



PLANNING FOR PROFIT



BRITISH COLUMBIA

Ministry of Agriculture,
Food and Fisheries

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Dairy – Fraser Valley 100 Cow Dairy Operation

This information is a tool to project costs and returns for B.C. farm enterprises and is a general guide to plan individual farm operations.

This sample budget should be used as a guide only and should not be used for business analysis. Each farm should develop their own budget to reflect their production goals, costs and market prices.

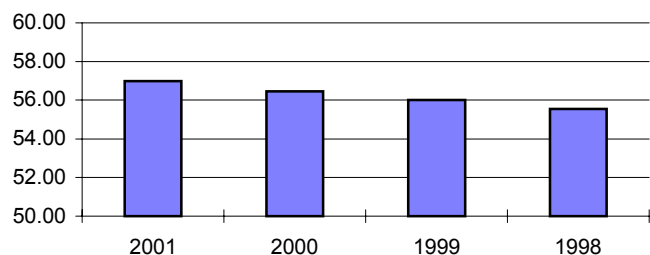
Information regarding financial planning and other enterprise budgets may be downloaded from the internet at <http://fbminet.ca/bc> or obtained from your local office of the B.C. Ministry of Agriculture, Food and Fisheries.

Market Factors

Milk marketing in BC is regulated through the BC Milk Marketing Board by authority of the Natural Products Marketing Act. Milk producers are required to acquire a license and hold Total Production Quota (TPQ) sufficient to cover their intended production. The producer's TPQ allows them to produce a specific amount of kilograms of butterfat. For example, a 100 cow dairy farm producing 1 million litres of milk per year at 3.60 kg of butterfat per hectolitre would require 36,000 kgs of TPQ.

Farmgate milk prices are determined using a 'multiple component pricing' formula. The producer is paid for 3 main components in the milk: butterfat, protein and other solids. The percentage of butterfat and protein in the milk can cause significant variation in revenue per hectolitre (100 litres).

Milk Price (/hl)



Risk Factors & Strategies

Risks vary from producer to producer. The most significant risk, for any given producer, may be:

- **Financial risk.** Dairy farms in BC require very significant capital investment. Revenue is quite predictable. However, producers can and should manage costs to maintain appropriate margins. The most significant variable costs are feed and labour. High quality, home grown forages can replace purchased concentrates.
- **Production risk.** There are two significant production risks:
 - Reproductive problems,
 - Disease

Sanitation and attention to detail should minimize the risk of major outbreaks.

Key Success Factors

- Do the little things right
- Disease control
- Produce high quality home grown feeds
- Careful management of breeding

Target Production:

- 9000 litres per cow per lactation (per year equivalent of 8244 litres)
- 3.72 kg Butterfat per hectolitre - 13.1 month Calving Interval

Sample Enterprise Budget and Worksheet Dairy – Fraser Valley 100 Cow Dairy Operation

To assess net income, **indirect expenses** must be subtracted from income. Indirect expenses do not vary with the level of output and are typically associated with inputs used in more than one enterprise and must be allocated appropriately between uses. In this case, paid labour should also be included as an indirect expense because the portion of paid versus operator labour in this size dairy operation varies a great deal from farm to farm.

Projected Income	Yield	Price	Unit	Income		Your Estimate
Milk Revenue				per hl	per cow	_____
Butterfat	3.72	4.78	kg	17.79	1,467	_____
Protein	3.25	9.88	kg	32.10	2,647	_____
Lactose and Other Solids (LOS)	5.48	1.39	kg	7.62	628	_____
Livestock Sales				4.32	356	_____
Gross Revenue				61.83	5,098	_____
Freight, Promotion and Levies				-2.53	-209	_____
Net to Producer				59.30	4,889	_____
Projected Expenses	Quantity	Price	Unit	Expense		Your Estimate
<u>Feed & Supplements</u>						
Concentrates	39.45	0.274	kg DM	10.82	892	_____
Alfalfa Hay	3.24	0.294	kg DM	0.95	79	_____
Local Hay	11.61	0.188	kg DM	2.19	180	_____
Corn Silage	11.59	0.167	kg DM	1.93	159	_____
Grass Silage	45.57	0.129	kg DM	5.86	483	_____
Minerals and Supplements				0.86	71	_____
Calf Starter and Milk Replacer				0.70	58	_____
<u>Livestock Supplies and Services</u>						
Vet, Medicine and Breeding				1.34	110	_____
Dairy Supplies and Bedding				1.34	110	_____
Registration & DHIS				0.42	35	_____
<u>Other</u>						
Fuel Costs				1.27	105	_____
Building & Equipment R&M				2.64	218	_____
Utilities				1.07	88	_____
Total Expenses				31.39	2,588	_____
Contribution Margin (gross income less direct expenses)				27.91	2,301	_____

Calculation of Projected Net Income

To assess net income, **indirect expenses** must be subtracted from income. Indirect expenses do not vary with the level of output and are typically associated with inputs used in more than one enterprise and must be allocated appropriately (prorated) between uses.

Projected Income
Less Projected Direct Expenses	-
= Projected Contribution Margin	=
Less Projected Indirect Expenses	
Depreciation (e.g., buildings and equipment)	-
Interest	-
Other Indirect Expenses (e.g., operator labour)	-
= Projected Net Income

Assumptions: Dairy – Fraser Valley 100 Cow Dairy Operation

Buildings, Machinery, Quota, & Livestock Replacement Costs

Quota	\$ 1,460,000
Buildings	765,000
Equipment	290,000
Livestock	290,000
Total	2,805,000

Total production quota (TPQ) based on the assumptions used in this spreadsheet equates to 31500 kgs. The value is based on unused quota prices of \$43 per kg used and \$53 unused. The total quota value changes on a monthly basis.

Buildings include: drive through barn, parlor and equipment, manure storage, minimal feed storage and outbuildings.

Equipment value is based on the minimal equipment required to feed, house and clean the dairy herd. Forage equipment isn't included although there may be some overlap such as tractors and manure spreading equipment.

Livestock values include milk cows, dry cows and replacement stock at varying ages as required to support a milking herd of 100 cows with the assumed production, calving interval and culling rates.

Labour Requirements

Labour requirements vary considerably depending on the production system used by the farm. For example, milking time depends on parlor size; barn cleaning depends on the cleaning system.

	Hrs per day	per hl	per cow
Milking	6	0.244	20.1
Barn scraping	3.5	0.142	11.7
Feeding	2	0.081	6.7
Calf care	0.75	0.030	2.5
Herd health	0.25	0.010	0.8
Breeding, calving	0.75	0.030	2.5
Maintenance	0.5	0.020	1.7
Other (administration, etc)	0.5	0.020	1.7
Total	14.25	0.579	47.7

Alternative Production Practices

Feed and labour are the most significant variable costs for dairy farmers. There are limited opportunities to reduce labour costs; often the only way to do it is with major capital investments such as a new milk parlor or automated barn cleaning.

There are many different options for forage production. The optimum system varies depending on the resources of the individual farm operation. However, producers can choose any combination of grass silage, corn silage, intensive grazing, pasture, hay, cereals and other energy or protein crops. Harvesting options range from grazing to custom operation. Land leasing should also be considered in many instances.

For More Information

References

- BCMAFF web site <http://www.agf.gov.bc.ca>
- BCMAFF Infobasket <http://infobasket.gov.bc.ca>
- BCMAFF Dairy Talk <http://fbminet.ca/bc/publish/dairy.htm>
- BCMAFF Business Planning Guide for Dairy Producers Example http://fbminet.ca/bc/publish/business_plan/Dairy.pdf

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