telephone 527 - 3101

3/68-300