

NOODLES



1.0 INTRODUCTION

Fresh noodles are an extruded product made of tapioca flour and maida. They are long thread-like food item of 0.22 to 0.4 mm thickness. This is an eatable food item under instant food products and very popular now-a-days as break-fast food. It is one of the most conventional foods available in the market. Noodles is the term being used to designate products made from blend of flours, the major component of which is tapioca flour and maida. Noodle is made in different sizes, hollow as well as solid, for different cooking methods. Some are made for cooking and others are for frying.

This project profile is for setting up of a unit for making noodles for frying, with installed processing capacity of 200 kgs per day.

2.0 MARKET POTENTIAL

Noodles and chowmein are very popular in developed countries and now it has created good market potential in our country also and is becoming a popular item. The factors governing its demand are:

- (a) Rapid industrialisation in the country.
- (b) Increase in the purchasing capacity of the people.
- (c) Change in people's eating habits especially the younger generation.
- (d) It is ready-to-eat product.
- (e) Convenience of preparation.

Keeping in view the above factors, the demand of this product is likely to increase manifold in the coming years.

3.0 PROCESS DETAILS

The process of manufacturing of noodles is as follows.

(a) Dry Mixing: The three ingredients, viz, maida, starch

and soda bicarbonate is blended in a vertical mixer alongwith edible colour.

(b) Dough Formation: Satisfactory dough can be made from the above blend only by using boiled water, when a part of the starch is gelatinized. The ingredients are mixed in dough mixer for about 12 to 15 minutes.

(c) Extrusion: The kneaded dough is then transferred to noodles making machine where extruded material of desired shape and length is obtained by using an appropriate type of die and suitably adjusting the distance between the dye surface and cutting blade. The moisture content of the product at this stage is about 33%.

(d) Pre-drying: The cut noodles from the cutting machine falls on wooden trays. The product undergoes surface drying and becomes sufficiently hard enough to be handled without sticking or being crushed. The moisture content of the pre-dried product is about 29.5%.

(e) Drying: The pre-dried product is finally semi dried. The moisture content of the product will be 17%. Drying is done by exposure to indirect sunrays or placing in shade. The noodles dried as above do not have a satisfactory cooking quality and undergo a heavy loss on cooking. This can be reduced considerably by giving heat treatment to the product. This is optional as this gives a brown colour to the product, which may not be appealing to some of the customers.

Sometimes the product is exposed to steam. The steamed product has three advantages: (i) longer shelf-life (ii) harder grain and (iii) better eating quality than unsteamed product. Steaming is done by exposing the product in thin layer to steam for about 15 minutes. The steamed and subsequently dried product has a moisture content of about 10%. The steaming is done before the product is semi-dried.

4.0 COST OF THE PROJECT

The estimated project cost is given below:

Particulars	Amount (Rs lacs)
Land & Site Development	-
Building & Civil Works	6.05
Machinery & Equipment	4.14
Misc. Fixed Assets	2.00
Preliminary & Pre-operative Expenses	0.76
Contingencies & Escalation @ 3%	0.37
Working Capital Margin	1.46
TOTAL	14.77

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 Store Room (Brick wall, CGI roof, Concrete floor)	100	5500	550000
Add: Electrification, water supply, etc @ 10%			55000
TOTAL			605000
Say (Rs. in lacs)			6.05

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

Particulars	Qty	Rate (Rs)	Amount (Rs)
Powder Mixer	1	25000	25000
Dough Mixer	1	50000	50000
Noodles Making Machine	1	250000	250000
Miscellaneous items	LS	LS	20000
Sub-total			345000
Add: Transportation, taxes, etc @ 20%			69000
TOTAL			414000
Say (Rs. in lacs)			4.14

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
Furniture & fixtures	LS	LS	10000
Miscellaneous items	LS	LS	10000
TOTAL			200000
Say (Rs. in lacs)			2.00

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

Particulars	Amount (Rs lacs)
Travelling expenses	0.30
Professional & other fees	0.20
Interest during implementation	0.16
Miscellaneous expenses	0.10
TOTAL	0.76

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

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

	Period (Days)	Amount (Rs lacs)		
		Year 1	Year 2	Year 3
Raw Materials & Consumables	30	0.25	0.30	0.35
Power	30	0.08	0.09	0.11
Salary	30	0.33	0.33	0.33
Finished Goods	15	0.52	0.59	0.66
Receivables	7	0.29	0.35	0.40
Total		1.46	1.65	1.85
Working Capital Margin in Year 1 (100%)	1.46			

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%	5.91
B. Subsidy from Central/State Govt.	-	
DEBT		
Term Loan from Banks/FIs	60%	8.86
TOTAL	100%	14.77

6.0 PROFITABILITY STATEMENT

(Rs. in lacs)

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
A. INCOME					
Installed capacity (kg/annum)	60000	60000	60000	60000	60000
Capacity utilisation	50%	60%	70%	70%	70%
Production at capacity utilisation	30000	36000	42000	42000	42000
Price (Rs/kg)	50	50	50	50	50
Income from sales/annum	15.00	18.00	21.00	21.00	21.00
B. OPERATING EXPENSES					
Raw Materials & Consumables	7.33	8.79	10.26	10.26	10.26
Power	0.94	1.13	1.32	1.32	1.32
Salary	3.96	3.98	4.00	4.02	4.04
Repair & Maintenance	0.17	0.19	0.21	0.23	0.25
Selling Expenses	0.15	0.18	0.21	0.21	0.21
Miscellaneous Expenses	0.08	0.09	0.11	0.11	0.11
Total Operating Expenses	12.62	14.36	16.10	16.14	16.18
Less: Working expenses capitalised	1.46	0.00	0.00	0.00	0.00
Operating profit	3.83	3.64	4.90	4.86	4.82
C. FINANCIAL EXPENSES					
Depreciation	0.55	0.55	0.55	0.55	0.55
Interest on Term Loan	0.71	0.59	0.42	0.26	0.09
Net Profit	2.58	2.50	3.93	4.06	4.18
Net cash accruals	3.13	3.05	4.48	4.61	4.73
Principal Repayment	0.52	2.09	2.09	2.09	2.09

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

Rated processing capacity/day (kg)	200
Days/annum	300
Total production of noodles at installed capacity (kg)	60000

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

Particulars	Composition	Quantity (kg)	Rate (Rs)	Amount (Rs)
Maida	50%	30000	20	600000
Starch	44%	26400	25	660000
Sodium Bicarbonate, salt, etc	6%	3600	20	72000
Total				1332000
Add: Packing materials, etc @ 10%				133200
Expenses on raw materials & consumables at installed capacity (Rs)				1465200

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

Connected load (kw)	22
Avg. load factor	70%
Hrs/day	8
Days/annum	300
Annual power consumption (kwh)	37598
Rate per unit (Rs)	5.00
Expenses on power at installed capacity (Rs)	187992

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 Employees	Numbers	Salary/Month (Rs)	Cost/annum (Rs)
Manager (Self)	-	-	-
Machine operators/ skilled workers	3	6000	216000
Helpers	5	3000	180000
Expenses on salary in the 1st year (Rs)			396000

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 lacs)
Building & Civil Works	6.05	1%	0.06
Machinery & Equipment	4.14	2%	0.08
Misc. Fixed Assets	2.00	2%	0.03
Expenses on repair & maintenance in year 1			0.17

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 lacs)
Building & Civil Works	6.05	3.34%	0.20
Machinery & Equipment	4.14	5.28%	0.22
Misc. Fixed Assets	2.00	6.33%	0.13
TOTAL			0.55

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	8.86	8.34	6.26	4.17	2.09
	Repayment	0.00	0.17	0.17	0.17	0.17
	Interest (8%)	0.06	0.06	0.04	0.03	0.01
	Closing balance	8.86	8.17	6.08	4.00	1.91
Month 2	Opening balance	8.86	8.17	6.08	4.00	1.91
	Repayment	0.00	0.17	0.17	0.17	0.17
	Interest	0.06	0.05	0.04	0.03	0.01
	Closing balance	8.86	8.00	5.91	3.82	1.74
Month 3	Opening balance	8.86	8.00	5.91	3.82	1.74
	Repayment	0.00	0.17	0.17	0.17	0.17
	Interest	0.06	0.05	0.04	0.03	0.01
	Closing balance	8.86	7.82	5.74	3.65	1.56
Month 4	Opening balance	8.86	7.82	5.74	3.65	1.56
	Repayment	0.00	0.17	0.17	0.17	0.17
	Interest	0.06	0.05	0.04	0.02	0.01
	Closing balance	8.86	7.65	5.56	3.48	1.39
Month 5	Opening balance	8.86	7.65	5.56	3.48	1.39
	Repayment	0.00	0.17	0.17	0.17	0.17
	Interest	0.06	0.05	0.04	0.02	0.01
	Closing balance	8.86	7.47	5.39	3.30	1.22
Month 6	Opening balance	8.86	7.47	5.39	3.30	1.22
	Repayment	0.00	0.17	0.17	0.17	0.17
	Interest	0.06	0.05	0.04	0.02	0.01
	Closing balance	8.86	7.30	5.21	3.13	1.04
Month 7	Opening balance	8.86	7.30	5.21	3.13	1.04
	Repayment	0.00	0.17	0.17	0.17	0.17
	Interest	0.06	0.05	0.03	0.02	0.01
	Closing balance	8.86	7.13	5.04	2.95	0.87
Month 8	Opening balance	8.86	7.13	5.04	2.95	0.87
	Repayment	0.00	0.17	0.17	0.17	0.17
	Interest	0.06	0.05	0.03	0.02	0.01
	Closing balance	8.86	6.95	4.87	2.78	0.70
Month 9	Opening balance	8.86	6.95	4.87	2.78	0.70
	Repayment	0.00	0.17	0.17	0.17	0.17
	Interest	0.06	0.05	0.03	0.02	0.00
	Closing balance	8.86	6.78	4.69	2.61	0.52
Month 10	Opening balance	8.86	6.78	4.69	2.61	0.52
	Repayment	0.17	0.17	0.17	0.17	0.17
	Interest	0.06	0.05	0.03	0.02	0.00
	Closing balance	8.69	6.60	4.52	2.43	0.35
Month 11	Opening balance	8.69	6.60	4.52	2.43	0.35
	Repayment	0.17	0.17	0.17	0.17	0.17
	Interest	0.06	0.04	0.03	0.02	0.00
	Closing balance	8.52	6.43	4.35	2.26	0.17
Month 12	Opening balance	8.52	6.43	4.35	2.26	0.17
	Repayment	0.17	0.17	0.17	0.17	0.17
	Interest	0.06	0.04	0.03	0.02	0.00
	Closing balance	8.34	6.26	4.17	2.09	0.00
Principal Repayment		0.52	2.09	2.09	2.09	2.09
Interest		0.71	0.59	0.42	0.26	0.09

7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5	Total
Profit After Tax (Net Profit)	2.58	2.50	3.93	4.06	4.18	
Depreciation	0.55	0.55	0.55	0.55	0.55	
Interest	0.71	0.59	0.42	0.26	0.09	
Total	3.83	3.64	4.90	4.86	4.82	22.06
Interest	0.71	0.59	0.42	0.26	0.09	
Loan repayment	0.52	2.09	2.09	2.09	2.09	
Total	1.23	2.68	2.51	2.34	2.18	10.93
DSCR	3.12	1.36	1.95	2.08	2.21	

Average DSCR = 2.02

8.0 BREAK EVEN POINT (BEP)

(Rs. in lacs)

Year	1	2	3
A. Net sales	15.00	18.00	21.00
B. Variable cost			
Raw Materials & Consumables	7.33	8.79	10.26
Power	0.94	1.13	1.32
Selling Expenses	0.15	0.18	0.21
Miscellaneous Expenses	0.08	0.09	0.11
Total variable cost	8.49	10.19	11.89
C. Contribution (A-B)	6.51	7.81	9.11
D. Fixed & Semi-fixed Costs			
Salary	3.96	3.98	4.00
Repair & maintenance	0.17	0.19	0.21
Interest on Term Loan	0.71	0.59	0.42
Depreciation	0.55	0.55	0.55
Total fixed cost	5.39	5.31	5.18
E. BREAK EVEN POINT	82.75%	67.96%	56.85%
F. BEP at operating capacity	41.37%	40.78%	39.80%
G. Cash BEP	37.17%	36.58%	35.59%

9.0 INTERNAL RATE OF RETURN (IRR)

(Rs. in lacs)

Year	0	1	2	3	4	5
CASH OUTFLOW						
Capital Expenditure	12.56	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	1.46	0.20	0.20	0.00	0.00
Total (A)	12.56	1.46	0.20	0.20	0.00	0.00
CASH INFLOW						
Profit After Tax		2.58	2.50	3.93	4.06	4.18
Add: Depreciation		0.55	0.55	0.55	0.55	0.55
Add: Interest		0.71	0.59	0.42	0.26	0.09
Add: Salvage Value						
Total (B)	0.00	3.83	3.64	4.90	4.86	4.82
NET FLOW (B-A)	-12.56	2.38	3.45	4.71	4.86	4.82

IRR = 16%

MACHINERY SUPPLIERS

- (a) Rising Industries Teghoria Loknath Mandir, Jhowtala, Ghosh Dutta Para, Near Honda Service Center, Tanushree Apartment, Kolkata - 700157, West Bengal, India
- (b) Grace Food Processing & Packaging Machinery, 426, 3rd Floor, Zakir Nagar West, Okhla, New Delhi - 110 025, Delhi, India
- (c) Technocraft, Kolkata, No. 5- B, Kundu Lane, Belgachia, Kolkata - 700 037, West Bengal, India