



# PLANNING FOR PROFIT

Province of British Columbia  
Ministry of Agriculture, Fisheries and Food

## Irrigated Alfalfa North Okanagan Spring 1993

Agdex 121-810

### 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 Statement**.

### Key Factors Affecting Profit

	Target
Quality	>18% crude protein
Quantity	4.5 ton/acre
Price of Product	\$90 - \$120 per ton
Life Stand	5 yrs - 1 yr est, 4 prod.

In order to achieve the best price for the product, it is important that alfalfa hay be high in crude protein and be dust free.

Hay should be stored under cover to reduce damage from sun and rain.

Alfalfa stands should be replaced after five years to maintain high yields.

### Marketing Alternatives

High quality alfalfa hay may be marketed to dairymen. Hay is marketable to sheep, cattle, and horse producers at a variety of quality levels. Transportation costs may eliminate selling of hay to distant markets.

### Cash Flow Timing

	J	F	M	A	M	J	J	A	S	O	N	D
%Inc								10	10	10	20	20
%Exp		35	10			15	15	15		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.

### Rules of Thumb

Direct Expenses % of Income	25-30%
Equipment Investment	\$700/acre
Irrigation Investment	\$370/acre

The following indicators are provided for comparison purposes. They are set out as potential targets for alfalfa hay production.

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# IRRIGATED ALFALFA HAY

## Target Yield - 4.5 Tons/Acre

### Contribution Margin 1 Acre of Alfalfa

#### Income

	Yield	Price	Unit	Income
Alfalfa Hay #1	3.0	\$120.00	ton	\$360.00
Alfalfa Hay #2	1.5	100.00	ton	150.00
<b>Total Income</b>				<b>\$510.00</b>

#### Direct Expenses

	Quantity	Price	Unit	Expense
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#### Fertilizers

11-52-0	100	\$.15	lb.	\$14.90
0-0-60	75	.11	lb.	8.58
21-0-0-24	35	.12	lb.	4.09

(actual rates and nutrients should be based on soil tests)

#### Crop Supplies & Services

Crop Insurance	1	7.00	acre	7.00
Twine	0.4	28.74	roll	10.35
Hydro				17.39
Water Rights	1.8	0.49	ac.ft.	0.87

Machine Repairs & Maintenance 52.51

Fuel Costs 26.15

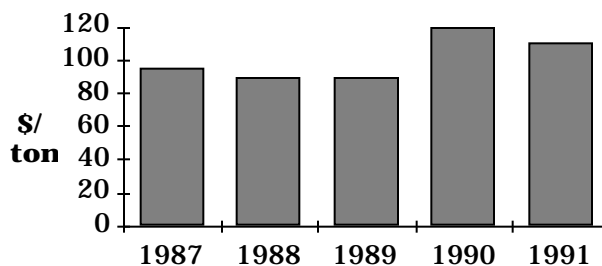
**Total Direct Expenses \$141.84**

**Contribution Margin \$368.16**

### Buildings and Machinery Replacement Cost Total Farm Size - 225 Acres Full Production - 180 Acres

Buildings	\$ 39,000
Power Machinery	50,000
Field Machinery	26,600
Harvesting Equipment	58,400
Irrigation	83,000
Miscellaneous	23,000
<b>Total</b>	<b>\$280,000</b>

### Alfalfa Hay Prices Okanagan



### Contribution Margin - Sensitivity Analysis

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

Price \$/Ton	Yield Tons per Acre			
	3.5	4.0	4.5	5.0
90.00	173.16	218.16	263.16	308.16
100.00	208.16	258.16	308.16	358.16
113.33	254.83	311.49	368.16	424.83
120.00	278.16	338.16	398.16	458.16

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.