PLANNING FOR PROFIT

BRITISH COLUMBIA Ministry of Agriculture and Food

Pollination **Agdex 616 - 810**
Southern Interior
Summer 1999

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	1.25 sets/hive
Price	$45.00/set

Costs to provide **pollination** services will vary from site to site. Factors affecting this variation include the number of hives delivered per trip, distance travelled and truck capacity. This budget reflects an average of time and cost reported by co-operators involved. Individuals must adjust the figures for their own operations. Industry publication have published "cost of pollination with respect to the number of hives and distances travelled". (e.g. December 1993 American Bee Journal).

This *enterprise sheet assumes* that the operator is primarily in Honey Production. Therefore, the bulk of the colony maintenance costs of **Contribution Margin** requirements are borne by the honey business. Honey Production is considerably lower for the Okanagan than for the rest of the Southern Interior. It is likely that few if any commercial beekeeping operations would exist in this area if honey production were not augmented by pollination income. Contrarily, a pollination business could not survive without significantly higher rental rates to cover hive maintenance costs year round.

Marketing Alternatives

Marketing opportunitites exist to provide pollination services to other edible horticulture crops. Producers of annual and perennial crops require regular education and promotional reminders of the value and need for pollination of their crops.

Cash Flow Timing

	J	F	M	A	M	J	J	A	S	O	N	D
%Inc				10	40	40	10					
%Exp	15	10		45	30							

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	$400 - $450/hive
Direct Expense % of Income	40% - 45%
Operator Labour*	160 hours
* 1/2 total labour is hired	

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

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POLLINATION
Target Yield - 1.25 sets/hive

Summer 1999

Contribution Margin Pollination per Bee Hive Okanagan Valley

Income

	Yield	Price	Unit	Income
Hive Rental	1.25	$45.00	hive	$56.25
Total Income				**$56.25**

Direct Expenses

	Quantity	Price	Unit	Expense
Feed				
Sugar	3.60	$0.711	kg	$2.56
Feed Supplements				
Protein Supplement	0.34	2.20	kg	0.75
Fumagillin	0.04	9.879	g	0.42
Oxytetracycline	5	0.023	g	0.12
Hive Supplies & Services				
Queens	0.05	15		0.75
Formic Acid	0.27	8.481		2.29
Apistan Strips	2	2.010		4.02
Machinery Operation				
Fuel Costs	1	0.509		0.51
Oil, Lubrication	1	0.076		0.08
R & M	1	0.360		0.36
Hired Labour				
Feeding	0.04	15.83		0.63
Unit Preparation	0.13	15.83		2.06
Strap & Deliver*	0.14	15.83		2.22
Clean & Medicate	0.08	15.83		1.27
Other Supplies & Services				
Hive R & M	1	2.253		2.25
Honey Crop Loss	3	1.388		4.16
Total Direct Expenses				**$24.45**

Contribution Margin **$31.80**

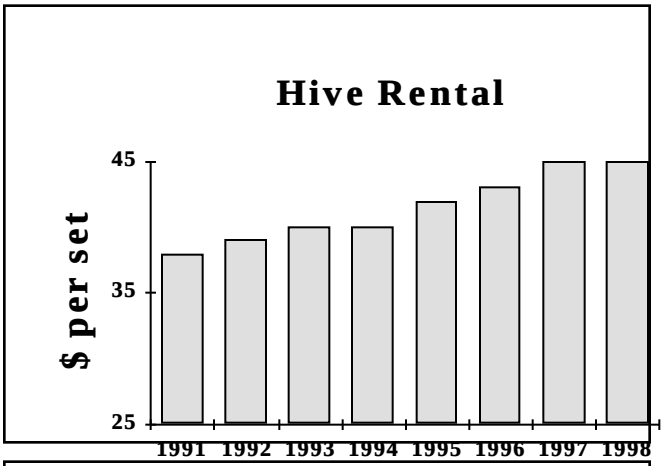
*Based on 2,000 total pollination kms

NB: No beekeeping operations exist solely for pollination. Tomore realistically reflect total costs, additional expenses to maintain colonies for the remaining 46 - 48 weeks of the year should be added. Refer to Key Factors Affecting Profit.

Buildings and Machinery Replacement Cost Total Farm Size - 400 Hives

Buildings	$43,300
Hives (used, 5 boxes with bees)	55,000
Extracting Equipment	12,250
Honey Storage & Sales Equip.	9,750
Hive Handling & Protection	10,100
Small Tools, Fuel Tanks & Other	3,100
Vehicles	37,000
Total	$170,500

NB: Equipment listed is for a honey operation, no additional pollination equipment is needed.



Contribution Margin – Sensitivity Analysis

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

PRICE	Number of sets/hive				
$/set	1	1.1	1.2	1.25	1.5
35	11.97	14.90	17.83	19.30	20.76
40	16.97	20.40	23.83	25.55	27.26
45	21.97	25.90	29.83	**31.80**	33.76
50	26.97	31.40	35.83	38.05	40.26
55	31.97	36.90	41.83	44.30	46.76

This information is provided as a guideline only. Target yield indicates average production. An individual crop plan should be developed by each producer. Planning forms may be obtained from your local office of the BC Ministry of Agriculture and Food.