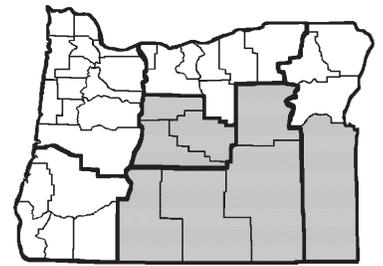




Enterprise Budget

100 Cow/Calf, High Desert Area

Brenda Turner, research assistant,
Fred Obermiller, Extension range economist,
John Tanaka and Bart Eleveld, Extension economists,
Dave Chamberlain, Gary Delaney, Ron Hathaway,
Devon Knutson, and Willie Riggs, Extension agents,
Oregon State University



EM 8654, November 1997

This livestock enterprise budget estimates the typical costs and returns of producing calves in the high desert area of southeast Oregon. It should be used as a guide to estimate actual costs and is not representative of any particular ranch. The major assumptions used in constructing this budget are discussed below. Assistance provided by area producers is greatly appreciated. For costs and returns associated with alternate herd sizes in the high desert area, see EM 8653, EM 8470, and EM 8656. For native hay production, refer to EM 8652, and see EM 8335 for cow/yearling costs and returns.

Livestock

The enterprise consists of 100 cows, 5 bulls, and 2 horses. A 90 percent conception rate is used, and 95 percent of the pregnant cows give birth. Cow death loss is 2 percent, while a 1 percent death loss is assumed for the bulls and 4 percent for calves. Mature cows are culled at the rate of 13 percent annually, and all replacement heifers are raised (see figure on page 3).

Calves are worked in April, including branding, vaccination, and implanting. Cows are vaccinated in April and treated for external parasites. Cows and replacement heifers are vaccinated and pregnancy tested in the fall as the cattle are gathered. Cull cows and calves are sold November 1. Culled replacement heifers are sold October 1.

Current market values and years of useful life for all livestock are shown in the bottom portion of Table 1. The calculations for livestock noncash fixed costs are shown in Table 2. No depreciation costs are included for cows or replacement heifers since they are raised on the ranch. For bulls and horses, which are purchased in this budget, the cost of depreciation has been included implicitly by reporting replacement purchases as costs and cull sales as revenues. The difference between these two values is the annual cost of capital replacement.

Livestock selling prices are a 3-year average (1993-1995) of farmgate prices for the Southeast region including Crook, Deschutes, Harney, Klamath, Lake, and Malheur counties. Livestock weights are assumed typical for the high desert area.

Feed

Feed is supplied in the form of native and alfalfa hay, pasture, and public range. Cattle are fed hay for 120 days. Replacement heifers are assumed to require 0.75 AUM per head and are grazed on 50 acres of flood-irrigated pasture at \$7 per AUM. This charge covers fertilizer and irrigation expenses. Other cattle are grazed on 600 acres of unirrigated pasture for 4 months and public range for 4 months.

Salt and minerals are fed at the rate of 48 pounds per cow annually, and approximately one-third is assumed to be consumed by wildlife.

Labor

Labor provided by the family is included as a variable cost of \$4,000 per year.

Capital

Opportunity costs of operating capital are charged at a rate of 10 percent for the duration of the grazing season, and 2.5 percent per year for the current market value of the ranch unit including land and livestock.

Budget

In the enterprise budget, implants, pour-on, vaccine, pregnancy testing, fly tags, wormer, etc. are included under the line item "Vet & Medicine." Brand inspection is \$1.75 per animal sold plus a \$10 per trip charge (three trips assumed). Materials for annual fence repairs cost \$670. "Supplies" include saddle, tack, and branding equipment. "Marketing Fees" are a flat 3 percent charge of the gross value of the livestock that are sold to cover the costs to sell via satellite or through the auction yard, etc. "Utilities" include electricity, telephone, etc. "Legal and relative expenses" include costs associated with litigation regarding policy issues. All items not included in the other budget line items, such as association dues, are accounted for under "Miscellaneous."

Machinery and Equipment

A loader tractor and feed wagon are used to feed hay. A 3/4-ton pickup is used to pull a stock trailer, for general travel and for general ranch work. Corrals are used in the spring and fall to work cattle.

Machinery and equipment values are based on spring 1996 replacement costs, assuming the assets are half depreciated. The upper portion of Table 1 summarizes the values assumed for machinery, equipment, and buildings as well as the hours, miles, or years associated with their use. In Table 1, "Tractor Implements" include a 3-point blade, post-hole auger, pasture harrow, ditcher, etc. "Working Facilities" include a squeeze chute, corrals, and scales.

Machinery and equipment costs are calculated in Table 3 for variable and fixed cost components.

Other

The commercial value of land and improvements of a whole ranch unit ranges from \$1,000 to \$2,500 per cow unit (animal unit) depending upon productivities and extent of federal land dependency. This budget assumes that the ranch as a whole is valued at \$1,750 per cow unit. Six hundred acres of private unirrigated pasture are owned and provide 536 AUMs over 4 months. Fifty acres of flood-irrigated pasture provide 236 AUMs over 8 months (186 yearling and 50 horse AUMs). Native hay is produced on additional acreage. The cost of land ownership and hay production costs are all included in the \$60 per ton hay charge. Property taxes total \$730 for the 650 acres of pasture. Actual property taxes will vary with assessed value.



OREGON STATE UNIVERSITY EXTENSION SERVICE

EM 8654 Enterprise Budget

COW/CALF COSTS and RETURNS High Desert Area 100-Cow Herd

<u>GROSS REVENUE by Type</u>	<u>Quantity/Unit</u>	<u>\$/Unit</u>	<u>Total</u>	<u>Per Cow</u>	<u>Your Cost</u>
Cull Bulls	0.8 hd @ 15.0 cwt	51.00	612.00	6.12	_____
Cull Cows	13 hd @ 9.5 cwt	42.00	5,187.00	51.87	_____
Cull Horse	0.25 hd @ 1.0 hd	600.00	150.00	1.50	_____
Heifer Calves	10 hd @ 4.75 cwt	74.00	3,515.00	35.15	_____
Yearling Heifers	16 hd @ 8.5 cwt	67.00	9,112.00	91.12	_____
Steer Calves	41 hd @ 5.25 cwt	81.00	17,435.25	174.35	_____

Total GROSS Revenue \$36,011.25 \$360.11 _____

<u>CASH COST by Type</u>	<u>Quantity</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Total</u>	<u>Per Cow</u>	<u>Your Cost</u>
Pasture Irrigation and Fertilizer	236.00	aum	7.00	1,652.00	16.52	_____
Native Hay	183.00	tn	60.00	10,980.00	109.80	_____
Alfalfa Hay	27.00	tn	85.00	2,295.00	22.95	_____
Public Land Grazing Fee	425.00	aum	1.83	777.75	7.78	_____
Salt	2.00	tn	160.00	320.00	3.20	_____
Minerals (custom mix)	0.40	tn	600.00	240.00	2.40	_____
Fuel & Lube, Machinery & Equipment				1,788.33	17.88	_____
Interest - Operating Capital				333.33	3.33	_____
Repairs, Machinery & Equipment				3,045.52	30.46	_____
Fence Repair Materials				670.00	6.70	_____
Supplies				700.00	7.00	_____
Utilities				900.00	9.00	_____
Vet & Medicine				2,350.00	23.50	_____
Brand Inspection				171.40	1.71	_____
Bull Purchase	0.80	hd	2,000.00	1,600.00	16.00	_____
Horse Purchase	0.25	hd	2,000.00	500.00	5.00	_____
Marketing Fees				1,080.34	10.80	_____
Accounting				400.00	4.00	_____
Legal and Related Expenses				200.00	2.00	_____
Family Labor				4,000.00	40.00	_____
Miscellaneous				1,000.00	10.00	_____

Total VARIABLE Cost \$35,003.67 \$350.04 _____

GROSS REVENUE minus VARIABLE Cost \$1,007.58 \$10.08 _____

CASH FIXED Cost						
Machinery & Equipment Insurance & Taxes (Tables 1 & 3)				1,296.51	12.97	_____
Property Taxes				730.00	7.30	_____
Total CASH FIXED Cost				\$2,026.51	\$20.27	_____

Total VARIABLE and CASH FIXED Costs \$37,030.18 \$370.31 _____

<u>OTHER COSTS and RETURNS</u>	<u>Total</u>	<u>Per Cow</u>	<u>Your Cost</u>
--------------------------------	--------------	----------------	------------------

NET PROJECTED RETURNS OVER VARIABLE and CASH FIXED Costs	-\$1,018.93	-\$10.20	_____
---	-------------	----------	-------

Noncash Fixed Cost of Depr. & Interest (10%) on Machinery & Equip. (Tables 1 & 3)	\$8,120.35	\$81.20	_____
---	------------	---------	-------

NET PROJECTED RETURNS TO LAND & LIVESTOCK OWNERSHIP	-\$9,139.38	-\$91.39	_____
--	-------------	----------	-------

Opportunity Cost of Land Ownership (\$1,750/cow-unit x 100 units@2.5%)	\$4,375.00	\$43.75	_____
--	------------	---------	-------

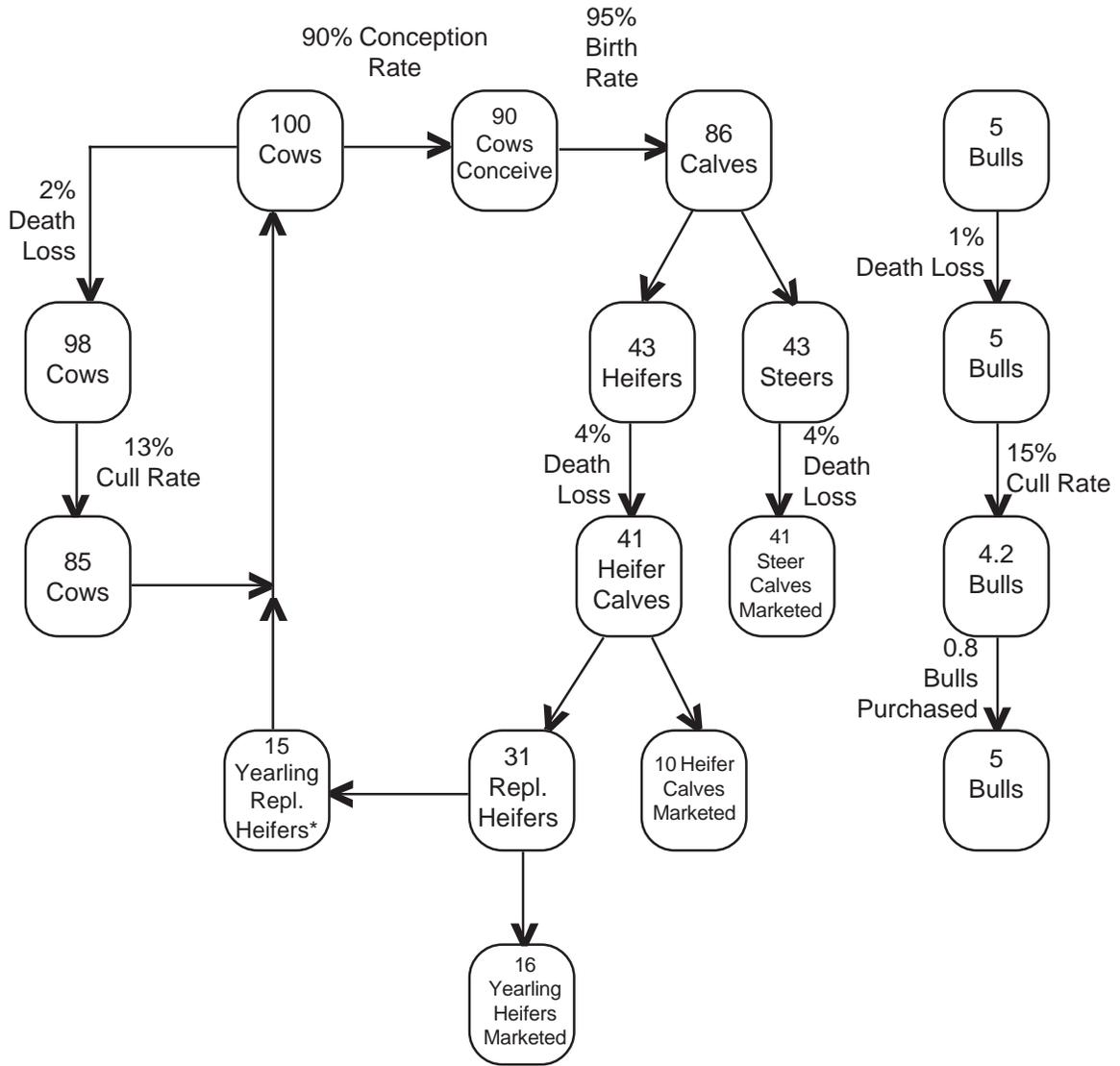
Opportunity Cost of Livestock Ownership (Table 2)	\$1,661.80	\$16.62	_____
---	------------	---------	-------

PROJECTED RETURNS NET OF ALL ECONOMIC COSTS	-\$15,176.08	-\$151.76	_____
---	--------------	-----------	-------

PROJECTED RETURNS TO LAND & LIVESTK OWNERSHP, & FAM LAB	-\$5,139.38	-\$51.39	_____
--	-------------	----------	-------

EM 8654 Enterprise Budget

COW/CALF PRODUCTION FLOWCHART
 High Desert Area
 100-Cow Herd



* All 15 replacement heifers have been pregnancy tested and are pregnant. The conception rate of the remaining 85 cows in the brood cow herd is 88 percent.

EM 8654 Enterprise Budget

Table 1. Machinery and Livestock Cost Assumptions

Item	Size	List Price	Current Market Value	Salvage Value	Useful Life	Remaining Life	Annual Use For Ranch	Annual Use For Enterprise
MACH. & EQUIPMENT								
Loader Tractor	50 hp	\$13,500	\$8,100	\$2,700	10,000	6,000	580	385 hr
Tractor Implements		6,000	3,600	1,200	15	9	1	1 yr
ATV		4,000	2,400	800	3,750	2,250	335	168 hr
Feed Wagon		3,500	2,100	700	12,000	7,200	400	170 mi
Stock Trailer		10,000	6,000	2,000	10	6	1	1 yr
Pickup	3/4 ton	20,000	12,000	4,000	100,000	60,000	10,000	5,000 mi
Hay Bunks		3,300	1,980	660	20	12	1	1 yr
Working Facilities		10,000	6,000	2,000	30	18	1	1 yr
Buildings		47,000	28,200	9,400	30	18	1	1 yr
LIVESTOCK								
Bulls		2,000	1,383	765	6	3 yr		
Cows			570	400	7	3.5 yr		
Horses		2,000	1,300	600	15	7.5 yr		
Replacement Heifers			570	570	7	5 yr		

Table 2. Livestock Opportunity Cost Calculations

Livestock	Opportunity Cost per Head	# Head	Opportunity Cost by Class of Livestock	Opportunity Cost per Cow
Bulls	34.56	5	172.80	1.73
Cows	14.24	85	1,210.14	12.10
Horses	32.50	2	65.00	0.65
Replacement Heifers	14.24	15	213.60	2.14
Total			1,661.80	\$16.62

Table 3. Machinery and Equipment Cost Calculations

Machine & Equipment	Size	Costs per Hour, Year, or Mile				Total Cost	Hours, Years, or Miles per Head	Cost per Cow		
		Variable Fuel & Lube	Repair & Maint.	Fixed Depr. & Interest	Insurance & Taxes			Variable	Fixed	Total
Loader Tractor	50 hp	\$3.45	\$3.65	\$2.01	\$0.10	\$9.25	3.850 hr	\$27.34	\$8.28	\$35.62
Tractor Implements		0.00	75.00	560.00	36.00	671.00	0.010 yr	0.75	5.96	6.71
ATV		0.69	0.01	1.33	0.07	2.11	1.675 hr	1.18	2.35	3.53
Feed Wagon		0.00	0.65	0.58	0.05	1.28	1.700 mi	1.10	1.08	2.18
Stock Trailer		0.00	100.00	1,200.00	60.00	1,360.00	0.010 yr	1.01	12.60	13.61
Pickup	3/4 ton	0.07	0.03	0.24	0.05	0.39	50.000 mi	4.70	14.58	19.28
Hay Bunks		0.00	93.00	264.00	47.52	404.52	0.010 yr	0.93	3.12	4.05
Working Facilities		0.00	135.00	666.67	144.00	945.67	0.010 yr	1.35	8.11	9.46
Buildings		0.00	1,000.00	3,133.33	676.80	4,810.13	0.010 yr	10.00	38.10	48.10
TOTAL								\$48.34	\$94.17	\$142.51

© 1997 Oregon State University. This publication may be photocopied or reprinted in its entirety, without change, for noncommercial purposes. Produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties.



Oregon State University Extension Service offers educational programs, activities, and materials without regard to race, color, religion, sex, sexual orientation, national origin, age, marital status, disability, and disabled veteran or Vietnam-era veteran status as required by Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973. Oregon State University Extension Service is an Equal Opportunity Employer.