



PLANNING FOR PROFIT

Barley Annual Ryegrass Silage North Okanagan Spring 1993

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
Protein:	Barley	10%
	Ryegrass	18%
Yield:	Barley	4.5 tons D.M./acre
	Ryegrass	2.0 tons D.M./acre
Energy:	Barley	63% TDN
	Annual Ryegrass	60% TDN

Variety selection is important to ensure livestock palatability. A smooth horse smooth barley variety should be used. Although the total digestible nutrients will remain constant as the plant matures, the energy level will move from the stalk to the head. For best silage production, harvesting should be keyed on the barley when the barley is in the soft dough stage.

Marketing Alternatives

Silage is grown to be used as a feed for a livestock enterprise. The prices used are an indicator of the value of the cost of replacement forages. Annual ryegrass may also be used for grazing. The high cost of moving silage reduces the value of silage as a commercial crop.

Cash Flow Timing

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

The above information indicates the timing of monthly flow of funds included in the contribution margin only. Typically, silage will be held over the year end for winter feed and the returns will not be realized until the livestock are sold. A complete **Projected Cash Flow** should include indirect expenses, capital sales and purchases, loans and personal expenses.

Rules of Thumb

Direct Expenses % Income	30%
Irrigation Equip. Investment	\$500/acre

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

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Barley Annual Ryegrass Silage

Target Yield - 6.5 Tons/Acre

Contribution Margin 1 Acre of Barley Annual Ryegrass Silage

Income

	Yield	*Price	Unit	Income
Barley	4.5	\$95.00	ton	\$427.50
Annual Ryegrass	1.25	95.00	ton	118.95
Annual Ryegrass	0.75	95.00	ton	71.25
Total Income				\$617.50

Direct Expenses

	Quantity	Price	Unit	Expense
<u>Seed</u>				
Barley	90	\$0.14	lb.	\$12.44
Annual Ryegrass	10	0.57	lb.	5.70

Fertilizer

46-0-0	400	0.13	lb.	52.63
(actual rate and nutrients should be based on soil test)				

Herbicide

broadleaf	0.5	5.47	litre	2.73
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Crop Supplies & Services

Irrigation Hydro				16.65
Water Rights	1.8	0.49	ac.ft.	0.88
Silage cover	100	0.04	sq.ft.	4.03
Fuel Costs				39.42
Machine Repair & Maintenance				53.19

Total Direct Expenses **\$187.67**

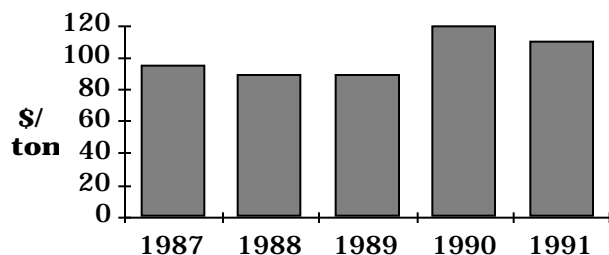
Contribution Margin **\$429.83**

*Hay equivalent price.

Buildings and Machinery Replacement Cost Total Farm Size - 200 Acres Silage - 70 acres

Buildings	\$ 25,000
Bunker Silo	24,000
Irrigation Equipment	35,000
Power Machinery	82,800
Field Machinery	23,400
Harvesting Equipment	69,000
Small Tools & Miscellaneous	8,000
Vehicle	<u>15,000</u>
Total	\$282,200

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 d.m. per Acre			
	5.0	6.0	6.5	7.0
75.00	187	262	300	337
85.00	237	322	365	407
95.00	287	382	430	477
105.00	337	442	495	547

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 and Fisheries.