



# PLANNING FOR PROFIT



Province of British Columbia  
Ministry of Agriculture, Fisheries and Food

## Grass Forage Established Cowichan Valley Summer 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.
Quantity	86% Dry Matter
Price of Product - Silage	Crude Protein 16 - 18% \$110 - 1.30/lb
	Min 65% T.D.N.
	35% Dry Matter
	Crude Protein 16 - 18%

Forage yields are affected primarily by the supply of nutrients and the availability of moisture to the crop. Efficient use of nutrients from fertilizer and or manure 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 controlling Curled Dock and Chickweed. 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. Farm operations would realize income when forage is transferred to a 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	12	12	12	12	8				8	12	12	12
%Exp			10	5	20	15	20	15	5	10		

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.

### Labour Time

Land Preparation	5 min./acre
Fertilizing	15- 20 min./acre
Harvesting	4 1/2 - 5 hours/acre

The above indicators are based on the actual field time with the equipment complement used in this budget, which is assumed to be in top operating condition. Individual operators may vary from this depending on equipment size, land and operator expertise.

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# ESTABLISHED GRASS FORAGE

## Target Yield - 6.5 Tons D.M./acre

### Contribution Margin 1 Acre of Grass Forage Cowichan Valley

#### Income

	Yield	Price	Unit	Income
Grass Silage	12	\$40.00	ton	\$480.00
Grass Hay	3.0	140.00	ton	420.00

**Total Income \$900.00**

#### Direct Expenses

	Quantity	Price	Unit	Expense
<u>Fertilizer</u>				
46 - 0 - 0	650	\$.15	lb.	\$97.50
Manure	10	0	ton	0.00
<u>Pest Control</u>				
Parathion	.24	16.00	litre	3.85

#### Machinery Costs

Land Preparation				3.15
Fertilizing				1.60
Irrigating				13.30
Harvesting				58.30
Trucking				7.40

#### Crop Supplies and Service

Silage Additive	12	3.50	ton	42.00
Silo Cover	12	.15	ton	1.80
Twine	2.75	2.50	ton	7.50

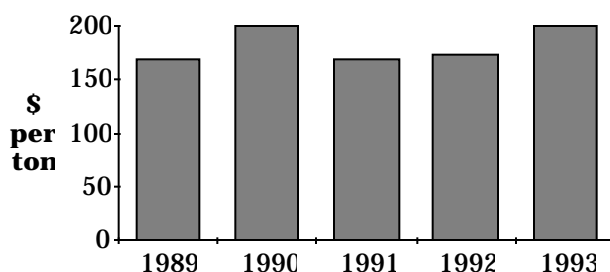
**Total Direct Expenses \$236.40**

**Contribution Margin \$663.60**

### Buildings & Machinery Replacement Cost Total Farm Size - 90 Acres

Buildings	\$65,000
Power Machinery	33,000
Irrigation	58,500
Field Equipment	58,200
Harvest Equipment	92,300
Vehicles (incl. used dump truck)	58,000
<b>Total</b>	<b>\$365,000</b>

### Cowichan 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			
	2.0	2.5	3.0	3.5
<b>100.00</b>	446	495	544	592
<b>120.00</b>	486	545	604	662
<b>140.00</b>	526	595	664	732
<b>160.00</b>	566	645	724	802

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.