



# PLANNING FOR PROFIT

Province of British Columbia  
Ministry of Agriculture, Fisheries and Food

**Irrigated Alfalfa  
Establishment Year  
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

	<b>Target</b>
Quality	>15% crude protein
Quantity	minimum 1.5 tons/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. Target for crude protein is indicative of allowing the alfalfa to become well established, i.e. mid to late bloom stage.

## 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	75 - 85%
Equipment Investment	\$700/acre
Irrigation Equip. 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 - 2.5 Tons/Acre

### Contribution Margin 1 Acre of Alfalfa Establishment Year

#### Total Income

	Yield	Price	Unit	Income
Alfalfa Hay	2.5	\$90.00	ton	\$225.00

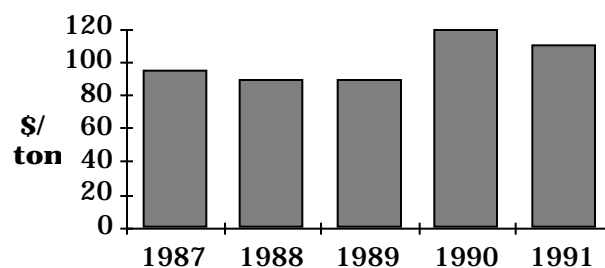
#### Direct Expenses

	Quantity	Price	Unit	Expense
<u>Seed</u>				
Alfalfa	11	\$2.35	lb.	\$ 25.96
Innoculant	0.2	2.80	pkg.	0.56
<u>Fertilizers</u>				
11-52-0	100	0.15	lb.	14.90
0-0-60	75	0.11	lb.	8.58
21-0-0-24	35	0.12	lb.	4.09
(actual rates and nutrients should be based on soil tests)				
<u>Herbicide</u>				
Pre-Plant	1.32	9.55	litre	12.61
<u>Crop Supplies &amp; Services</u>				
Crop Insurance	1	7.00	acre	7.00
Twine	0.2	28.74	roll	5.75
Hydro				17.39
Water Rights	1.8	0.49	ac.ft.	0.87
Machine Repairs & Maintenance				57.16
Fuel Costs				31.75
<b>Total Direct Expenses</b>				<b>\$186.62</b>
<b>Contribution Margin</b>				<b>\$38.38</b>

### Buildings and Machinery Replacement Cost Total Farm Size - 225 Acres Alfalfa Establishment - 45 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			
	2.0	2.3	2.5	2.8
70.00	(46.62)	(25.62)	(11.62)	9.38
80.00	(26.62)	(2.62)	13.38	37.38
90.00	(6.62)	20.38	38.38	65.38
100.00	13.38	43.38	63.38	93.38

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.