

THE PROJECT PROFILE FOR "BEE KEEPING-CUM-HONEY PROCESSING" VIETNAM

Honey is a viscous material derived from the nectars of the plants through the collection of honey and modified & stored by them as a dense liquid. It consists of sugar, dextrose and fructose. In its ash the compounds of silica, iron, copper, manganese, chlorine, calcium, potassium, sodium phosphorus are found. Enzymes like invertase, diastase, catalase, lipase and Vitamin A, B complex and C are found. The normal composition of honey is

Moisture 19.9%
Ash 0.29%
Acidity 0.1%
Balance Sugars.

It has nourishing value like milk and it helps to build haemoglobin. It is reservoir of energy. In India it is used in tea, coffee, milk etc. due to its delicious flavour. Honey curds, butter, honey roti, biscuits - honey has a delicious taste. The use of honey before baking of biscuits bread improves their flavour and enhance their keeping quality by retarding their drying up. Honey is used as medicine as lactose in the form of carrier of almost all homoeopathic medicines.

There is good demand for honey throughout the country. The marketing of honey is looked after by the Khadi & Village Industries Board.

In India modern Bee Keeping methods are to get optimum quantity of honey. On an average 8 Kg. honey per year is obtained from one hive. Production of honey during 1993-94 & 1994-95 is tabulated.

Sl. No.	Year	Village covered (No. in lakhs)	Bee keeping (No. in lakhs)	Bee colonies (No. in lakhs)	Production value (Rs. in lakhs)	Gross Value (Rs. in lakhs)	Estimated (Rs. in lakhs)	Remarks
1	2	3	4	5	6	7	8	9
	1993-94	0.39	2.36	6.75	2,163.38	2,650.02	1,500.69	-
	1994-95	0.39	2.51	7.00	2,596.04	3,151.00	2,016.80	-

TECHNICAL INFORMATION/PROCESS OUTLINE:

Three species of honey bees are available in India which are used for honey comb. Commonly various sizes of wooden frames are used for honey comb. The frames are placed away from living beings. To each box, a honey spire is provided which collects more bees. All these bees fill the central honey comb. When these cells are full, they are hermetically sealed by capping with wax. These cappings are removed with the help of an uncapping knife. The extractor should be worked slowly in the beginning at about 150 rpm for about 2 minutes. Then the side of the frame should be reversed and extractor should be emptied into cistern when its honey chamber is two-third full. It is desirable to make arrangements for straining and packing honey into this promptly. Fresh extracted honey is warm and easy to strain.

Beekeeping & Honey Processing

Crude honey may contain some impurities such as wax, pollen, parts of the bees, dirt etc. It has to be processed to make it more presentable. Crude honey is transferred to a vessel. Honey is stirred continuously and temperature not allowed to raise above 41 C (overheating damages the aroma, flavour and colour of honey). Honey melts at 59 C to 62.5 C and clogs the strainer. The hot honey removed with a knife and then honey is packed in containers.

ASSUMPTIONS IN PRODUCT FORMULATION

1. Training will be provided by KVIC
2. Marketing will be made by KVIC.
3. Machinery and equipment will be made by KVIC within quotations submitted by the entrepreneur.
4. Construction of shed and packing materials will be obtained within quoted cost.
5. Calculations are based on pre-faction capacity installed.
6. Additional expenditure toward price escalation will be met from internal generated funds.
7. B.C.Cs is based on KVIC price list/guidelines.

Bee Keeping & Honey Processing

CONSTITUTION OF VIGNAN VIGNAN COMMISSION FACILITIES CENTRE

Sl. No.	Purpose for which construction is proposed	Specification given by Industry Director. Location, Area, Capacity, Special feature, if any.	Cost of construction per Sq. Ft.	Total cost (estimated) Rs.	Time required for construction (in months)	Period of life of the plant (years)	Depreciation to be included in cost of the production	Comments by architect
1	Bee Keeping							
2	For storing raw material by-product & finished product & testing.	As per appropriate from local authorities shed 60x20 sq.ft. with height 15 ft. Total area 1200 sq.ft.	Rs. 250 per sq.ft.	Rs. 3 lakhs	3 to 6 months	20 years.	8	Enclosed separately.

The capacity and other details are as follows:

1. Production of honey 400 Kgs. per month i.e. $400 \times 12 = 4800$ Kgs. per annum.
 The prevailing selling price of honey = Rs. 70/- per kg.
 The annual sales value of the said production will be $4800 \times 70 = \text{Rs. } 3,36,000/-$

Bee Keeping & Honey Processing

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Process	Type of Machinery/Plant/Equipment necessary	From whom & where to be procured and where to be installed	Life of machinery (estimated in years & depreciation provided in cost)	Mode of supply	Where spare parts provided (along with supply)	Arrangment for servicing, inspection & repairs	Cost of machinery including transport, installation, etc.	Guaranteed period (in years)	Period time required for supply (in months)
2 Collected honey	3 1) Bee boxes 2) Nectar Hives 3) Hives stand 4) And well 5) Queen Gate 6) Feeder 7) Hive tool 8) Swam bag 9) Bee veil 10) Smoker 11) Honey extractor 12) Misc. exps. 13) Honey & Fuel storage	Procured from International centre for Industries Development & will be installed at Langthabal Chingthai & others.	5 Life of the machine between 7 to 10 years.	6 50% advance to all suppliers	7 Yes.	8 Will supply of machineries	9 Quotation for machinery seperately. The additional cost towards transportation, installation & local taxes will be Rs _____ 5% of this	10 5 years	11 6 months time of delivery.

Approved by _____

Signature of the applicant
Date: _____

REMARKS ON THE PROJECT FILE (P. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100)

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EMPLOYMENT:

1. supervisor	1 No.	Rs. 1000 p.m.	Rs. 1000/-
2. Unskilled workers	5 Nos.	Rs. 500 p.m. each	Rs. 2500/-
3. Typist cum clerk	1 No.	Rs. 750 p.m.	Rs. 750/-
4. Peon	1 No.	Rs. 500 p.m.	Rs. 500/-

Rs. 4750/-

benefit like medical insurance,
 ent fund, bonus, etc.

Rs. 1250/-

Rs. 1250/-

Rs. 6,000/-

EMPLOYMENT VA.GES (In rupees):

i) Casual employment : 2 persons will be employed after II year of production and from profits will be utilised for these expenditure if

ii) Direct labour : As mention above.

Statement of Expenditure for the year ending 31st March 1954

Category	No.	Description	Rate	No. of units	Total	Remarks
Direct Labour	1	Supervisor	Fixed	1	750/-	
	2	Salesman	Fixed	1	750/-	
	3	Misc. Exp. like insurance, PF, bonus, etc.	-	-	250/-	
		Total			2,000/-	
Indirect Labour	1	Tyrist-cum-oleic	Fixed	1	750/-	
	2	R.F./Bonus	-	-	250/-	
		Total			1,000/-	

Total A + B = Rs. 2000 + Rs. 1000
= Rs. 3,000/-

Direct Labour:

Category of Direct Labour	Number of worker (2)	Rate per day/unit (5)	Mode of payment (4)	Total during the year (5)	Days/weeks (6)
Skilled workers	3 Nos.	Rs. 500 per Month each + PE Rs. 100	Cash	Rs. 36,000	300 working days

Indirect Labour Assisted by the institution.

Project Name	Project No.	Project Location	Project Status
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Appendix VI

COST ESTIMATE

Name of industry : Beekeeping Industry
 Name of the organization : Honey & vira product year, etc.
 Product manufactured sold during : 4.5 tons (optimum capacity utilization)
 Number of units manufactured sold : year
 Period for which cost estimates are made : Initial
 Location of manufacture/base :

Item	No. of unit	Total cost/unit	Cost expected to be incurred
Prime Cost			
a) Raw material		Rs. 85,000/-	
b) Other commodities directly required		Rs. 10,000/-	
c) Direct labour		Rs. 72,000/-	
d) Electricity directly used for production		Rs. 5,000/-	
Total Prime Cost	=	Rs.1,72,000/-	140

Other production Overhead

a) Depreciation	Rs. 4,000/-	(Rs. 20,000/-) x 10%	Rs. 2,000/-
b) Interest on capital engaged	Rs. 1,00,000/-	(Rs. 1,00,000/-) x 10%	Rs. 10,000/-
c) Insurance	Rs. 2,000/-		Rs. 2,000/-
d) Indirect cost of assembles	Rs. 5,000/-		Rs. 5,000/-
e) Repair/maintenance	Rs. 5,000/-		Rs. 5,000/-
f) Rent/owned	Rs. 88,380/-		Rs. 88,380/-
g) Interest @Rs. 18% on Rs.491000/-			

Fixed Investment

a) Building	Rs. 3,00,000/-		
b) Plant & machineries	Rs. 1,50,000/-		
		=	Rs. 4,50,000/-
			= Rs. 4,91,000/-

Working Capital for 3 months

a) Raw material	Rs. 21,250/-		
b) Salaries/wages	Rs. 18,000/-		
c) Indirect cost	Rs. 1,250/-		
d) Insurance	Rs. 500/-	@Rs. 18% Rs.	88,380/-
		=	Rs. 41,000/-

Other production Activities:

Total ex-factory cost of production	= Rs.(1,72,000 + 15,000 + 2,000 + 10,000 + 6,000 + 88,380)
Total cost of production	= Rs. 3,02,380/-

All tonnes of Honey @ Rs. 97/- per ton = Rs. 4,65,600/-

IV. Sales Contribution should include

- c) Godown contribution for handling, transport/insurance, supervisory charges, interest, etc. Chargeable on sales wages in handling total selling cost
- b) Sales of wax

= Rs. 14,600/-

= Rs. 4,80,000/-

= Rs. 3,02,380/-

Say Rs. 3,02,300

Rs. 1,72,000

Selling Price/profit/surplus

Annexure VI (Cost Estimate)

Item	No. of unit.	Total cost/unit	Cost expected to be incurred
Honey/Wax	4.8 tons/240 kg.	63.00	Rs. 3,02,380/-

Total Investment :-

Rs. 2,00,000/-
 Rs. 1,50,000/-
 Total = Rs. 3,50,000/-

ed Assets
 a) Building
 b) Plant & machinery

Rs. 21,250/-
 Rs. 18,000/-
 Rs. 1,250/-
 Rs. 500/-

a) Raw material
 b) Salaries/wages
 c) Indirect cost
 d) Insurance

Total 41,000

(A + B) Investment = Rs. (4,00,000 + 41,000)

= Rs. 4,91,000/-

Investment @ Rs. 18% = Rs. 4,91,000/- = Total Rs. 58,580

Rs. 330/-

1. Fixed cost

$$\begin{aligned} \text{Sales} &= 100 \text{ units} \\ &= 100 \times 45000 = \text{Rs. } 45,00,000 \\ &= 100 \times 175,000 = \end{aligned}$$

Net Surplus

$$\begin{aligned} \text{Gross surplus} &= (\text{Interest on T.D.} + \text{Interest on W.C. loan} - \text{Depreciation}) \\ &= \text{Rs. } 179,000 - (800,400 + 30,000) \\ &= \text{Rs. } 53,600 \end{aligned}$$

Net Surplus

$$\begin{aligned} \text{Net Surplus} &+ \text{Depreciation} \\ &= \text{Rs. } 53,600 + \text{Rs. } 30,000 \\ &= \text{Rs. } 83,600/- \end{aligned}$$

Thus, the project can pay term loan in about four years even at a capacity utilization of 90%.

$$\text{B.E.P.} = \frac{\text{Fixed cost}}{\text{contribution}} \times 100$$

$$= \frac{\text{Fixed cost}}{\text{Sales} - \text{Variable cost}} \times 100$$

Fixed Cost:

Depreciation	30,000
Interest & wages	54,400
Other expenses	12,000
Fixed Salary & Wages	28,800
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	125,200

Variable Cost:

Raw material	85,000
Salary & Wages	43,200
Electricity	5,000
Other Commodities	10,000
Ed. ca W.C Total	34,000
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	177,200

Therefore, B.E.P. (1 Year)

$$\frac{125,200}{480,000 - 177,200} \times 100$$

$$\frac{125,200}{302,800} \times 1000$$

= 41.4 %

Capital Employed:

Debt to Equity Ratio (D:Eq):

	Dept	
	DER = -----	Dept: TL
= 2,00,000		
	Equity	M.C.D.
= 1,30,000		

1,30,000	420,000	
	=-----	Equity: F.C.
= 1,12,500	270,500	
	= 1.55 : 1	M.C.
= 5,000		Total Value
= 1,50,000		

210,000		

B. Capital employed to value of Output Ratio :

$$\frac{\text{Fixed capital} + \text{Working Capital}}{\text{Output}}$$

$$= \frac{4,50,000 + \text{Rs. } 83,400}{\text{Rs. } 480,000}$$

$$= 1.2 : 1$$

C. Capital Employed to Net Value Employed Ratio:

	F.C. + M.C.	
	-----	Net Value = Output - (Land, Power,
Output, Dept)		480,000 - (85,000 + 5,000 + 20,000 +
1,50,000	1,54,000	= 480,000 - 1,30,000
		= 350,000

= 1.54 : 1

iv. Cost per Worker Relation:

$$\frac{B.C + W.C}{\text{No. of Workers.}}$$
$$\frac{55,000 + 33,400}{10}$$

= Rs. 53840/Worker.

v. Productivity Per Worker:

$$\frac{\text{Output}}{\text{No. Workers}}$$
$$\frac{430,000}{10}$$

= Rs. 43,000/wc. ker.

vi. Percentage of Raw Material to value of Output:

$$\frac{\text{Value of Raw material}}{\text{Value of Output}} \times 100$$
$$\frac{25,000}{430,000} \times 100$$

= 17.7 %