

PASTA PRODUCTS

QUALITY AND STANDARDS : As per PFA/BIS specifications

PRODUCTION CAPACITY : 150 tpa



1.0 PRODUCT AND ITS APPLICATIONS

One of the popular pasta products is noodles made from tapioca flour and maida. These are thread like products, 0.22 to 0.40 mm in diameter. This product is becoming very popular due to increasing consumption of fast foods.

2.0 MARKET POTENTIAL

The demand for pasta food is over increasing due to growing trends towards fast foods particularly among younger generation, increase in the purchasing power of the people, convenience of preparation, scope for a number of recipes to suit individual's palate.



3.0 BASIS AND PRESUMPTIONS

- a) The unit will work for 300 days per annum on single shift basis.
- b) The unit can achieve its full capacity utilization during the 3rd year of operation.
- c) The wages for skilled workers are taken as per prevailing rates in this type of industry.
- d) Interest rate for total capital investment is calculated @ 12% per annum.
- e) The entrepreneur is expected to raise 20-25% of the capital as margin money.
- f) The unit would construct its own building.
- g) Costs of machinery and equipment are based on average prices of machinery manufacturers.

4.0 IMPLEMENTATION SCHEDULE

Project implementation will take a period of 8 months. Break-up of the activities and relative time for each activity is shown below:

❖ Scheme preparation and approval	:	01 month
❖ SSI provisional registration	:	1-2 months
❖ Sanction of financial supports etc.	:	2-5 months
❖ Installation of machinery and power connection	:	6-8 months
❖ Trial run and production	:	01 month

5.0 TECHNICAL ASPECTS

5.1 Location

The plant can be located at any suitable place keeping in view the marketing convenience, availability of power, water and skilled manpower.



5.2 Process of Manufacture

The noodle is manufactured in different sizes, hollow as well as solid and cooked in different methods. Some are made for cooking and others are for frying. The manufacturing method for frying quality noodles is as follows:



The average moisture content of dry mixes is 10-11%. The three ingredients, viz. maida, starch and sodium bicarbonate are dry blended in a vertical mixer alongwith edible colour. Dough is made from the above blend by using boiled water wherein a part of the starch is gelatinized. The ingredients are mixed in dough mixer for about 12 to 15 minutes. The kneaded dough is transferred to a noodle making machine wherein extruded material of desired shape and length is obtained by using an appropriate 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%. The cut noodles from the cutting machine fall on wooden trays. The product undergoes surface drying and becomes hard enough to be handled without sticking or being crushed. The moisture content of the pre-dried product at this stage is about 30%. The pre-dried product is finally semi-dried. The moisture content of the product is around 17%. The product is exposed to steam for 15 minutes and subsequently dried to 10% moisture level.

6.0 POLLUTION CONTROL

There is no major pollution problem associated with this industry except for disposal of waste which should be managed appropriately. The entrepreneurs are advised to take "No Objection Certificate" from the State Pollution Control Board.



7.0 ENERGY CONSERVATION

The fuel for the steam generation in the boiler is coal or LDO depending upon the type of boiler. Proper care should be taken while utilising the fuel for the steam production. There should be no leakage of steam in the pipe lines and adequate insulation should be provided.

8.0 PRODUCTION CAPACITY

Quantity	:	150 tpa
Installed capacity	:	700 kg/day
Optimum capacity utilization	:	70%
Working days	:	300/annum
Manpower	:	12

Utilities

Motive Power	:	25 kW
Water	:	10 kL/day
Coal/LD oil	:	125 kg/day



9.0 FINANCIAL ASPECTS

9.1 Fixed Capital

9.1.1 Land & Building Amount (Rs. lakh)

Land 700 sq.mtr	:	1.00
Built up Area 225 sq. mtr.	:	4.50

Total cost of Land and Building	:	5.50

9.1.2 Machinery and Equipment

Description		Amount (Rs. lakh)
Vertical powder mixer cap 500 kg, Dough mixer, noodle making extruder, Wooden trays , boiler, weighing scales, buckets, handling equipment	:	3.25
Erection and electrification @ 10% of machinery cost	:	0.33
Office furniture & fixtures	:	0.42
Total	:	----- 4.00

9.1.3 Pre-operative Expenses

Consultancy fee, project report, deposits with electricity department etc.	:	1.00
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9.1.4 Total Fixed Capital : 10.50

(9.1.1+9.1.2+9.1.3)

9.2 Recurring expenses per annum

9.2.1 Personnel

Designation	No.	Salary Per month	Amount (Rs.lakh)
Factory Manager	1	8,000	0.96
Supervisor	2	6,000	1.44
Office Assistant	2	5,000	1.20
Technician	2	4,500	1.08
Skilled workers	1	3,000	0.36
Unskilled workers	4	2,500	1.20
			6.24
Perquisites @ 15%			0.94
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Total :	12		7.18

9.2.2 Raw Material including packaging materials

Particulars	Qty.(MT)	Rate/kg	Amount (Rs. lakh)
Maida	130	9	11.70
Starch	20	10	2.00
Salt, chemicals	LS	-	0.75
Packaging material	LS	-	3.30

Total:			17.75

9.2.3 Utilities**Amount (Rs. lakh)**

Power	0.50
Water	0.05
Fuel	0.15

Total:	0.70

9.2.4 Other Contingent Expenses**Amount (Rs. lakh)**

Repairs and maintenance@10%	0.85
Consumables & spares	0.35
Transport & Travel	0.12
Publicity	0.60
Postage & stationery	0.08
Telephone	0.07
Insurance	0.08

Total:	2.15

9.2.5 Total Recurring Expenditure**Amount (Rs. lakh)**

(9.2.1+9.2.2+9.2.3+9.2.4) 27.78

9.3 Working Capital

Recurring Expenditure for 3 months 6.95

9.4 Total Capital Investment**Amount (Rs. lakh)**

Fixed capital (Refer 9.1.4)	10.50
Working capital (Refer 9.3)	06.95

Total:	17.45

10.0 FINANCIAL ANALYSIS

10.1 Cost of Production (per annum)

	Amount (Rs. lakh)
Recurring expenses (Refer 9.2.5)	27.78
Depreciation on building @5%	00.25
Depreciation on machinery @10%	00.36
Depreciation on furniture @20%	00.08
Interest on Capital Investment @12%	02.01

Total:	30.48

10.2 Sale Proceeds / Annual turnover

Item	Qty. (MT)	Rate per kg	Amount (Rs.lakh)
Noodles	150	24	36.00

10.3 Net Profit per year

= Sales - Cost of production
= 36.00 - 30.48
= Rs. 5.52 lakh

10.4 Net Profit Ratio

= $\frac{\text{Net profit} \times 100}{\text{Sales}}$
= $\frac{5.52 \times 100}{36}$
= 15.33%

10.5 Rate of Return on Investment

= $\frac{\text{Net profit} \times 100}{\text{Capital Investment}}$
= $\frac{6 \times 100}{17.3}$
= 34.7 %

10.6 Annual Fixed Cost	Amount (Rs. Lakh)
All depreciation	0.69
Interest	2.01
40% of salary, wages, utility, contingency	3.98
Insurance	0.08
Total:	6.76

10.7 Break even Point

$$= \frac{\text{Annual Fixed Cost} \times 100}{\text{Annual Fixed Cost} + \text{Profit}}$$

$$= \frac{6.76 \times 100}{6.76 + 6.00}$$

$$= 53\%$$

11.0 ADDRESSES OF MACHINERY AND EQUIPMENT SUPPLIERS

M/s. Mona Machinery Mfg. Co.
Chandralok, 111 SD Road,
Secunderabad (A.P.)

M/s. Shanti Turning Works
4-1-590/12, Troop Bazar,
Hyderabad – 500001

M/s. Khan Engg. Works,
5-5-274 Nampally,
Near Gandhi Bhavan,
Patel Nagar
Hyderabad

M/s. Mahalaxmi Engg. Works,
Craftman, Gylid, Mallepally,
Hyderabad

PPM International
70, Rama Road,
New Delhi –110 015

M/s. Debdoot India,
67-B, Biddan St.,
Kolkata - 700006

12.0 OTHER SPECIAL FEATURES

A careful selection of product mix is necessary based on the local market demand and availability of raw materials. The facilities can also be utilised to manufacture other pasta products with local recipes for fuller utilisation of capacity.

