

1 VERMICELLI

1.1 Introduction

Vermicelli is a popular instant food product. It falls under the category of extruded product and is made from wheat flour. At times tapioca or soybean or groundnut flour is also added. Thus, it is rich in proteins and liked by people from all walks of life, irrespective of age. It is basically a snack food item and at times it is also used as a table enricher. With changing lifestyles, greater awareness about health and preference for instant food items have made vermicelli very popular and an item of mass consumption.

1.2 Objective

The primary objective of the model report is to facilitate the entrepreneurs in understanding the importance of setting up unit of vermicelli. This model report will serve as guidance to the entrepreneurs on starting up such a new project and basic technical knowledge for setting up such a facility.

1.3 Raw Material Availability

Major raw material would be wheat flour which will be available locally. Other flours like soya bean, tapioca or groundnut will be required in small quantities. Some minerals and vitamins can also be added.

1.4 Market Opportunities

Urbanisation has changed the lifestyles of not only urbanites but even of semi-urban and rural areas. This along with increase in the purchasing power of people has fuelled demand for many fastfood or instant food items and vermicelli is one such product. With the addition of groundnut or soybean or tapioca flour, it also becomes a nutritive product and thus even health conscious people prefer it. Vermicelli has, thus, become a very popular instant food variety since last few years and its demand is steadily growing. There are some established brands like Maggi and Fryums but the market is very large and growing. A small scale unit can compete with these brands in the local market on the price front because of low overheads, less transportation costs and reasonable advertisement budget. Proper and adequate placement of product and thrust on publicity basically at the point of sales would also be crucial.

1.5 Project description

1.5.1 Applications

Vermicelli is an extruded instant food product basically made from wheat flour. Other flours like groundnut, soybean or tapioca are also mixed with wheat flour to make it more nutritive. They are easily affordable, tasty and easy to make. This product can be made in many states of the country but this project profile is given to set up a unit in the state of MP.

1.5.2 Availability of know how and compliances

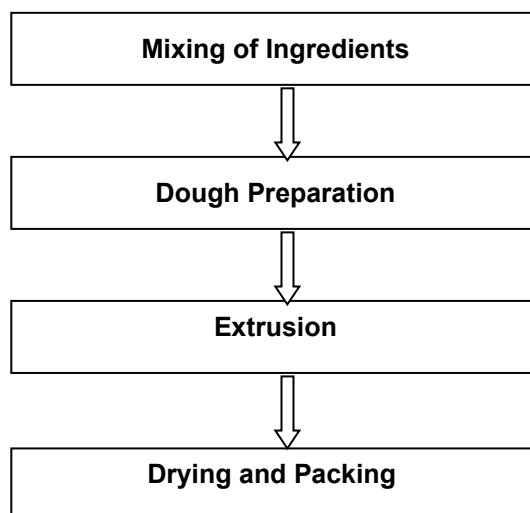
DFRL, Mysore,, has successfully developed the technical know-how. BIS has specified quality parameters in 1485:1976. Compliances under the PFA Act are mandatory.

1.5.3 Capacity of the Project

Rated production capacity of 80 tonnes per year with 300 working days and 17 hours working every day.

1.5.4 Manufacturing process

It is very well standardised and simple. Wheat and other flours in small quantity are mixed with around 25% to 30% of water in a mixer for about half an hour and dough is prepared. This dough is passed through extruder and long rods of vermicelli come out from the extruder which are cut into the desired length and then placed in the tray drier for drying. Drying temperature is around 55-65O C and time required is 4½ to 5 hours. Dried pieces are weighed and packed in attractively printed polythene bags. The weight and process loss is around 10%. The process flow chart is as under:



1.6 Project component and cost

Major components of the projects and their costs are described in the table hereunder:

PARTICULARS	Unit	Qty	Cost/unit	Total
LAND & BUILDING				46.75
Land	SqM	1,100	250.00	2.75
Land Development				
Land Area		1,100	500.00	5.50
Building				
Production Block				
Builtup Area	SqM	700	5,000.00	35.00
Contingencies		10%		3.50
PLANT & MACHINERY				345.00
Weighing Scale	LS	1	30,000,000	300.00
Contingencies		15%		45.00
MISCELLANEOUS FIXED ASSETS				11.50
Misc Assets	LS	1	1,000,000	10.00
Contingencies		15%		1.50
PRE-OPERATIVE EXPENSES				14.70
Establishment		1	1,130,000	11.30
Professional Charges		1	100,000	1.00
Security Deposits		1	240,000	2.40
TOTAL				417.95

The cost of the various components will depend on the location of the project. Item wise assumptions are as under:

1.7 Plant and Machinery

The main machineries are Extruder, Dough Kneading machine, Trays Capacity drier etc. The total cost of plant and machinery is Rs. 345 lakhs.

1.8 Building

The main production block will cost around Rs. 38.50 lakhs.

1.9 Miscellaneous Assets

A provision of Rs. 11.50 lakhs would take care of all the requirements.

1.10 Preliminary & Pre-operative Expenses

A provision of Rs. 14.70 lakhs would take care of pre-production expenses like establishment, professional charges, security deposits etc.

1.11 Working Capital Requirement

ITEMS	Year 1	Year 3	Year 5
STOCK OF RAW MATERIAL & PACKING MATERIAL	29.10	43.65	43.65
SUNDRY DEBTORS	45.00	67.50	67.50
TOTAL	74.10	111.15	111.15
MARGIN	18.53	27.79	27.79
MPBF	55.58	83.36	83.36
INTEREST ON WC	6.11	9.17	9.17

1.12 Means of Finance

EQUITY CAPITAL			38.54%	168.24
MOFPI SUBSIDY	25%	50.00	11.46%	50.00
TERM LOAN				
FINANANCIAL INSTITUTIONS		10.00%	50.00%	218.24
<i>-Payable half yearly Installments</i>	10	21.80		
TOTAL			100%	436.48

1.13 Cash flow statement

PARTICULARS	Year 1	Year 3	Year 5	Year 7
SOURCES OF FUNDS				
EQUITY CAPITAL	-	-	-	-
SUBSIDY				
NET PROFIT	37.35	90.84	109.59	107.95
(INTEREST ADDED BACK)				
DEPRECIATION	37.91	37.91	37.91	37.91
PRELIMINARY EXP.W/O	2.10	2.10	2.10	2.10
INCREASE IN TERM LOAN	-	-	-	-
INCREASE IN BANK BORROWINGS-WC	55.58	4.63	-	-
TOTAL	132.93	135.47	149.60	147.96

1.14 Projected balance sheet

PARTICULARS	Year 1	Year 3	Year 5	Year 7
LIABILITIES				
EQUITY CAPITAL	168.24	168.24	168.24	168.24
RESERVES & SURPLUS	59.41	183.80	347.89	545.49
TERM LOAN	196.44	109.24	22.04	-
BANK BORROWINGS-WC	55.58	83.36	83.36	83.36
TOTAL	479.66	544.64	621.52	797.09

1.15 Projected profit and loss account

PARTICULARS	Year 1	Year 3	Year 5	Year 7
NET REVENUE REALISATION	300.00	450.00	450.00	450.00
TOTAL EXPENSES	222.65	319.16	300.40	302.04
GROSS PROFIT	77.35	130.84	149.60	147.96
DEPRECIATION	37.91	37.91	37.91	37.91
INTEREST	27.94	23.36	14.64	9.17
PRELIMINARY EXP.W/O	2.10	2.10	2.10	2.10
PROFIT BEFORE TAX	9.41	67.47	94.95	98.78
RETAINED PROFIT	9.41	67.47	94.95	98.78

1.16 Profitability statement

Particulars	Year 1	Year 3	Year 5	Year 7
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INCOME	300.00	450.00	450.00	450.00
EXPENDITURE	222.65	319.16	300.40	302.04
VARIABLE	168.10	249.47	248.85	248.24
FIXED	54.55	69.69	51.55	53.80
GROSS PROFIT	77.35	130.84	149.60	147.96
PROFIT BEFORE TAX	9.41	67.47	94.95	98.78
RETAINED PROFIT	9.41	67.47	94.95	98.78

1.17 Key Indicators

NET PRESENT VALUE at current Inflation (Rs. in lakhs)	590.66
INTERNAL RATE OF RETURN %	26.91
AVERAGE DSCR	2.57
BREAK EVEN POINT %	51.04
PAY BACK PERIOD (YEARS)	4.20

1.18 Manpower Requirement

PARTICULARS	NOs.
SUPERVISORY STAFF	
Manager	1
Production Supervisors	3
WORKERS	
Skilled Workers	6
Semi-Skilled Labour	9
Maintenance Supervisor	1
Salesman	2

1.19 Assumptions

Project & Financing			
Contingencies on Building			10%
Contingencies on Equipment			15%
Term Loan			50%
Rate of Interest on Term Loan			10%
Subsidy Considered	Subject to ceiling		25%
Expected time of Installation	Months		10
Moratorium	Months		6
CAPACITY			
Rated Capacity Per Annum	80% of Installed capacity	TPA	1000
Number of Operational Days	DAYS		300
Working Hours Per day	Hrs		20
CAPACITY UTILIZATION			
Year I			60%
Year II			85%
Year III			90%
SALES PRICE			
W S Price			50,000
OTHER EXPENSE			
Commission			5.0%
Marketing Expenses			2.5%
POWER			

Connected Load	HP	60
DEPRICIATION AS PER COMPANY'S ACT		
BUILDING		3.34%
PLANT & MACHINERY		10.34%
MISC. FIXED ASSETS		7.07%
LAND & SITE DEVELOPMENT		1.63%
MAINTENANCE		
BUILDING		2.00%
PLANT & MACHINERY		3.00%
MISC. FIXED ASSETS		2.00%
LAND & SITE DEVELOPMENT		1.50%

1.20 Sources of technology

1. Punjab Engg. Works, Ram Krishna Samadhi Road, Kolkata
2. AMS Engg, Station Road, Patna, Bihar
3. Siwan Foundry, Siwan, Bihar

The actual cost of projects may deviate on change of any of the assumptions.