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2015 Costs and Returns for a 200 Cow, Cow-Calf Operation, Northern Utah

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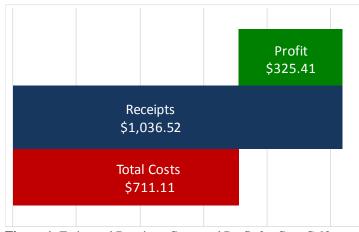


Figure 1. Estimated Receipts, Costs and Profit for Cow Calf Operation.

INTRODUCTION

Enterprise budgets are the building blocks of a farm or ranch. They represent estimates of income and expenses for a specific period of time using a set of production practices and inputs for that enterprise.

The budget in Table 1 on page 3 contains sample costs and returns for a typical cow-calf ranching operation in Northern Utah. It is intended to be a guide used to estimate income and expenses as well as list inputs such as feed, veterinary costs and production practices. The budget also provides a framework for the whole ranch/farm plan.

Receipts. Prices for 500 to 600 pound steer and heifer calves were determined by taking the average price of these calves from weekly sales at the Producers Livestock Auctions during January 2015 as reported by the Utah Department of Agriculture and Food Market News Reports.

Marketing. Marketing is an important part of the ranching business, but livestock marketing has changed over time. Ranchers increasingly utilize video auctions in addition to more traditional marketing techniques such as order buyers and local livestock auctions.

Seasonal Employees. One seasonal employee is hired a total of 500 hours per year and is paid at the rate of \$13.10/hr. including employer's share of payroll tax (USDA ERS). The total annual cost is \$6,550 for the 200 cow ranch farm. The average labor cost per cow is estimated at \$32.75.

Weighted Mean/Cow. An average which determines the relative importance that heifers, steers, replacement heifers and culls place on the market value per cow.

Feed and Other Cash Expenses. Feed represents the single largest input cost on most ranches, representing approximately 50 percent of total input costs. Most cow calf operations in Northern Utah utilize forages provided through private and public range most of the year and then supplement with hay in the winter and early spring. Figure 2 illustrates how these feed resources are used throughout the year.

Feed costs, health and reproduction, marketing and other cash expenses were determined through interviews with producers, veterinarians and agribusiness lenders.

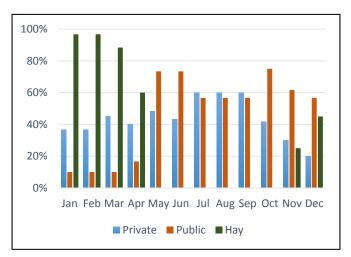


Figure 2. Typical Annual Use of Public and Private Grazing Lands and Forage hay.

FINANCIAL AND PRODUCTION TERMINOLOGY

Contribution Margin. This represents the portion of sales revenue from the operation that is not consumed by variable costs and so contributes to the coverage of fixed costs and net profit.

Contribution Margin Ratio. The percentage of total sales that is not consumed by variable costs. For example, a contribution margin ratio of 36.9% means that for each dollar increase in sales, total contribution margin will increase by 36.9 cents.

Fixed Costs (Overhead). These are costs that take place irrespective of production. For example, fixed costs include depreciation on equipment and buildings, property taxes, interest on land, equipment or buildings, etc.

Net Income or Profit. Sometimes referred to as net profit, this is the operation's total sales minus total costs.

Net Income or Profit Ratio. A ratio of profitability calculated as net income divided by total sales. The net income or profit ratio is very useful in determining profitability and is displayed as a percentage. A profit margin of 32% means the farm has a net income of 32 cents for every dollar of sales.

Price Breakeven. Breakeven analysis is a tool used to determine the relationship between the revenue and costs associated with an enterprise. Price breakeven represents the price point which must be reached to cover costs of the enterprise. Price breakeven can be calculated on variable costs as well as total costs.

Production Breakeven. This is the production point which total expenses and total revenue are equal to the production needed to cover costs of the enterprise.

Variable Costs (Operating). Variable or input costs are those costs that change with production. These costs include feed, supplements and minerals as well as reproduction, veterinary and health costs and other inputs which are directly associated with production.

CALCULATING YOUR OWN BUDGET WITH EXCEL

To download a free Excel spreadsheet of this and other crop and livestock enterprise budgets, go to <u>http://extension.usu.edu/boxelder</u> and select the Agriculture –

Crops/Livestock Budgets link.

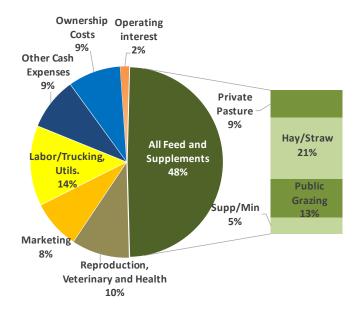


Figure 3. Percent Feed, Health, Marketing, Labor, Ownership and Other Cash Expenses for a Typical 200 Cow, Cow-Calf Operation.

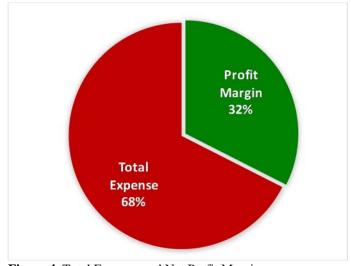


Figure 4. Total Expense and Net Profit Margin.

CONTACT INFORMATION

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Table 1. Costs and Returns for a 200 Cow, Cow-Calf Ranching Operation, Northern Utah

Call Wearing Rate Wearing View Total Wearing View Total Wearing View State View State View State View Value Per Value Per Va	Cow	Cow Replacement	Cow Dea	eath Loss Cov		'Bull	Bull Replacement			Mean/Cow
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	Net	ncome to Owner (Man	agement/	risk)					\$325 41	\$67.289

 Table 2.
 Net Income (Total Sales per Cow - Total Costs per Cow)

Total	Total Sales per Cow						
Costs/Cow	\$937	\$987	\$1,037	\$1,087	\$1,137		
\$671	\$265	\$315	\$365	\$415	\$465		
\$691	\$245	\$295	\$345	\$395	\$445		
\$711	\$225	\$275	\$325	\$375	\$425		
\$731	\$205	\$255	\$305	\$355	\$405		
\$751	\$185	\$235	\$285	\$335	\$385		

Table 3. Net Income/Total Sales Ratio (Net Income per Cow / Total Sales per Cow)

Net	Total Sales per Cow						
Income/Cow	\$937	\$987	\$1,037	\$1,087	\$1,137		
\$275	29.4%	27.9%	26.6%	25.3%	24.2%		
\$300	32.1%	30.5%	29.0%	27.6%	26.4%		
\$325	34.7%	33.0%	31.4%	29.9%	28.6%		
\$350	37.4%	35.5%	33.8%	32.3%	30.8%		
\$375	40.1%	38.1%	36.2%	34.6%	33.0%		

Table 4. Contribution Margin (Total Sales per Cow - Variable Costs per Cow)

Total	Variable Costs per Cow						
Sales/Cow	\$554	\$604	\$654	\$704	\$754		
\$1,137	\$583	\$533	\$483	\$433	\$383		
\$1,087	\$533	\$483	\$433	\$383	\$333		
\$1,037	\$483	\$433	\$383	\$333	\$283		
\$987	\$433	\$383	\$333	\$283	\$233		
\$937	\$383	\$333	\$283	\$233	\$183		

Table 5. Contribution Margin Ratio (Contribution Margin per Cow / Total Sales per Cow)

Total	Contribution Margin						
Sales/Cow	\$282.67	\$332.67	\$382.67	\$432.67	\$482.67		
\$1,137	24.9%	29.3%	33.7%	38.1%	42.5%		
\$1,087	26.0%	30.6%	35.2%	39.8%	44.4%		
\$1,037	27.3%	32.1%	36.9%	41.7%	46.6%		
\$987	28.7%	33.7%	38.8%	43.9%	48.9%		
\$937	30.2%	35.5%	40.9%	46.2%	51.5%		

 Table 6.
 Production Breakeven (Total Costs / Total Sales per Cow)

Total	Total Costs						
Sales/Cow	\$135,015	\$137,515	\$140,015	\$142,515	\$145,015		
\$1,137	119 hd	121 hd	123 hd	125 hd	128 hd		
\$1,087	124 hd	127 hd	129 hd	131 hd	133 hd		
\$1,037	130 hd	133 hd	135 hd	137 hd	140 hd		
\$987	137 hd	139 hd	142 hd	144 hd	147 hd		
\$937	144 hd	147 hd	150 hd	152 hd	155 hd		

Table 7. Price Breakeven (Total Costs per Cow / Weighted Sale Weight per Cow

Total	Weighted Sale Weight/Cow						
Costs/Cow	538 lbs.	588 lbs.	638 lbs.	688 lbs.	738 lbs.		
\$811	\$1.51	\$1.38	\$1.27	\$1.18	\$1.10		
\$761	\$1.41	\$1.29	\$1.19	\$1.11	\$1.03		
\$711	\$1.32	\$1.21	\$1.11	\$1.03	\$0.96		
\$661	\$1.23	\$1.12	\$1.04	\$0.96	\$0.90		
\$611	\$1.14	\$1.04	\$0.96	\$0.89	\$0.83		