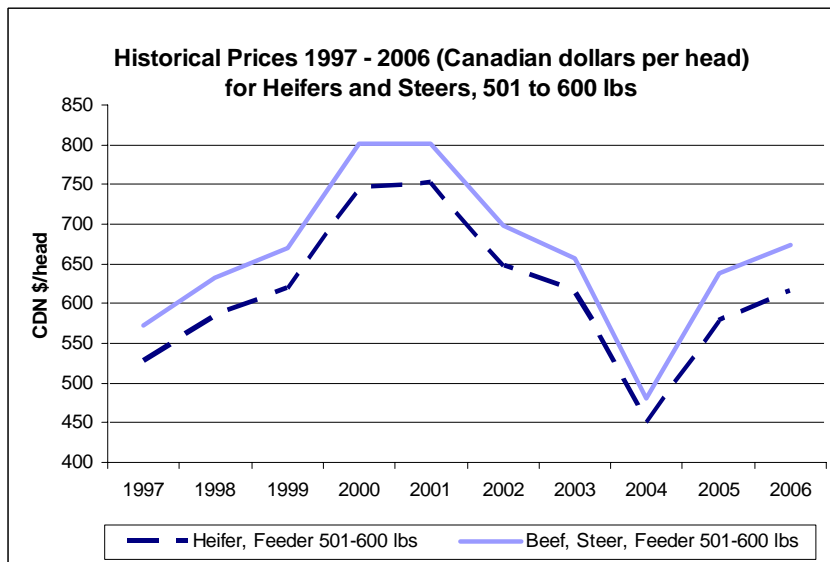


## 250 Cow Calf Operation - Vanderhoof

This information is a resource to project costs and returns for British Columbia farm enterprises and is a general guide to plan individual farm operations. This budget should be used as a guide only. Each farm should develop their own budget to reflect specific production goals, costs and market prices.

Information regarding financial planning and other enterprise budgets may be viewed at the B.C. Ministry of Agriculture and Lands website (<http://www.agf.gov.bc.ca/busmgmt/>) and their information portal, InfoBasket (<http://www.infobasket.gov.bc.ca>).

### HISTORICAL PRICES



Note: Heifers are traditionally 8 to 10 cents per pound lower in market prices than steers.

Source: Agriculture and Agri-Food Canada, Canadian Agricultural Income Stabilization (CAIS) Program, Price List for Corporation/Co-operatives and Special Individuals, 2006 and prior years.

### KEY FACTORS AFFECTING PROFITABILITY

Key factors seen as affecting the value of production and thus profit of the business include:

- Weaning weight
- Calving date
- Calf prices
- Cull Animal Price

## REVENUE AND EXPENSE BUDGET INFORMATION

This budget summarizes the income and expenses for a model cow calf operation at this location. These statements show the profit or loss of the farm business and are prepared on an accrual basis.

- **Gross profit** is the revenue generated from the farm business less purchases of livestock, feed, marketing , and trucking costs plus any changes in inventory.
- **Direct expenses** are those costs that can readily be identified with items produced by the ranch business. Examples are seed, fertilizer, fuel, grazing and pasture fees, and veterinary supplies.
- **Indirect expenses** do not vary with the level of output and are those items that cannot be identified specifically with the items produced by the business. Examples include land taxes, utilities, legal and accounting fees, and operating and term interest.
- **Contribution Margin** equals Gross Profit less Direct Expenses or the amount left over to contribute to direct expenses of the farm business.
- **Depreciation** is calculated on a straight-line basis (ten percent of equipment value and five percent of building value) annually to account for the use of the machinery/buildings for revenue generation and the decrease in value of machinery/buildings.
- **Net Farm Income** equals the Gross Profit less Direct Expenses, Indirect Expenses and Depreciation. The net farm income is viewed as the return to land, labour and capital and the amount left over to cover living expenses, capital purchases and principle loan payments.

## ASSUMPTIONS

The following assumptions were made in calculating the revenue and expense budget.

### Revenue & Expenses

- Projected revenue and expenses are based on current market prices.
- Labour cost included in the budget is for paid labour required over and above owner operator labour.
- Off-farm income and living expenses are not included in the budget.
- Prices (dollars per pound) used include: Steers 1.17, Heifers 1.05, Cull Yearling Heifers 1.04, Cull Cows 0.27, Cull Bulls 0.18.
- Weights (pounds per animal) used include: Steers 560, Heifers 515, Cull Yearling Heifers 900, Cull Cows 1,400, Cull Bulls 1,800.

### Type, Size & Production Values

Model farm data such as deeded acres, owned land base, crop land acreage, cows overwintered, cow calf production values, and asset and liability type, size and value was developed through consensus research from producers at this specific location plus information from the Farm Financial Survey, Statistics Canada & Agriculture and Agri-food Canada.

- The farm operation is assumed to be currently in operation and it not a new business. This is reflected in the assets and liabilities of the business.
- Land base and operation consists of 1,200 deeded acres with 250 cows over wintered.
- Crop land is used to produce the following crops, yield and quantity.

	<b>Acres</b>	<b>Yield (Ton/Acre)</b>
<b>Hay Full Production</b>	490	2.60
<b>Hay Establishment Year 1</b>	55	2.00
<b>Hay Establishment Year 2</b>	55	
<b>Total Hay</b>	600	2.31
<b>Pasture</b>	600	

- The 250 cow calf operation has the following annual sales:

Annual Sales	Quantity	Price per Pound	Sale Weight	Value per Animal	Total Value
<b>Cows</b>	32	\$0.27	1,400	\$378	\$12,096
<b>Replacement Heifers</b>	12	\$1.04	900	\$936	\$11,232
<b>Bulls Calves</b>	2	\$0.18	1,800	\$324	\$648
<b>Steers Calves</b>	119	\$1.17	560	\$655	\$77,945
<b>Heifer</b>	69	\$1.05	515	\$541	\$37,329
<b>Total</b>	<b>234</b>			<b>\$376</b>	<b>\$139,250</b>

- Cow calf production summary values:

<b>No. of Cows</b>	250
<b>Weaning Per Cent</b>	95.0%
<b>Cow Replacement</b>	15.0%
<b>Cow Death Loss</b>	2.25%
<b>Heifer Conception</b>	75.0%

### Feed Expenses

- Feed requirements are calculated based on the following values.

	Units / Cow
<b>Hay</b>	3.53 Ton

- Feed required for the cow-calf enterprise is provided first by the farm business's own crop production and if required, additional feed is then purchased from outside the farm at market value. If the operation has crop production in excess of feed required, it is sold at market prices and shows up as revenue for the farm business. The value of the feed provided by the farm business's own crop production and used by the cow calf operation does not show up as crop revenue or as a feed expense. However, all expenses associated with crop production are included in the direct expenses.

### Indirect Expenses

- Indirect expenses includes building & fence repair, land taxes, shop supplies, small tools, labour, legal & accounting, insurance, utilities, operating interest and term loan interest with values appropriate for an cow/calf and crop production operation of this size.
- Depreciation is calculated as ten percent of equipment value of \$187,000 plus five percent of building value of \$33,250.
- Principle and interest value are calculated assuming an operating loan of \$18,000, intermediate loan of \$0 and a long term loan of \$54,000 with interest rates on these loans ranging from seven to eight percent.

The budget provided should be viewed as a first approximation only. Use the column "your farm" to add, delete and adjust items to reflect your specific production situation.

<b>REVENUE AND EXPENSE BUDGET - VANDERHOOF</b>					<b>YOUR FARM</b>	<b>PER COW</b>	<b>YOUR FARM PER COW</b>
				<b>250 COWS</b>	<b>YOUR FARM</b>	<b>PER COW</b>	<b>PER COW</b>
<b>Revenue</b>							
Cow Calf				\$139,250	_____	\$557	_____
Feeder				\$0	_____	\$0	_____
Crops				\$14,400	_____	\$58	_____
Other Income				\$0	_____	\$0	_____
Less:							
	Livestock Purchase			(\$5,000)	_____	(\$20)	_____
	Feed Purchase			\$0	_____	\$0	_____
	Marketing & Trucking			(\$6,652)	_____	(\$27)	_____
Inventory							
Change	Cow Calf	Feeder	Forage	\$0	_____	\$0	_____
	0	0	0				
<b>Gross Profit</b>				<b>\$141,998</b>	_____	<b>\$568</b>	_____
<b>Direct Expenses</b>							
Seed				\$3,203	_____	\$13	_____
Fertilizer				\$17,675	_____	\$71	_____
Chemicals				\$275	_____	\$1	_____
Twine				\$556	_____	\$2	_____
Tarp				\$2,288	_____	\$9	_____
Custom Work				\$3,000	_____	\$12	_____
Irrigation				\$1,078	_____	\$4	_____
Feed Supplement				\$0	_____	\$0	_____
Mineral and Salt				\$2,000	_____	\$8	_____
Grazing Fees				\$4,500	_____	\$18	_____
Pasture				\$25,000	_____	\$100	_____
Trucking hay & to Pasture				\$1,875	_____	\$8	_____
Supplies				\$2,250	_____	\$9	_____
Vet & Medicine				\$3,750	_____	\$15	_____
Equip. Fuel & Lube				\$12,312	_____	\$49	_____
Equip. Repair				\$10,218	_____	\$41	_____
Supplies Inventory Change				\$0	_____	\$0	_____
<b>Total Direct Expenses</b>				<b>\$89,980</b>	_____	<b>\$360</b>	_____
<b>Contribution Margin</b>				<b>\$52,018</b>	_____	<b>\$208</b>	_____
<b>Indirect Expenses</b>							
Building & Fence Repair				\$2,800	_____	\$11	_____
Land Taxes				\$1,300	_____	\$5	_____
Shop supplies/small tools				\$1,450	_____	\$6	_____
Labour				\$12,000	_____	\$48	_____
Legal & Accounting				\$1,500	_____	\$6	_____
Insurance & Licences				\$4,800	_____	\$19	_____
Utilities				\$3,200	_____	\$13	_____
Miscellaneous				\$1,400	_____	\$6	_____
Operating Interest				\$2,464	_____	\$10	_____
Term Loan Interest				\$4,200	_____	\$17	_____
<b>Total Indirect Expense</b>				<b>\$35,114</b>	_____	<b>\$140</b>	_____
<b>TOTAL EXPENSES</b>				<b>\$125,094</b>	_____	<b>\$500</b>	_____
<b>NET RETURN OVER EXPENSE</b>				<b>\$16,904</b>	_____	<b>\$68</b>	_____
<b>Adjustments</b>							
	Depreciation - Equipment and Buildings			(\$20,300)	_____	(\$81)	_____
<b>NET FARM INCOME</b>				<b>(\$3,396)</b>	_____	<b>(\$14)</b>	_____

## SENSITIVITY ANALYSIS OF NET FARM INCOME

Profitability is strongly influenced by market prices (price per pound) and production yield (calf weight). The following tables illustrate the resulting net farm income as price and production levels vary.

### Net Farm Income at Various Prices (\$ per lb) for Steer Calves\*

	Price	Net Farm Income Per Cow (Steer Weight of 560 lb)
	1.55	\$88
	1.40	\$48
<b>Value from Sample Budget</b>	1.17	(\$14)
	.95	(\$72)
	.83	(\$107)

### Net Farm Income at Various Weights (lbs per animal) for Steer & Heifer Calves\*

	Steer Weight	Heifer Calf Weight	Net Farm Income Per Cow (Price Constant at 1.17 Per Pound for Steers and 1.05 Per Pound for Heifer Calves)
<b>Value from Sample Budget</b>	560	515	(\$14)
	575	530	(\$1)
	600	555	(\$20)
	625	580	(\$41)

\* Note: As calf weight increases, the price per pound decreases.

## INVESTMENT CAPITAL REPLACEMENT COSTS

The following equipment and buildings would be required for the livestock operation. Thus, the start up investment for the operation would include the market value of machinery, building and land (purchase or rental costs) and should be reviewed as part of the return on assets and return on investment.

<b>Buildings, Machinery and Livestock Investment Farm Size - 1200 Cultivated Acres</b>	
<b>Buildings</b>	<b>73,000</b>
<b>Machinery</b>	<b>187,000</b>
<b>Cow Herd</b>	<b>244,400</b>
<b>Land</b>	<b>1,400,000</b>
<b>House</b>	<b>148,000</b>

## CONTACTS

### Ministry of Agriculture and Lands

#815, 299 Victoria Street  
 Prince George, BC v2l 5b8  
 Ph. 1-250-565-7200  
 or 1-800-334-3011

### Ministry of Agriculture and Lands

Bag 5000, 1020 Murray Street  
 Smithers, BC V0J 2N0  
 Ph. 1-250-847-7247