



# PLANNING FOR PROFIT



Province of British Columbia  
Ministry of Agriculture, Fisheries and Food

**Irrigated Grass Forage  
(Established)  
Bulkley Valley**

**Agdex 120 - 810  
Summer 1994**

## 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	63% T.D.N. 16% Crude Protein
Quantity	4.0 - 4.5 tons/acre

The forage base should consist of a grass legume mix of orchard grass, brome, timothy and alsike. Forage yields are affected primarily by the supply of nutrients and the availability of moisture to the crop. Forage quality is most affected by the stage of maturity at harvest. Proper handling and storage practices will maintain as much quality as possible for feeding. Irrigation may enhance yields. Fencing may be required to protect hay fields from damage by livestock. A budget for grass forage establishment should be done in order to calculate the full cost of growing a forage crop.

## Marketing Alternatives

Limited opportunities exist to market grass hay. 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. It is possible to sell excess hay in local markets 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	15	15	15	10						15	15	15
%Exp					20	30	30	20				

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

Fertilizing	8 - 10 min./acre
Irrigating	8 hours/acre
Harvesting	5 - 6 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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# GRASS HAY

## Target Yield - 4.25 Tons/acre

### Contribution Margin 1 Acre of Irrigated Grass Hay Bulkley Valley

**Income**

	Yield	Price	Unit	Income
First Cut	3.0	\$80.00	ton	\$240.00
Second Cut	1.25	80.00	ton	100.00
<b>Total Income</b>				<b>\$340.00</b>

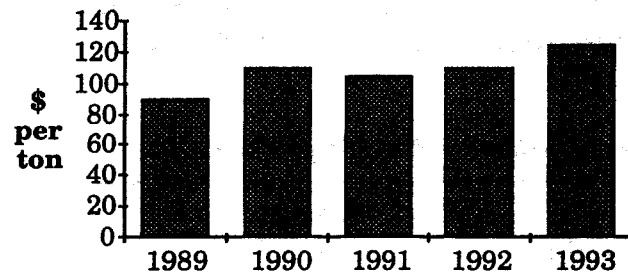
**Direct Expenses**

	Quantity	Price	Unit	Expense
<b>Fertilizer</b>				
17 - 20 - 0	150	\$.13	lb.	\$20.10
34 - 0 - 0	100	.12	lb.	12.35
<b>Crop Supplies and Service</b>				
Twine	4.25	2.50	ton	10.65
Irrigation Hydro	8	2.90	use	23.20
<b>Machinery Costs</b>				
Fertilizing				1.60
Irrigating				22.50
Harvesting				22.80
Trucking				2.65
<b>Total Direct Expenses</b>				<b>\$115.85</b>
<b>Contribution Margin</b>				<b>\$224.15</b>

### Buildings & Machinery Replacement Cost Total Farm Size - 250 Acres Irrigated Acres - 40

Buildings	\$30,000
Power Machinery	33,000
Field Equipment	58,200
Harvest Equipment	74,300
Irrigation	30,000
Vehicles	<u>18,000</u>
<b>Total</b>	<b>\$243,500</b>

### Alfalfa Hay Prices



### Contribution Margin - Sensitivity Analysis

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

Price \$/ton	Yield Tons per Acre			
	2.0	3.0	4.25	5.0
60.00	10	67	139	182
80.00	50	127	224	282
100.00	90	187	309	382
120.00	130	247	394	482

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.