

BETEL NUT PROCESSING



1.0 INTRODUCTION

Betel nuts are consumed in large quantities across the country. It is a typical Indian habit and they are consumed by many due to addiction whereas some consume it assuming that it helps the digestive system. Apart from this segment, there is very large market of pan shops literally scattered across the length and breadth of the country. Since last few years, many varieties of betel nuts and mouth fresheners are introduced in the market. Consumption of plain betel nuts is being replaced by flavoured varieties of betel nuts and many pan shops also use it while making special pans.

This project profile is for setting up of a Betel Nut processing unit for production of flavored nuts with installed processing capacity of 25 MT of nuts per annum.

2.0 MARKET POTENTIAL

Betel nuts in plain and other forms are consumed in the country since centuries. With the passage of time, many new varieties and flavours are introduced and being sold

in huge quantities all over the country. Attractively packed pouches are available in the market like plain, sweet, mentholated, mixed with dry fruit and so on. There are some big and established companies as well as many regional players in the market and most of them are doing fairly well. Key to success is adequate advertisement budget, proper and adequate placement, affordable price and lucrative discounts to retailers. The product is sold in cities, towns, rural areas, highways, bus-stands and railway stations, theatres and many such places mainly through cigarette and pan shops/vendors.

3.0 PROCESS DETAILS

Betel nuts or areca nuts are cut into small pieces with the help of shredder and are soaked in sugar syrup for 72 hours and then syrup is drained. Same process is repeated for additional 24 hours. Then these pieces are dried in the drying chamber and suitably packed. To make mentholated betel nuts, they are cut into small pieces and then are mixed with paste made of menthol, cloves, cardamom and edible oil for about 72 hours. Then they are dried in a dryer and packed.

4.0 COST OF THE PROJECT

The estimated project cost is given below.

Particulars	Amount (Rs lacs)
Land and Site Development	-
Building & Civil Works	6.00
Machinery & Equipment	11.23
Misc. Fixed Assets	3.80
Preliminary & Pre-operative Expenses	1.06
Contingencies & Escalation @ 3%	0.63
Working Capital	3.05
TOTAL	25.77

4.1 Land & Site Development: No. cost has been considered for land & site development. It is assumed that the unit 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 (Half Brick wall, CGI sheet roof, Concrete Floor)	80	4000	320000
Office & Store (Brick wall, CGI sheet roof, Concrete Floor)	50	4500	225000
		Sub total	545000
Add: Electrification, Water Supply, etc @ 10%			54500
		TOTAL	599500
		Say (Rs. in lacs)	6.00

4.3 Machinery & Equipment: Details of machinery & equipment are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
SS Soaking Tanks	6	20000	120000
Shredder Knives	25	500	12500
Mixer Grinder	1	25000	25000
Nut-cracker	1	35000	35000
Tray Dryers with 48 trays	2	220000	440000
Form, Fill and Seal Machines	2	150000	300000
Gas-fired Furnace with Burners	1	25000	25000
Miscellaneous items	LS	LS	10000
		Sub total	967500
Add: Transportation, installation, etc @ 15%			145125
		TOTAL	1122625
		Say (Rs. in lacs)	11.23

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

Particulars	Qty	Rate (Rs)	Amount (Rs)
Power connection (30 HP)	1	100000	100000
Water supply system (STW boring, 3 HP pump set, storage, pipes & fittings)	1	80000	80000
3 Wheeler Delivery Vehicle	1	180000	180000
Furniture & Fixtures	LS	LS	10000
Miscellaneous items	LS	LS	10000
		TOTAL	380000
		Say (Rs. in lacs)	3.80

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

Particulars	Amount (Rs lacs)
Travelling expenses	0.40
Professional & other fees	0.20
Interest during implementation	0.36
Miscellaneous expenses	0.10
TOTAL	1.06

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)		
		Yr 1	Yr 2	Yr 3
Raw Materials & Consumables	30	2.68	3.22	3.75
Utilities	30	0.13	0.15	0.18
Salary	30	0.90	0.91	0.92
Finished Goods	15	1.89	2.18	2.48
Receivables	15	2.03	2.44	2.85
TOTAL		7.63	8.90	10.17
Working Capital Margin in Yr 1 (40%)	3.05			

5.0 MEANS OF FINANCE

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

Particulars	Percent	Amount (Rs lacs)
EQUITY		
A. Equity from Promoters	40%	10.31
B. Subsidy from Central/State Govt.	-	
DEBT		
Term Loan from Banks/Fls	60%	15.46
TOTAL	100%	25.77

6.0 PROFITABILITY STATEMENT

(Rs. in lacs)

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7
A. INCOME							
Production capacity (No. of sachets)	3300000	3300000	3300000	3300000	3300000	3300000	3300000
Capacity utilisation	50%	60%	70%	70%	70%	70%	70%
Production at capacity utilisation	1650000	1980000	2310000	2310000	2310000	2310000	2310000
Price (Rs/sachet)	3	3	3	3	3	3	3
Income from sales (Rs lakh)	49.50	59.40	69.30	69.30	69.30	69.30	69.30

B. OPERATING EXPENSES							
Raw Materials & Consumables	32.60	39.12	45.64	45.64	45.64	45.64	45.64
Utilities	1.54	1.85	2.16	2.16	2.16	2.16	2.16
Salary	10.92	11.03	11.14	11.25	11.36	11.48	11.59
Repair & Maintenance	0.21	0.25	0.30	0.36	0.44	0.52	0.63
Selling Expenses	0.50	0.59	0.69	0.69	0.69	0.69	0.69
Miscellaneous Expenses	0.25	0.30	0.35	0.35	0.35	0.35	0.35
Total Operating Expenses	46.01	53.14	60.28	60.45	60.63	60.84	61.05
Less: Working expenses capitalised	3.05	0.00	0.00	0.00	0.00	0.00	0.00
Operating profit	6.54	6.26	9.02	8.85	8.67	8.46	8.25
C. FINANCIAL EXPENSES							
Depreciation	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Interest on Term Loan	1.23	1.10	0.90	0.70	0.50	0.31	0.11
Interest on Working Capital Loan	0.73	0.85	0.98	0.98	0.98	0.98	0.98
Net Profit	3.34	3.08	5.92	5.94	5.96	5.95	5.93
Net cash accruals	4.57	4.31	7.15	7.17	7.19	7.18	7.16
Principal Repayment	0.62	2.47	2.47	2.47	2.47	2.47	2.47

6.1 Estimation of Production Capacity: Production of flavoured betel nuts in sachets at installed capacity is estimated as below.

Rated processing capacity (tonnes/annum of areca nuts)	25
Recovery of processed nuts (%)	90%
Net production of processed nuts (tonnes)	23
Production of flavoured nuts in MT after additives @ 10%	25
Capacity of packing material (Sachets) in gms	7.5
Production/ annum of flavored areca nuts at installed capacity (No. of sachets)	3300000

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

Particulars	Qty (MT)	Rate (Rs)	Amount (Rs)
Areca nuts	25.00	220000	5500000
Sugar @ 9.25%	2.31	17000	39313
Edible oil @ 1.85%	0.46	50000	23125
Cloves, Menthol, Cardamom, etc @ 7.40%	1.85	250000	462500
Packing material (Sachets) in Nos	3300000	0.15	495000
Expenses on raw materials & consumables at installed capacity (Rs)			6519938

6.3 Utilities: Expenses on utilities at installed capacity is estimated as below.

Expenses on power

Connected Load (kw)	22
Avg. load factor	70%
Hrs/day	8
Days/annum	300

Annual power consumption (kwh)	37598
Rate per unit (Rs)	5
Expenses on power per annum at installed capacity (Rs)	187992
Add: Expenses on LPG cylinder refill @ Rs 10,000/month	120000
Expenses on utilities at installed capacity (Rs)	307992

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

Particulars of Employees	Numbers	Salary/Month (Rs)	Cost/annum (Rs)
Manager	1	15000	180000
Skilled Workers/Machine Operators	4	10000	480000
Sales Staff	2	6000	144000
Helpers	8	3000	288000
Expenses on salary in the 1st year (Rs)			1092000

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 @ 20% every subsequent year.

Particulars	Cost (Rs)	Rate	Amount (Rs lacs)
Building & Civil Works	6.00	1%	0.06
Machinery & Equipment	11.23	1%	0.11
Misc. Fixed Assets	3.80	1%	0.04
Expenses on repair & maintenance in the 1st year (Rs)			0.21

6.6 Selling Expenses: Selling expenses have 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 lacs)
Building & Civil Works	6.00	3.34%	0.20
Machinery & Equipment	11.23	7.07%	0.79
Misc. Fixed Assets	3.80	6.23%	0.24
TOTAL			1.23

6.9 Interest on Term Loan & Principal Repayment: Interest rate has been assumed at 8% per annum. Duration of Loan repayment has been considered for a period of 7 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	6	7
Month 1	Opening balance	15.46	14.84	12.37	9.89	7.42	4.95	2.47
	Repayment	0.00	0.21	0.21	0.21	0.21	0.21	0.21
	Interest (8%)	0.10	0.10	0.08	0.07	0.05	0.03	0.02
	Closing balance	15.46	14.64	12.16	9.69	7.21	4.74	2.27
Month 2	Opening balance	15.46	14.64	12.16	9.69	7.21	4.74	2.27
	Repayment	0.00	0.21	0.21	0.21	0.21	0.21	0.21
	Interest	0.10	0.10	0.08	0.06	0.05	0.03	0.02
	Closing balance	15.46	14.43	11.96	9.48	7.01	4.54	2.06
Month 3	Opening balance	15.46	14.43	11.96	9.48	7.01	4.54	2.06
	Repayment	0.00	0.21	0.21	0.21	0.21	0.21	0.21
	Interest	0.10	0.10	0.08	0.06	0.05	0.03	0.01
	Closing balance	15.46	14.22	11.75	9.28	6.80	4.33	1.86

Month 4	Opening balance	15.46	14.22	11.75	9.28	6.80	4.33	1.86
	Repayment	0.00	0.21	0.21	0.21	0.21	0.21	0.21
	Interest	0.10	0.09	0.08	0.06	0.05	0.03	0.01
	Closing balance	15.46	14.02	11.54	9.07	6.60	4.12	1.65
Month 5	Opening balance	15.46	14.02	11.54	9.07	6.60	4.12	1.65
	Repayment	0.00	0.21	0.21	0.21	0.21	0.21	0.21
	Interest	0.10	0.09	0.08	0.06	0.04	0.03	0.01
	Closing balance	15.46	13.81	11.34	8.86	6.39	3.92	1.44
Month 6	Opening balance	15.46	13.81	11.34	8.86	6.39	3.92	1.44
	Repayment	0.00	0.21	0.21	0.21	0.21	0.21	0.21
	Interest	0.10	0.09	0.08	0.06	0.04	0.03	0.01
	Closing balance	15.46	13.61	11.13	8.66	6.18	3.71	1.24
Month 7	Opening balance	15.46	13.61	11.13	8.66	6.18	3.71	1.24
	Repayment	0.00	0.21	0.21	0.21	0.21	0.21	0.21
	Interest	0.10	0.09	0.07	0.06	0.04	0.02	0.01
	Closing balance	15.46	13.40	10.93	8.45	5.98	3.50	1.03
Month 8	Opening balance	15.46	13.40	10.93	8.45	5.98	3.50	1.03
	Repayment	0.00	0.21	0.21	0.21	0.21	0.21	0.21
	Interest	0.10	0.09	0.07	0.06	0.04	0.02	0.01
	Closing balance	15.46	13.19	10.72	8.25	5.77	3.30	0.82
Month 9	Opening balance	15.46	13.19	10.72	8.25	5.77	3.30	0.82
	Repayment	0.00	0.21	0.21	0.21	0.21	0.21	0.21
	Interest	0.10	0.09	0.07	0.05	0.04	0.02	0.01
	Closing balance	15.46	12.99	10.51	8.04	5.57	3.09	0.62
Month 10	Opening balance	15.46	12.99	10.51	8.04	5.57	3.09	0.62
	Repayment	0.21	0.21	0.21	0.21	0.21	0.21	0.21
	Interest	0.10	0.09	0.07	0.05	0.04	0.02	0.00
	Closing balance	15.25	12.78	10.31	7.83	5.36	2.89	0.41
Month 11	Opening balance	15.25	12.78	10.31	7.83	5.36	2.89	0.41
	Repayment	0.21	0.21	0.21	0.21	0.21	0.21	0.21
	Interest	0.10	0.09	0.07	0.05	0.04	0.02	0.00
	Closing balance	15.05	12.57	10.10	7.63	5.15	2.68	0.21
Month 12	Opening balance	15.05	12.57	10.10	7.63	5.15	2.68	0.21
	Repayment	0.21	0.21	0.21	0.21	0.21	0.21	0.21
	Interest	0.10	0.08	0.07	0.05	0.03	0.02	0.00
	Closing balance	14.84	12.37	9.89	7.42	4.95	2.47	0.00
Principal Repayment		0.62	2.47	2.47	2.47	2.47	2.47	2.47
Interest		1.23	1.10	0.90	0.70	0.50	0.31	0.11

6.10 Interest on Working Capital: Interest rate on working capital loan has been assumed at 16%. The details of calculation are given below.

		(Rs. in lacs)		
Particulars		Year 1	Year 2	Year 3
Total current assets		7.63	8.90	10.17
Bank Loan (60%)		4.58	5.34	6.10
Interest @ 16%		0.73	0.85	0.98

7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5	6	7	Total
Profit After Tax (Net Profit)	3.34	3.08	5.92	5.94	5.96	5.95	5.93	
Depreciation	1.23	1.23	1.23	1.23	1.23	1.23	1.23	
Interest	1.23	1.10	0.90	0.70	0.50	0.31	0.11	
Total	5.81	5.41	8.05	7.87	7.69	7.49	7.27	49.58
Interest	1.23	1.10	0.90	0.70	0.50	0.31	0.11	
Loan repayment	0.62	2.47	2.47	2.47	2.47	2.47	2.47	
Total	1.85	3.57	3.37	3.17	2.98	2.78	2.58	20.30
DSCR	3.14	1.51	2.39	2.48	2.58	2.69	2.82	

Average DSCR = 2.44

8.0 BREAK EVEN POINT (BEP)

(Rs. in lacs)

Year	1	2	3
A. Net sales	49.50	59.40	69.30
B. Variable cost			
Raw Materials & Consumables	32.60	39.12	45.64
Utilities	1.54	1.85	2.16
Selling Expenses	0.50	0.59	0.69
Miscellaneous Expenses	0.25	0.30	0.35
Interest on Working Capital Loan	0.73	0.85	0.98
Total variable cost	35.61	42.71	49.81
C. Contribution (A-B)	13.89	16.69	19.49
D. Fixed & Semi-fixed Costs			
Salary	10.92	11.03	11.14
Repair & Maintenance	0.21	0.25	0.30
Interest on Term Loan	1.23	1.10	0.90
Depreciation	1.23	1.23	1.23
Total fixed cost	13.59	13.61	13.57
E. BREAK EVEN POINT	97.90%	81.55%	69.64%
F. BEP at operating capacity	48.95%	48.93%	48.75%
G. Cash BEP	44.52%	44.51%	44.33%

9.0 INTERNAL RATE OF RETURN (IRR)

(Rs. in lacs)

Year	0	1	2	3	4	5	6	7
CASH OUTFLOW								
Capital Expenditure	21.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	7.63	1.27	1.27	0.00	0.00	0.00	0.00
Total (A)	21.66	7.63	1.27	1.27	0.00	0.00	0.00	0.00
CASH INFLOW								
Profit After Tax		3.34	3.08	5.92	5.94	5.96	5.95	5.93
Add: Depreciation		1.23	1.23	1.23	1.23	1.23	1.23	1.23
Add: Interest		1.23	1.10	0.90	0.70	0.50	0.31	0.11
Add: Salvage Value (15%)								3.25
Total (B)	0.00	5.81	5.41	8.05	7.87	7.69	7.49	10.52
NET FLOW (B-A)	-21.66	-1.82	4.14	6.78	7.87	7.69	7.49	10.52

IRR = 15%

MACHINERY SUPPLIERS

- (a) Grace Food Processing & Packaging Machinery
426, 3rd Floor, Zakir Nagar West, Okhla, New Delhi - 110 025, Delhi, India
- (b) Darshan Enterprise
Opposite Ashok Garden, Maninagar Main Road, Mavdi Plot, Rajkot - 360 001, Gujarat, India
- (c) Gurukrupa Industries
Umakant Pandit Udhog Nagar, Opposite Kishan Trailer, Near Ashok Garden, Rajkot - 360004, Gujarat, India