

AE 364

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Idaho Cow-Calf Production Costs - 1979,
A Measure of Anticipated Pacific Northwest Production

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G. Ray Prigge

Introduction

The Upper Salmon River Valley (Lemhi and Custer counties) is one of the most important cow-calf production areas in the State of Idaho. It is characterized by above average cow herd size and cattlemen tend to be full time livestock producers. Because there are limited alternatives to the production of feeder calves, cattle numbers tend to remain stable at about 55,000 brood cows over the typical cattle cycle. The two county area typically has about 10% of the total Idaho brood cow numbers. This study attempts to estimate the costs and returns of a typical 200 head cow-calf operation located in the Upper Salmon River Valley.

Objectives of the Study

1. To gather and analyze data for cow-calf production enterprises on intermountain ranches in the Upper Salmon River Valley.
2. To provide reliable estimates of investment requirements, production inputs, costs and returns for 1979 under the conditions assumed to be representative for cow-calf enterprises in the area.

*University of Idaho Extension Economist, Farm Business Management.

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3. To provide current and prospective beef producers with a procedure for analyzing the profitability of a cow-calf enterprise so they can better evaluate production alternatives available to them. Space is provided in the tables so those interested can insert their own cost and return figures.

Source of Data

The data were compiled from information provided by a selected group of experienced Upper Salmon cattlemen operating cow-calf ranches of approximately 200 head.

Because of the procedure used and the widely variable conditions under which feeder calves are produced in the area, the data in the budget do not reflect a mathematical average of costs and returns of all local cow-calf operations. The participating ranchers reported the estimated investment required and the usual production practices associated with the typical cow-calf enterprise.

Results

Data summarized in the tables below are not "average". Instead, they illustrate production and cost estimates for a typical cow-calf operation in the Upper Salmon River Valley and represent the considered judgement of a select committee of local Idaho cattlemen.

TABLE 1 - ESTIMATED COSTS AND RETURNS
COW-CALF ENTERPRISE - SALMON, IDAHO - 200 COWS (DEBT FREE)

IRS FORM 1040 F CODES	COSTS AND RETURNS ITEMS	TOTAL	PER COW (200 HEAD)	YOUR ESTIMATE	
				TOTAL	PER COW
	<u>INCOME (Table 3)</u>				
6	Steer Calves (85 x 410# x \$.98)	\$34,153	\$170.77		
6	Heifer Calves (45 x 380# x \$.92)	15,732	78.66		
(Form 4797)	Replacement Heifers (4 x 700# x \$.75)	2,100	10.50		
(Form 4797)	Cows (32 x 1000# x \$.56)	17,920	89.60		
(Form 4797)	Bulls (3 x 1600# x \$.67)	3,216	16.08		
	TOTAL CASH INCOME (Table 3)	\$73,121	\$365.61		
	<u>CASH OPERATING COSTS</u>				
33	Feed purchased (Table 4)	\$ 3,220	\$ 16.10		
39	Medical Supplies & Veterinary Services	1,400	7.00		
30	Repair & Maintenance (inventory listed Table 5)				
	Fencing - charged to crops	---	---		
	Buildings	236	1.18		
	Corrals, Feeders & Work Area	472	2.36		
	Machinery & Equipment	472	2.36		
40	Fuel & Oil	704	3.52		
29	Hired Labor (none)	---	---		
	Bulls purchased, 3 per year	4,800	24.00		
42	Taxes	650	3.25		
43	Insurance (liability, wind & fire)	500	2.50		
45	License (70% of pickup)	8	.04		
	Interest on Borrowed Operating Capital (\$9,495 at 12% for 6 months)	771	2.14		
31	Interest on Investment Capital (debt free)	---	---		
44, 50	Miscellaneous Overhead (accounting, utilities, dues, subscriptions, & business travel)	385	1.93		
	TOTAL CASH OPERATING COSTS.	\$ 13,618	\$ 68.09		
	<u>NON-CASH OPERATING COSTS</u>				
	Feed - Home Grown (Table 4)	\$21,782	\$108.91		
	Operator's Labor (2,500 hours @ \$4.00/hr.)	10,000	50.00		
	TOTAL NON-CASH OPERATING COSTS.	\$31,782	\$158.91		
	TOTAL OPERATING COSTS (CASH + NON-CASH)	\$45,400	\$227.00		
	RETURN ABOVE OPERATING COSTS	\$27,721	\$138.61		
	Less Depreciation (Table 5)	-1,267	-6.34		
	RETURN TO TOTAL CAPITAL INVESTMENT & MANAGEMENT	\$26,454	\$132.27		
	% RETURN TO TOTAL CAPITAL INVESTMENT & MANAGEMENT	14.8%			

TABLE 1. ESTIMATED COSTS AND RETURNS.

TABLE 2. CAPITAL INVESTMENT SUMMARY

TABLE 3. LIVESTOCK INVENTORY, PRODUCTION, AND SALES.

TABLE 4. FEED REQUIREMENTS AND COSTS.

TABLE 5. CAPITAL INVESTMENT.

TABLE 6. INCOME SUMMARY

TABLE 2
CAPITAL INVESTMENT SUMMARY

ASSETS	TOTAL	PER COW (200 HEAD)	YOUR ESTIMATE	
			TOTAL	PER COW
Cash (Average Reserve)	\$ 3,000	\$ 15.00		
Land (Table 5) ¹				
Livestock (Table 3)	160,300	801.50		
Buildings & Improvements (Table 5)	5,850	29.25		
Machinery & Equipment (Table 5)	9,047	45.23		
TOTAL INVESTMENT DUE TO COW-CALF ENTERPRISE	\$178,197	\$890.45		

¹Does not include the value of hay or range land which was considered as separate enterprises with the hay and aftermath grazing and the range grazing being charged to the beef enterprise at current local rates. Current value of investment in meadow, pasture and dry range land is estimated as \$321,250 (Table 5).

TABLE 3
LIVESTOCK INVENTORY, PRODUCTION AND SALES

Kind of Livestock	Beginning of Year		To Be Purchased		Head Born	Head Died	Sales				
	Head	Value Per Head	Value	Head			Value	Head	Weight Per Head (Pounds)	Price ^{1/} (\$/cwt)	Total Receipts
Cows	165	\$700	\$115,500				3	32	1,000	\$.56	\$17,920
1st calf heifers (long yearlings first calving in 3/19/79).	36	500	18,000				1				
Replacement Heifers (short yearlings)	40	460	18,400					4	700	.75	2,100
Heifer Calves						94	9	45	380	.92	15,732
Steer Calves						94	9	85	410	.98	34,153
Bulls	7	1200	8,400	3	\$4,800			3	1,600	.67	3,216
TOTAL	248	XXX	\$160,300	3	\$4,800	188	22	169	XXX	XXX	\$73,121

^{1/} Prices used were those prevailing during February, 1979.

Table 4 - FEED REQUIREMENTS AND COSTS

FEEDS	LIVESTOCK		REQUIREMENTS				SOURCE					
	Kind of Animals	No. of HEAD	Length of Feeding Period	Amount PER HEAD Per Day	Amount PER HEAD for Feed Period	TOTAL (Quantity)	HOME GROWN			PURCHASED		
							Quantity	Value Per Unit	TOTAL VALUE	Quantity	Price Per Unit	TOTAL COST
Alfalfa Grass Hay	Cows + 3 horses	165 + 3	120 days	9.8#	1,176 #	98.8 tons						
	1st Calf Heifers	35	120 days	9.8#	1,176 #	20.6 tons						
	Replace. Heifers	45	180 days	6.5#	1,170 #	26.3 tons	151.6 tons	\$40	\$6,064			
	Bulls*	7	120 days	14.0#	1,680 #	5.9 tons						
Native Grass Hay	Cows + 3 horses	165 + 3	120 days	9.8#	1,176 #	98.8 tons						
	1st Calf Heifers	35	120 days	9.8#	1,176 #	20.6 tons						
	Replace. Heifers	45	180 days	6.5#	1,170 #	26.3 tons	151.6 tons	30	4,548			
	Bulls	7	120 days	14.0#	1,680 #	5.9 tons						
Oat Straw	Cows	165	120 days	1.3#	156 #	12.9 tons						
	Bulls	7	120 days	2.7#	324 #	1.1 tons	14 tons	20	280			
Oats	Horses	3	150 days	3.0#	450 #	.7 tons						
	Replace. Heifers	45	150 days	3.0#	450 #	10.1 tons	10.8 tons	125	1,350			
Salt & Minerals	All Stock	all				5.0 tons				5 tons	\$108	\$ 540
Protein Supplement (Cottonseed Meal)	1st Calf Heifers	35	120 days	1.0#	120 #	2.1 tons				4.8 tons	\$225	1,080
	Replace. Heifers	45	120 days	1.0#	120 #	2.7 tons						
Range (BLM & Forest)	Cows	165	150 days	1.0 AUM/mo	5.0 AUM	825 AUM				825 AUM	1.94/AUM	1,600
Stubble, Meadow & Owned Dry Range Grazing	Horses	3	240 days	1.2 AUM/mo	9.6 AUM	29 AUM	29 AUM	9.00/AUM	261			
	Cows	165	90 days	1.0 AUM/mo	3.0 AUM	495 AUM	495 AUM	9.00/AUM	4,455			
	Bulls	7	240 days	1.2 AUM/mo	9.6 AUM	67 AUM	67 AUM	9.00/AUM	603			
	1st Calf Heifers	35	240 days	1.0 AUM/mo	8.0 AUM	280 AUM	280 AUM	9.00/AUM	2,520			
	Replace. Heifers	45	180 days	0.7 AUM/mo	4.2 AUM	189 AUM	189 AUM	9.00/AUM	1,701			
TOTAL VALUE OF HOME GROWN FEEDS . . .							\$21,782					
							TOTAL COST OF PURCHASED FEEDS . . . \$3,220					

*7 bulls wintered and 3 purchased in the spring.

TABLE 5
CAPITAL INVESTMENT
Land; Buildings & Improvements; Machinery & Equipment

Column #	1	2	3	4	5	6	7	8		9
								Annual Cost		
ITEM	Replace- ment Cost	Salvage Value	Average Value(1)	Percent Due to Cow-Calf Enterprise	Average Investment Due to Enterprise (2)	Useful Life (years)	Depreciation Straight Line (3)	Interest on Investment (4)		
<u>Machinery & Equipment:</u>										
Horse & tack - 3 head	\$ 4,500	\$2,500	\$ 3,500	100%	3,500	10	\$200	\$315		
Tractor & Loader (used)	8,000	1,600	4,800	0%	---	15				
Tractor (used)	3,000	600	1,800	0%	---	10				
Pickup 3/4 Ton 4 wd	7,500	750	4,125	70%	2,888	10	473	260		
Baler	8,000	800	4,400	0%	---	10	---	---		
Bale Wagon	5,400	540	2,975	0%	---	15	---	---		
Gooseneck Trailer	3,700	740	2,220	100%	2,220	15	160			
Swather - Pull Type	6,000	1,200	3,600	0%	---	10	---	---		
Postpounder	700	70	385	10%	39	20	3	4		
Miscellaneous	500	0	250	50%	125	20	3	11		
Grain Mill	500	50	275	100%	275	10	45	25		
Sub-Total					\$9,047		\$724	\$815		
<u>Buildings & Improvements:</u>										
Calving Barn	5,000	500	2,750	100%	2,750	25	180	248		
Corrals & Chute, feeding equip.	5,000	0	2,500	100%	2,500	15	333	225		
Machinery shed, shop, tools	12,000	0	6,000	10%	600	40	30	54		
Sub-Total					\$5,850		\$543	\$527		
<u>Land:</u>										
Dry Range 250 acres @ \$125/acre			31,250	0% ⁽⁵⁾						
Native Wet Pasture 100 acres @ \$900/acre			90,000	0%						
Native Hay Land 100 acres @ \$1000/acre			100,000	0%						
Alfalfa Grass Hay Land 50 acres @ \$2000/acre			100,000	0%						
TOTAL					\$14,897		\$1,267	\$1,342		
PER COW (200 HEAD)					\$74.49		\$6.34	\$6.71		

(1) (Col 2 + Col 3)/2

(2) Col 4 x Col 5

(3) ((Col 2 - Col 3) x Col 5)/Col 7

(4) .09 x Col 6

(5) All land was charged to cattle through hay and pasture charges

TABLE 6
INCOME SUMMARY

COSTS AND RETURNS ITEMS	TOTAL	PER COW (200 HEAD)
TOTAL CASH INCOME (Table 1)	\$73,121	\$365.61
TOTAL CASH OPERATING COSTS (Table 1)	\$13,618	\$ 68.09
NON-CASH COSTS		
Feed - home grown (Table 4)	21,782	108.91
Operator's Labor (2,500 hours @ \$4.00/hr.)	10,000	50.00
SUB-TOTAL NON-CASH OPERATING COSTS (Table 1)	\$31,782	\$158.91
Depreciation		
Machinery & Equipment (Table 5)	\$ 724	\$ 3.62
Buildings & Improvements (Table 5)	543	2.72
Sub-Total Depreciation	\$ 1,267	\$ 6.34
Interest on Investment at 10%		
Machinery & Equipment (Table 5)	\$ 905	\$ 4.53
Buildings & Improvements (Table 5)	585	2.93
Livestock (Table 3)	16,030	80.15
Sub-Total Interest on Investment	\$17,520	\$ 87.60
SUB-TOTAL NON-CASH OWNERSHIP COSTS	\$18,787	\$ 93.94
TOTAL NON-CASH COSTS (OPERATING & OWNERSHIP)	\$50,569	\$252.85
TOTAL COSTS	\$64,187	\$320.94
RETURN TO MANAGEMENT (Loss)	\$ 8,934	\$ 44.67
Plus Interest on Capital Investment at 10%	17,520	87.60
RETURN TO CAPITAL INVESTMENT & MANAGEMENT	\$26,454	\$132.27
Plus Operator's Labor	10,000	50.00
RETURN TO CAPITAL INVESTMENT, OPERATOR'S LABOR AND MANAGEMENT	\$36,454	\$182.27

