



PLANNING FOR PROFIT



Province of British Columbia
Ministry of Agriculture, Fisheries and Food

Grass Legume Hay Production Prince George Spring 1992

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 Statement**.

Key Factors Affecting Profit

	Target
Quantity	2.25 tons/acre
Price	\$70.00/ton

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 of that quality for feeding as possible. A budget for grass forage establishment should be done in order to calculate the full cost of growing a forage crop.

Marketing Alternatives

Limited opportunity exists to market grass legume hay. 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. It is possible to sell excess hay in local markets to individuals with small livestock holdings.

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.

Rules of Thumb

Investment	\$750/acre
Direct Expense % of Income	40-50%

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

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GRASS LEGUME HAY

Target Yield - 2.25 Tons D.M./acre

Contribution Margin 1 Acre of Grass/Legume Hay

Income

	Yield	Price	Unit	Income
Forage	2.00	\$70.00	ton	\$140.00
Grazing (hay equiv.)	0.25	70.00	ton	17.50
Total Income				\$157.50

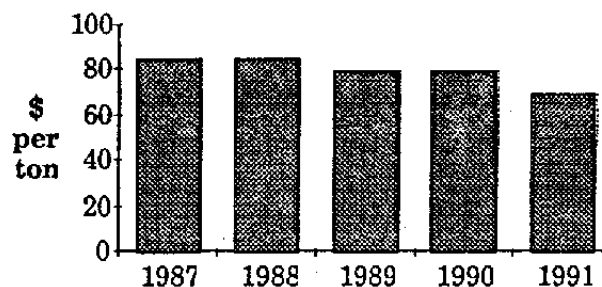
Direct Expenses

	Quantity	Price	Unit	Expense
<u>Fertilizer</u>				
34 - 0 - 11	150	\$.14	lb	\$21.00
<u>Crop Supplies and Services</u>				
Twine	2.0	2.00	ton	4.00
Hay Hauling	2.0	5.00	ton	10.00
Fuel, Oil & Lubrication				3.50
Machine Repair & Maintenance				10.00
Total Direct Expenses				\$48.50
Contribution Margin				\$109.00

Buildings and Machinery Replacement Cost Total Farm Size - 250 acres

Buildings	\$12,000
Machinery	135,000
Hay Storage	21,000
Vehicle	<u>15,000</u>
Total	\$183,000

Prince George Hay Prices



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				
	1.0	1.5	2.0	2.5	3.0
50.00	21	43	64	86	107
60.00	34	60	87	113	140
70.00	46	78	109	141	172
80.00	59	95	132	168	205

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.