



PLANNING FOR PROFIT



Province of British Columbia
Ministry of Agriculture, Fisheries and Food

Grass Forage (Established)
Fraser Valley
Spring 1994

Agdex 120 - 810

Introduction

The planning process provides producers with the opportunity to look at their operation as a group of distinct enterprises. Alternative enterprises should be evaluated on the basis of **Contribution Margin**, taking into consideration resource constraints, market opportunity, risk and uncertainty.

The **Contribution Margin** must provide funds for interest, overhead and other indirect expenses as well as a return for living expenses, loan repayment and investment. These items should be included in the overall farm plan which will include a **Projected Income Statement** and **Projected Cash Flow Budget**.

Key Factors Affecting Profit

	Target
Quality - Hay	Min 65% T.D.N. Min. 18% Crude Protein
- Silage	Min 60% T.D.N. Min. 16% Crude Protein

Forage yields are affected primarily by species and variety selection, supply of nutrients and availability of moisture to the crop. Efficient use of nutrients from manure and/or fertilizer will result in optimum yields. Forage quality is affected most by stage of maturity at harvest. Proper handling and storage facilities will maintain good feed quality. Additional costs may be incurred for weed control. To assess the full impact of forage production, a contribution margin analysis should also be carried out for the establishment of the forage crop.

Marketing Alternatives

A limited opportunity exists to market grass silage. The majority of the crop is produced for consumption on the farm. Livestock operations would realize the cash income when forage is transferred to the livestock enterprise. Hay can be marketed locally to individuals with small livestock holdings on limited acreages.

Cash Flow Timing

	J	F	M	A	M	J	J	A	S	O	N	D
%Inc	10	10	10	10	10	10	10	10			10	10
%Exp			15	20	20	20	20	5				

The above information indicates the timing of monthly flow of funds included in the contribution margin only. A complete **Projected Cash Flow** should include indirect expenses, capital sales and purchases, loans and personal expenses.

Rules of Thumb

Machinery Investment	\$3,000/acre
Direct Expenses % of Income	30 - 40%

The above indicators are provided for comparison purposes. They are set out as potential targets for grass forage production.

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ESTABLISHED GRASS FORAGE

Target Yield - 6 Tons D.M./acre

Contribution Margin 1 Acre of Grass Forage Fraser Valley

Income

	Yield	Price	Unit	Income
Grass Silage (35 - 40% D.M.)	10	\$50.00	ton	\$500
Grass Hay (85 - 90% D.M.)	2.75	120.00	ton	330
Total Income				\$830

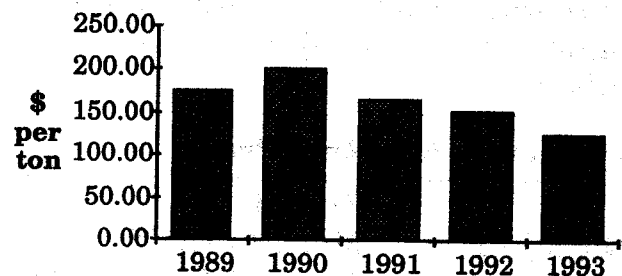
Direct Expenses

	Quantity	Price	Unit	Expense
Fertilizer				
Manure	10	\$0.00	ton	\$0
Lime	.5	45.00	MT	22
0 - 0 - 60	420	.15	lb.	63
11 - 52 - 0	110	.23	lb.	25
46 - 0 - 0	600	.15	lb.	90
Crop Supplies and Service				
Silage Additive	10	3.50	ton	35
Silo Cover	10	.15	ton	2
Twine	.175	28.74	roll	5
Fuel, Oil & Lube				38
Equipment Repair & Maintenance				30
Total Direct Expenses				\$310
Contribution Margin				\$520

Buildings & Machinery Replacement Cost Total Farm Size - 90 Acres

Machinery Shed	\$15,000
Bunker Silo	35,000
Hay Storage	15,000
Power Machinery	33,000
Field Machinery	55,500
Harvest Equipment	12,000
Vehicles	<u>104,500</u>
Total	\$270,000

Fraser Valley Alfalfa Hay



Contribution Margin - Sensitivity Analysis

The table below lists the changes to contribution margin as yield of hay changes and price received varies.

Price \$/ton	Hay Yield Tons per Acre			
	1.75	2.25	2.75	3.25
80.00	330	370	410	450
100.00	365	415	465	515
120.00	400	460	<u>520</u>	580
140.00	435	505	575	645

This information is provided as a guideline only. Target yield indicates above average production. An individual crop plan should be developed by each producer. Planning forms may be obtained from your local office of the B. C. Ministry of Agriculture, Fisheries and Food.