



PLANNING FOR PROFIT



Province of British Columbia
Ministry of Agriculture, Fisheries and Food

**Nucleus Colony Production
Southern Interior
Summer 1993**

Agdex 616 - 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	1 nucleus colony/hive
Price	\$38.50/nucleus colony

Winter severity affects nucleus mortality and spring feeding costs.

An increase in bulk honey prices will stimulate industry expansion. The shortage of honeycomb on the prairies should favour nucleus colonies over packages during expansion.

Volatility in sugar prices will have a major effect on the contribution margin due to sugar making up over one half of the direct expenses.

Marketing Alternatives

The spread of Africanized bees into bee production areas of the Southern U.S. will increase U.S. demand for gentle bees from Northern non-Africanized areas. Tracheal and varroa mites in B.C. bees may restrict access to markets in mite free areas. Mite damage to hives will increase the demand for replacement bees.

Cash Flow Timing

	J	F	M	A	M	J	J	A	S	O	N	D
%Inc	2	2			95							1
%Exp			25	20	5	15	5	15	10	5		

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

Additional Investment*	\$25/hive
Direct Expense % of Income	55%-65%
Operator Labour	175-225hours
*to Honey Operation, Contribution Margin Summer 1993	

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

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NUCLEUS COLONY PRODUCTION

Target Yield - 1 nuc/hive

Contribution Margin Nucleus Production per Bee Hive

Total Income

	Yield	Price	Unit	Income
Nucleus Colonies* (three frame)	1	\$38.50	each	\$38.50

Direct Expenses

	Quantity	Price	Unit	Expense
Feed				
Sugar (nucs)	12.5	\$.70	kg	\$8.75
Sugar (splits)	1.77	.70	kg	1.24
Feed Supplements				
Protein	.5	1.98	kg	.99
Fumagillin	1.85	.83	tsp.	1.54
Oxytetracycline	1.85	.06	tsp.	.11
Supplies & Services				
Queen Cells	1.35	2.00	each	2.70
Labour				
Nuc Making	.41	7.25	hour	3.00
Split Making	.055	7.25	hour	.40
Split Feeding	.017	7.25	hour	.13
Bee Yard Rent				.35
Marketing				.63
Fuel, Oil & Lube				2.97
Machinery R & M				.40

Total Direct Expenses **\$23.19**

Contribution Margin **\$15.31**

* The buyer also provides the seller with three frames for each nuc purchased.

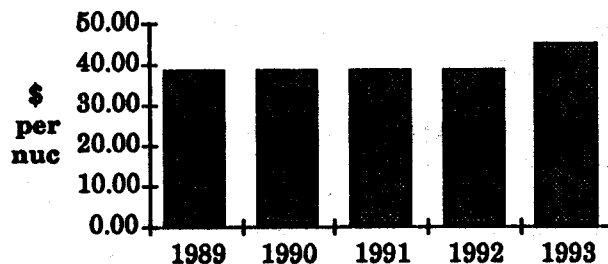
Buildings and Machinery Replacement Cost* Total Farm Size - 400 Hives

Nuc Boxes (250)	\$5,750
Frame Feeders (500)	3,000
Bear Fences	800
Hive Wintering Equipment	<u>400</u>

Total **\$9,950**

* Equipment listed is in addition to that required for existing Honey Contribution Margin, Summer 1993.

Nucleus Colony Prices



Contribution Margin - Sensitivity Analysis

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

PRICE \$nuc	Yield Nucs per Hive			
	.80	.90	1.00	1.10
35.00	4.81	8.31	11.81	15.31
37.50	6.81	10.56	14.31	18.06
38.50	7.61	11.46	15.31	19.16
40.00	8.81	12.81	16.81	20.81

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.