

PEANUT PROCESSING



1.0 INTRODUCTION

Peanut is a mass consumption item and is used for extraction of oil, for making butter, chikkies and chocolates, as an ingredient in making several food and snack preparations. This project profile deals with processing for munching purpose for which there is a vast demand. The market is primarily controlled by the small and unorganised sector.

Groundnut is an agriculture produce with 2 crops, with the winter crop contributing more than the summer crop. Groundnuts in shell (pods) are de-stoned and then de-shelled to obtain peanuts. After grading them as per different sizes (known as counts) they are sold in the market. The product discussed here is roasted and salted peanuts for direct consumption.

The project profile is for setting up of a Peanut Processing unit with installed capacity of 300 kg per day based on single shift of 8 hrs.

2.0 MARKET POTENTIAL

Large quantity of roasted and salted peanuts is sold round the year. The market is completely scattered and controlled by tiny or cottage units with few local established brands. In most of the cases, processing as well as handling is unhygienic and volumes are very small. There is competition from unorganised sector units and reasonable price, attractive packing, lucrative commission to retailers and consistent supply are the critical factors. Fast turnover is very important.

3.0 PROCESS DETAILS

Peanuts of medium size are roasted in electrically operated roaster. The roasting time is around 90 minutes. These roasted peanuts are then cooled and salt is mixed with it before packing them. The process loss is about 2-3%.

4.0 COST OF THE PROJECT

The estimated project cost is given below.

Particulars	Amount (Rs lacs)
Land & Site Development	-
Building & Civil Works	3.96
Machinery & Equipment	1.38
Misc. Fixed Assets	0.70
Preliminary & Pre-operative Expenses	0.61
Contingencies & Escalation @ 3%	0.18
Working Capital	3.23
TOTAL	10.06

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 cum Store (Brick wall, CGI sheet roofings, Concrete Floor)	80	4500	360000
Add: Electrification, water supply, etc @ 10%			36000
		TOTAL	396000
		Say (Rs. in lacs)	3.96

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

Particulars	Qty	Rate (Rs)	Amount (Rs)
Electrically operated roaster	1	100000	100000
Weighing scale	1	10000	10000
Miscellaneous items	LS	LS	10000
		Sub total	120000
Add: Transportation, taxes, etc. @ 15%			18000
		TOTAL	138000
		Say (Rs. in lacs)	1.38

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

Particulars	Qty	Rate (Rs)	Amount (Rs)
10 HP power connection	LS	LS	50000
Furniture & Fixtures	LS	LS	10000
Miscellaneous items	LS	LS	10000
		TOTAL	70000
		Say (Rs. in lacs)	0.70

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	0.20
Interest during implementation	0.11
Miscellaneous expenses	0.10
TOTAL	0.61

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.

	Period (days)	Amount (Rs lacs)		
		Yr 1	Yr 2	Yr 3
Raw Materials & Consumables	15	0.88	1.05	1.23
Power	30	0.03	0.03	0.04
Salary	30	0.23	0.23	0.23
Finished Goods	15	1.02	1.21	1.39
Receivables	15	1.08	1.29	1.51
Total		3.23	3.81	4.39
Working Capital Margin in Yr 1 (100%)	3.23			

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%	4.02
B. Subsidy from Central/State Govt.	-	
DEBT		
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
A. INCOME					
Production at installed capacity (tonnes)	87	87	87	87	87
Capacity utilisation	50%	60%	70%	70%	70%
Production at CU (tonnes)	44	52	61	61	61
Price (Rs/tonne)	60000	60000	60000	60000	60000
Income from sales/annum	26.19	31.43	36.67	36.67	36.67
B. OPERATING EXPENSES					
Raw Materials & Consumables	21.38	25.65	29.93	29.93	29.93
Power	0.31	0.38	0.44	0.44	0.44
Salary	2.76	2.79	2.82	2.84	2.87
Repair & Maintenance	0.06	0.07	0.08	0.09	0.11
Selling Expenses	0.26	0.31	0.37	0.37	0.37
Miscellaneous Expenses	0.13	0.16	0.18	0.18	0.18
Total Operating Expenses	24.90	29.35	33.81	33.85	33.89
Less: Working expenses capitalised	3.23	0.00	0.00	0.00	0.00
Operating profit	4.52	2.07	2.86	2.82	2.77
C. FINANCIAL EXPENSES					
Depreciation	0.27	0.27	0.27	0.27	0.27
Interest on Term Loan	0.48	0.40	0.29	0.18	0.06
Net Profit	3.77	1.40	2.29	2.37	2.44
Net cash accruals	4.04	1.67	2.57	2.64	2.71
Principal Repayment	0.36	1.42	1.42	1.42	1.42

6.1 Estimation of Production Capacity: Production of roasted peanut at installed capacity is estimated as below.

Processing capacity (kg/day in single shift of 8 hrs)	300
Days/ annum	300
Quantity of raw materials processed/annum (kg)	90000
Less: Process loss	3%
Total production/annum at installed capacity (kg)	87300

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

Raw material (peanuts) required at installed capacity (MT)	90
Rate (Rs/MT)	38000
Expenses on raw materials (Rs)	3420000
Add: Additives, transportation charges, packing materials, etc @ 25%	855000
Expenses on raw materials & consumables at installed capacity (Rs)	4275000

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

Connected load ((kw)	7
Avg. load factor	70%
Total working days	300
Hrs/ day	8
Total power consumption (kwh)	12533
Rate per unit (Rs)	5
Expenses on power per annum at installed capacity (Rs)	62664

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)	No. of months	Cost/annum (Rs)
Manager	Self	-	-	-
Skilled workers/ Machine Operators	2	5000	12	120000
Salesperson	1	4000	12	48000
Helpers	3	3000	12	108000
Expenses on salary in the 1st year (Rs)				276000

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 @ 15% every subsequent year.

(Rs. in lacs)

Particulars	Cost (Rs)	Rate	Amount
Building & Civil Works	3.96	1%	0.04
Machinery & Equipment	1.38	1%	0.01
Misc. Fixed Assets	0.70	1%	0.01
Expenses on repair & maintenance in the 1st year (Rs)			0.06

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	3.96	3.34%	0.13
Machinery & Equipment	1.38	7.07%	0.10
Misc. Fixed Assets	0.70	6.23%	0.04
TOTAL			0.27

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 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)	3.77	1.40	2.29	2.37	2.44	
Depreciation	0.27	0.27	0.27	0.27	0.27	
Interest	0.48	0.40	0.29	0.18	0.06	
Total	4.52	2.07	2.86	2.82	2.77	15.04
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	5.41	1.14	1.67	1.77	1.87	

Average DSCR = 2.02

8.0 BREAK EVEN POINT (BEP)

(Rs. in lacs)

Year	1	2	3
A. Net sales	26.19	31.43	36.67
B. Variable cost			
Raw Materials & Consumables	21.38	25.65	29.93
Power	0.31	0.38	0.44
Selling Expenses	0.26	0.31	0.37
Miscellaneous Expenses	0.13	0.16	0.18
Total variable cost	22.08	26.50	30.91
C. Contribution (A-B)	4.11	4.93	5.75
D. Fixed & Semi-fixed Costs			
Salary	2.76	2.79	2.82
Repair & Maintenance	0.06	0.07	0.08
Interest on Term Loan	0.48	0.40	0.29
Depreciation	0.27	0.27	0.27
Total fixed cost	3.57	3.53	3.46
E. BREAK EVEN POINT	86.99%	71.65%	60.11%
F. BEP at operating capacity	43.50%	42.99%	42.07%
G. Cash BEP	40.17%	39.66%	38.75%

9.0 INTERNAL RATE OF RETURN (IRR)

(Rs. in lacs)

Year	0	1	2	3	4	5
CASH OUTFLOW						
Capital Expenditure	6.22	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	3.23	0.58	0.58	0.00	0.00
Total (A)	6.22	3.23	0.58	0.58	0.00	0.00
CASH INFLOW						
Profit After Tax		3.77	1.40	2.29	2.37	2.44
Add: Depreciation		0.27	0.27	0.27	0.27	0.27
Add: Interest		0.48	0.40	0.29	0.18	0.06
Add: Salvage Value						
Total (B)	0.00	4.52	2.07	2.86	2.82	2.77
NET FLOW (B-A)	-6.22	1.29	1.49	2.28	2.82	2.77

IRR = 18%

MACHINERY SUPPLIERS

- KINC Mineral Technologies Pvt. Ltd.
No. 14, Haribhakti Industrial Estate, Dabhoi Road, Pratapnagar, Vadodara - 390004, Gujarat, India
- ABC Engineering
52/2, Ranganayagi Nagar, S.R.K.V. Post, Periyanaickenpalayam, Coimbatore - 641 020, Tamil Nadu, India
- Shrijee Nut Company
No. 15, Sardar Patel Udyog Nagar, Kalavad Road, Boriya, Dhoraji - 360405, Gujarat, India