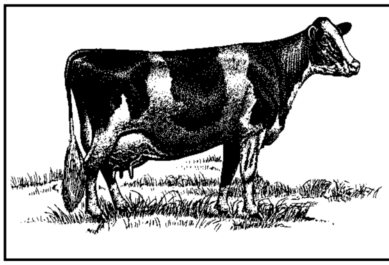

B.C. DAIRY TALK

Editor: Annette Moore

Guidelines For Financing Dairy Enterprises

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Introduction

British Columbia's dairy industry relies heavily upon borrowed capital. New capital is required for farm purchases, expansions, technology adoption, farm transfers, day to day operations, building and equipment replacement, etc. Successful borrowing depends upon sound financial planning. There are three basic considerations in the use of farm credit known as the three R's: returns, repayment capacity and risk bearing ability.

Returns

Will it produce sufficient returns to cover the costs? In other words, will it pay to borrow the money?

Repayment Capacity

Will the producer have sufficient repayment capacity to repay the loan? Many times the proposed change is profitable but the borrower is not able to meet the payments as they become due.

Risk-Bearing Ability

Does the producer have the risk-bearing ability to carry the risk and uncertainty involved in using credit? This means the ability to withstand unexpected low income (e.g. a drop in milk prices), unpredictable losses or rapidly increasing costs (e.g. interest rates, feed prices). Surveys have shown that expanded farms require two full years to regain production levels experienced prior to the expansion. This depends upon management skills and the extent of expansion.

This material provides some general guidelines for planning purposes. My congratulations to those who are living comfortably with debt loads exceeding the suggested guidelines.

Results

To evaluate the debt servicing capacity the following example farm was developed.

Cows (milking and dry)		116 cows
Forage land (corn silage and grass forage)		100 acres (Fraser Valley)
Total Production Quota (TPQ)		30,000 kg
Butterfat test		3.6 kg/hl (3.5%)
Quota production (litres per day)		2,283 litres per day
Milk price	skim milk	$39.00 per hectolitre
	butter fat	$4.50 per kg
Alfalfa hay		$200 per ton
Local hay		$150 per ton
Dairy grain ration		$250 per tonne

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Example Dairy Budget

	Example ($ per cow)		Your Estimate (total farm)	
Cash Inflow:				
Milk sales	4,040		________	
Livestock sales	260		________	
Total Cash Inflow		4,300		________
Cash Outflow:				
Dairy grain ration and supplements	710		________	
Hay purchases	780		________	
Veterinary, medicine, breeding	160		________	
Dairy supplies and bedding	75		________	
Registration and DHIA	35		________	
Freight, promotion, administration	175		________	
Seed, fertilizer, pesticides	100		________	
Fuel, oil, lubrication	90		________	
Repairs and maintenance	200		________	
Hired labour	420		________	
Contract/custom	15		________	
Overhead	200		________	
Miscellaneous	100		________	
Living allowance and income tax	440		________	
Total Cash Outflow		3,500		________
Cash Surplus		800		________
Less equipment depreciation	300		________	
Debt Servicing capacity		500		________

Suggested maximum loan (10%) $= \dfrac{\text{Debt servicing capacity}}{\text{Amortization factor}} = \dfrac{500}{0.1175} =$ \$4,255 per cow

Table 1

8%	0.1019
9%	0.1095
10%	0.1175
11%	0.1256
12%	0.1339
13%	0.1424
14%	0.1510
15%	0.1598
16%	0.1687

Table 2

Suggested Maximum Debt ($/cow*) with Varying Milk Yields and Interest Rates.

	Litres / Day / Milking Cow				
	28	30	32	34	36
8%	5,200	7,100	8,800	10,600	12,200
10%	4,500	6,200	7,600	9,200	10,600
12%	4,000	5,400	6,700	8,100	9,300
14%	3,500	4,800	5,900	7,200	8,200

Total cows	**116**	**108**	**101**	**95**	**90**
Quota (kg TPQ)	30,000	30,000	30,000	30,000	30,000
Forage acres	100	100	100	100	100
Litres/cow/ day (milking and dry)	23.6	25.3	27	28.7	30.3
Litres/cow/ year	7,198	7,712	8,226	8,741	9,255
Kg milk/cow/ year	7,412	7,941	8,471	9,000	9,529

** Debt levels are based on total cows (dry and milking) and cow numbers are adjusted to meet quota requirements. For example, when interest rates on borrowed capital are 10% and the average milk yield is 32 litres per milking cow, the suggested maximum debt load is $7,600 per cow (milking and dry).*

Table 3

Suggested Maximum Debt ($/litre of daily quota production) with Varying Milk Yields and Interest Rates.

	Litres / Day / Milking Cow				
	28	30	32	34	36
8%	266	336	391	441	482
10%	230	291	339	383	418
12%	202	256	298	336	367
14%	179	227	264	298	325

Example:

From table 3, if the milking cows average 32 litres per day and the interest rate is 10%, the suggested maximum debt is $339 per litre of daily milk quota shipments. In this example, the total production quota (TPQ) of 30,000 kgs butter fat is equivalent to 2,283 litres per day when the butterfat test is 3.6 kg/hl.

$$\frac{\text{30,000kg butterfat}}{\text{3.6 kg/100 litres}} \times 1/365 \text{ days} = 2{,}283 \text{ litres per day}$$

Suggested debt level = 2,283 litres/day x $339/litre = $773,937

Table 4

Suggested Maximum Debt Servicing Capacity (loan payment per litre of milk shipped) with Varying Milk Yields

	Litres / Day / Milking Cow				
	28	30	32	34	36
With living allowance & equipment deprecation	$.07	$.09	$.11	$.12	$.13
With living allowance but no equipment depreciation	$.11	$.13	$.15	$.16	$.17

Comments

The amount of debt a farm business can handle depends on many factors including feed costs, milk prices, land base (owned or leased), forage yields, family labour etc. For this reason, it is important to prepare budgets for each option and evaluate the impact additional debt will have on your cash flow. Also, government legislation and policies of the lender will influence the maximum loan you can obtain. It is recommended the term of a loan match the life of the asset (e.g. 10 year loan for a tractor).

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