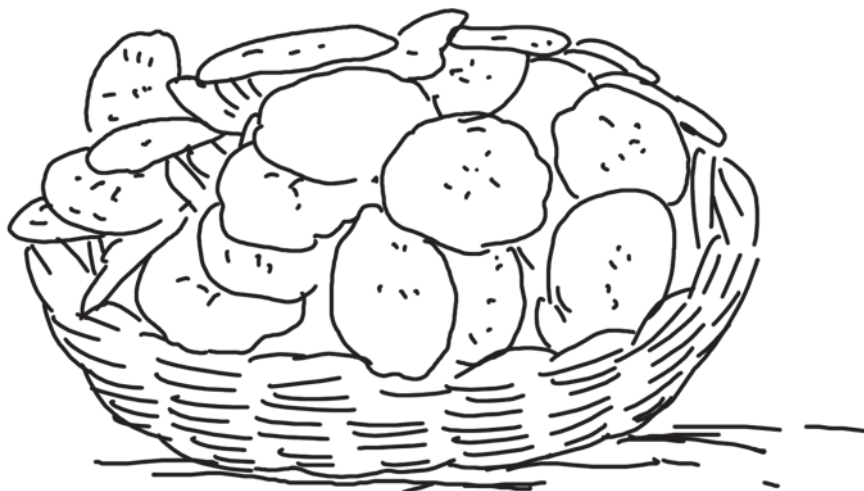


BANANA CHIPS



1.0 INTRODUCTION

Banana is one of the most important fruits in India and occupies about 27.4 thousand hectares area with an annual production of about 42.33 thousand tonnes. The main banana growing states are: Tamil Nadu, Maharashtra, Kerala and Andhra Pradesh. Banana contains about 20% sugar and reasonable amount of Vitamins A, B and C. The fruit is considered a rich source of energy producing food. It is consumed in several forms and preparations, amongst which Banana chip is considered the most popular.

Banana chips are made from unripe bananas. Chips or wafers are crispy, salty or spicy and consumers prefer fresh quality. Since they are made from banana, they have nutritious values as well. The product needs to be packed in transparent polythene bags.

This project profile is for setting up of Banana Chips making unit with installed processing capacity of 30 tonnes per annum of unripe bananas.

2.0 MARKET POTENTIAL

Chips are the most popular variety of snacks and they are consumed round the year by people of all age groups from

all income segments. Potato chips are more popular than banana chips but banana chips have a special category of consumers and they are preferred by many. Competition is not as fierce as in case of potato chips. There are some national as well as regional established brands for potato chips but they are not in banana chips as the market is small. This provides an ample opportunity to a new entrant as the market is not dominated by popular brands with good quality and competitive pricing, it is possible to capture adequate market share.

3.0 PROCESS DETAILS

Banana Chips making process is simple, well established and standardised. Damaged or ripe bananas are taken out during inspection and only good quality unripe bananas are washed in water. Then they are peeled and trimmed before slicing or cutting them in the required size. Then they are washed in boiled water and dried. Dried pieces are deep fried and then either salt or spices or both are applied on them. After cooling, they are packed. The process and weight loss is in the range of 15% to 20%.

4.0 COST OF THE PROJECT

The estimated project cost is given below:

Particulars	Amount (Rs lacs)
Land & Site Development	-
Building & Civil Works	4.73
Machinery & Equipments	1.87
Misc. Fixed Assets	1.50
Preliminary & Pre-operative Expenses	0.49
Contingencies & Escalation @ 3%	0.24
Working Capital	1.24
TOTAL	10.06

4.1 Land & Site Development: No cost has been considered for land & site development. It is assumed that the project will be set up in own land.

4.2 Building & Civil Works: Details of building & civil works are given below.

Particulars	Area (Sqm)	Rate (Rs)	Amount (Rs)
Work-shed cum Storage Room (Half brick wall, CGI roof, Concrete floor)	100	4500	450000
Add: Electrification, etc @ 5%			22500
TOTAL			472500
Say (Rs. in lacs)			4.73

4.3 Machinery & Equipments: Details of machinery & equipments are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Banana Peeling Machine	1	40000	40000
Fruit Washing Tanks	2	10000	20000
Slicer	2	15000	30000
Gas Furnace with Burners (Bhatti)	1	20000	20000
Frying Pans	2	10000	20000
SS Utensils	4	5000	20000
Weighing scales, sealing machine, etc	LS	LS	20000
Sub-total			170000
Add: Transportation, taxes, etc @ 10%			17000
TOTAL			187000
Say (Rs. in lacs)			1.87

4.4 Misc. Fixed Assets: Details of miscellaneous fixed assets are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Power connection (7.5 HP)	1	50000	50000
Water supply system (STW boring, 3 HP pump set, storage, pipes & fittings)	1	80000	80000
Furniture & fixtures	LS	LS	10000
Miscellaneous items	LS	LS	10000
TOTAL			150000
Say (Rs. in lacs)			1.50

4.5 Preliminary & Pre-operative Expenses: Details of preliminary & pre-operative expenses are given below.

Particulars	Amount (Rs lacs)
Travelling expenses	0.20
Professional & other fees	0.10
Interest during implementation	0.85
Miscellaneous expenses	0.10
TOTAL	0.49

4.6 Contingencies & Escalation: Contingencies & escalation has been assumed at 3% of the cost of building & civil works, machinery & equipments and miscellaneous fixed assets.

4.7 Working Capital: Details of working capital are given below.

Particulars	Period (Days)	Amount (Rs lacs)		
		Year 1	Year 2	Year 3
Raw Materials & Consumables	30	0.29	0.35	0.41
Power	30	0.02	0.02	0.03
Salary	30	0.25	0.25	0.25
Other Expenses	30	0.02	0.02	0.03
Finished Goods	15	0.29	0.32	0.36
Receivables	15	0.37	0.44	0.52
Total		1.24	1.41	1.59
Working Capital Margin in Year 1 (100%)	1.24			

5.0 MEANS OF FINANCE

The means of finance for the project is estimated as below.

Particulars	Percent	Amount (Rs lacs)
<u>EQUITY</u>		
A. Equity from Promoters	40%	4.02
B. Subsidy from Central/State Govt.	-	
<u>DEBT</u>		
Term Loan from Banks/FIs	60%	6.04
TOTAL	100%	10.06

6.0 PROFITABILITY STATEMENT

(Rs. in lacs)

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
<u>A. INCOME</u>					
Installed capacity (tonnes/annum)	24.00	24.00	24.00	24.00	24.00
Capacity utilisation	50%	60%	70%	70%	70%
Production at capacity utilisation	12.00	14.40	16.80	16.80	16.80
Price (Rs/tonne)	75000	75000	75000	75000	75000
Income from sales/annum	9.00	10.80	12.60	12.60	12.60
<u>B. OPERATING EXPENSES</u>					
Raw Materials & Consumables	3.56	4.27	4.98	4.98	4.98
Power	0.23	0.28	0.33	0.33	0.33
Salary	3.00	3.02	3.03	3.05	3.06
Repair & Maintenance	0.11	0.12	0.13	0.14	0.16
Selling Expenses	0.09	0.11	0.13	0.13	0.13
Miscellaneous Expenses	0.05	0.05	0.06	0.06	0.06
Total Operating Expenses	7.04	7.85	8.66	8.69	8.72
Less: working expenses capitalised	1.24	0.00	0.00	0.00	0.00
Operating profit	3.20	2.95	3.94	3.91	3.88
<u>C. FINANCIAL EXPENSES</u>					
Depreciation	0.35	0.35	0.35	0.35	0.35
Interest on Term Loan	0.48	0.40	0.29	0.18	0.06
Net Profit	2.37	2.20	3.30	3.39	3.47
Net cash accruals	2.72	2.55	3.65	3.74	3.82
Principal Repayment	0.36	1.42	1.42	1.42	1.42

6.1 Production Capacity: Total production of banana chips at installed capacity is estimated as below.

Rated processing capacity (tonnes/annum)	30
Less: Process & weight loss	20%
Production of banana chips per annum at installed capacity (tonnes)	24

6.2 Raw Materials & Consumables: Expenses on raw materials & consumables at installed capacity is estimated as below.

Particulars	Qty (Tonnes)	Rate (Rs)	Amount (Rs)
Unripe bananas	30	10000	300000
Edible oil	5	50000	247500
Total			547500
Add: Additives, packing materials, etc @ 30%			164250
Expenses on raw materials & consumables at installed capacity (Rs)			711750

6.3 Power: Expenses on power at installed capacity is estimated as below.

Connected load (kw)	5.60
Avg. load factor	70%
Hrs/day	8
Days/annum	300
Annual power consumption (kwh)	9400
Rate per unit (Rs)	5.00
Expenses on power at installed capacity (Rs)	46998

6.4 Salary: Expenses on salary in the 1st year is estimated as given below. It is assumed that salary expenses will increase @ 0.5% every subsequent year.

Particulars of Employee	Numbers	Salary/ Month (Rs)	Cost/annum (Rs)
Manager (Self)	-	-	-
Skilled workers	2	5000	120000
Helpers	5	3000	180000
Expenses on salary in the 1st year (Rs)			300000

6.5 Repair & Maintenance: Expenses on repair & maintenance in the 1st year is estimated as given below. It is assumed that expenses on repair & maintenance will increase @ 10% every subsequent year.

Particulars	Cost (Rs)	Rate	Amount (Rs lakh)
Building & Civil Works	4.73	1%	0.05
Machinery & Equipments	1.87	2%	0.04
Misc. Fixed assets	1.50	2%	0.02
Expenses on repair & maintenance in year 1			0.11

6.6 Selling Expenses: Selling expenses has been assumed at 1% of sales.**6.7 Miscellaneous Expenses:** Miscellaneous expenses have been assumed at 0.5% of sales.**6.8 Depreciation:** Depreciation has been calculated by straight line method. The details of calculation are given below.

Description	Cost (Rs)	Rate	Amount/annum (Rs lakh)
Building & Civil Works	4.73	3.34%	0.16
Machinery & Equipments	1.87	5.28%	0.10
Misc. Fixed Assets	1.50	6.33%	0.09
TOTAL			0.35

6.9 Interest on Term Loan & Principal Repayment: Interest rate has been assumed at 8%. Duration of Loan repayment has been considered for a period of 5 years including moratorium period of 9 months with equal monthly instalments. The details of calculation are given below.

(Rs in lacs)						
Month	Year	1	2	3	4	5
Month 1	Opening balance	6.04	5.68	4.26	2.84	1.42
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest (8%)	0.04	0.04	0.03	0.02	0.01

	Closing balance	6.04	5.56	4.14	2.72	1.30
Month 2	Opening balance	6.04	5.56	4.14	2.72	1.30
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.04	0.03	0.02	0.01
	Closing balance	6.04	5.44	4.02	2.60	1.18
Month 3	Opening balance	6.04	5.44	4.02	2.60	1.18
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.04	0.03	0.02	0.01
	Closing balance	6.04	5.33	3.91	2.49	1.07
Month 4	Opening balance	6.04	5.33	3.91	2.49	1.07
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.04	0.03	0.02	0.01
	Closing balance	6.04	5.21	3.79	2.37	0.95
Month 5	Opening balance	6.04	5.21	3.79	2.37	0.95
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.03	0.02	0.01
	Closing balance	6.04	5.09	3.67	2.25	0.83
Month 6	Opening balance	6.04	5.09	3.67	2.25	0.83
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.01
	Closing balance	6.04	4.97	3.55	2.13	0.71
Month 7	Opening balance	6.04	4.97	3.55	2.13	0.71
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	6.04	4.85	3.43	2.01	0.59
Month 8	Opening balance	6.04	4.85	3.43	2.01	0.59
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	6.04	4.73	3.31	1.89	0.47
Month 9	Opening balance	6.04	4.73	3.31	1.89	0.47
	Repayment	0.00	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	6.04	4.62	3.20	1.78	0.36
Month 10	Opening balance	6.04	4.62	3.20	1.78	0.36
	Repayment	0.12	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	5.92	4.50	3.08	1.66	0.24
Month 11	Opening balance	5.92	4.50	3.08	1.66	0.24
	Repayment	0.12	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	5.80	4.38	2.96	1.54	0.12
Month 12	Opening balance	5.80	4.38	2.96	1.54	0.12
	Repayment	0.12	0.12	0.12	0.12	0.12
	Interest	0.04	0.03	0.02	0.01	0.00
	Closing balance	5.68	4.26	2.84	1.42	0.00
	Principal Repayment	0.36	1.42	1.42	1.42	1.42
	Interest	0.48	0.40	0.29	0.18	0.06

7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5	Total
Profit After Tax (Net Profit)	2.37	2.20	3.30	3.39	3.47	
Depreciation	0.35	0.35	0.35	0.35	0.35	
Interest	0.48	0.40	0.29	0.18	0.06	

	Total	3.20	2.95	3.94	3.91	3.88	17.89
Interest		0.48	0.40	0.29	0.18	0.06	
Loan repayment		0.36	1.42	1.42	1.42	1.42	
	Total	0.84	1.82	1.71	1.60	1.48	7.44
DSCR		3.83	1.62	2.31	2.45	2.62	

Average DSCR = 2.40

8.0 BREAK EVEN POINT (BEP)

		(Rs. in lacs)		
	Year	1	2	3
A. Net sales (Rs. lakh)		9.00	10.80	12.60
B. Variable cost				
Raw Materials & Consumables		3.56	4.27	4.98
Power		0.23	0.28	0.33
Selling Expenses		0.09	0.11	0.13
Miscellaneous Expenses		0.05	0.05	0.06
Total variable cost		3.93	4.71	5.50
C. Contribution (A-B)		5.07	6.09	7.10
D. Fixed & Semi-fixed Costs				
Salary		3.00	3.02	3.03
Repair & maintenance		0.11	0.12	0.13
Interest on Term Loan		0.48	0.40	0.29
Depreciation		0.35	0.35	0.35
Total fixed cost		3.94	3.89	3.80
E. BREAKEVEN POINT		77.68%	63.87%	53.52%
F. BEP at operating capacity		38.84%	38.32%	37.47%
G. Cash BEP		35.37%	34.86%	34.00%

9.0 INTERNAL RATE OF RETURN (IRR)

						(Rs. in lacs)
Year	0	1	2	3	4	5
<u>CASH OUTFLOW</u>						
Capital Expenditure	8.34	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	1.24	0.17	0.17	0.00	0.00
Total (A)	8.34	1.24	0.17	0.17	0.00	0.00
<u>CASH INFLOW</u>						
Profit After Tax		2.37	2.20	3.30	3.39	3.47
Add: Depreciation		0.35	0.35	0.35	0.35	0.35
Add: Interest		0.48	0.40	0.29	0.18	0.06
Add: Salvage Value						
Total (B)	0.00	3.20	2.95	3.94	3.91	3.88
NET FLOW (B-A)	-8.34	1.96	2.78	3.77	3.91	3.88

IRR = 24%

MACHINERY SUPPLIERS

- (a) M. Son Industries
H-158, Sector-63, , Noida, Uttar Pradesh -201307, India
- (b) Kishore & Company, Gurgaon
344, Udyog Vihar, Phase-Ii, , Gurgaon, Haryana -122001, India
- (c) Royale Enterprises, Noida
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