

EXTRUDED SNACK FOODS



INTRODUCTION:

In India we do not have many snack food items which are common in developed countries. Generally available items in this category are pop corn, potato wafer, banana wafer, tapioca wafer, homemade items Murukku, Dalmot, Salted ground nuts etc. and very few of these items are made on an organized industrial scale. With the growth of industrialization in the country and more purchasing power of people there is a potential demand for these snack foods in the country.

OBJECTIVE:

The primary objective of the model report is to facilitate the entrepreneurs in understanding the importance of setting up unit of Extruded Snack Foods Plant. 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.

RAW MATERIAL AVAILABILITY:

The main raw materials for these products are wheat, maize, vegetable oil, flavoured materials etc. All raw materials are easily available in across India.

SUITABLE LOCATION:

Extruded Snack Foods can be manufactured at any location.

MARKET OPPORTUNITIES:

Raw materials which go in making snack foods are wheat, maize, rice, etc. and these are available in plenty in the country. Snack foods of different flavours prepared from these cereals will be more palatable to the people. There is also scope to improve the nutrition level of the people by supplementing these foods with essential vitamins and minerals. Keeping the above factors in view, there seems to be good scope for this industry in the country.

MANUFACTURING PROCESS:

The basic raw materials are taken as per the requirements of the desired end product in the silo mixer in which the materials are thoroughly mixed by means of paddle blades and uniformly distributed. The raw materials from the silo mixer are transferred by means of screw doser to the feed hopper of the extruder. This extruder runs with a high speed screw using materials with moisture content ranging 12 to 40%. The water addition to be formula is performed by direct injection into the barrel in such manner that a substantial change of feature of the extruded product can be achieved in a very short time. At the extruder outlet the product passes through the barrel at the required conditions which are present on the control panels. It is puffed in the required shape, given by suitable die and is cut at the required length and thickness. A lot of shapes can be done such as balls, sticks of different diameters rings, tubes, star wheels, chips and so on. From the outlet of the cooker extruder, the product is pneumatically carried to the dryer. The dryer which is cylindrical drum is heated by means of LPG gas burners. The product is dried by the time it reaches the exit of the cylindrical drum. The product from the dryer is transferred to the flavouring drum which works in conjunction with two flavouring preparation tanks. 1% by weight of flavor is mixed with 20% by weight of oil into a uniform solution and sprayed on to the product at the inlet of flavouring drum. In case of power flavor addition, only the coating oil is sprayed and a separate

powder atomizing unit is used. The powder flavor forms a cloud which deposits on the oil coated product as a top layer of flavor. The product is turned by means of baffles in the flavouring drum. This ensures uniform distribution of flavour over the entire surface of the product. The product at this point is ready for packing and is taken by means of a belt conveyor to the storage silo. From the storage silo another conveyor feeds the packing machine which automatically packs the product at prefixed weight and seals them before it goes for bulk packing.

CAPACITY OF THE PROJECT:

- The total capacity of the unit is 84 MT per year.

PRODUCTION TARGETS (PER ANNUM):

- The scheme is worked out per shift (8 Hour) basis and 300 working days per annum.
- Assume there'll be 70% production in first year.
- Quantity: 58.80 MT per year or 4.90 MT per month.

PROJECT COMPONENT AND COST:

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

Financial Aspects:-

APPLICATION OF FUND

Particular	Amount
Land	200 sq. meter covered area on rent
Building	
Plant & Machinery	3,223,000.00
Office Equipment & Furniture	50,000.00
Working Capital	965,056.26
Pre-Operative Expenses	25,000.00
Total	4,263,056.26

SOURCE OF FUND

Particular	Amount
Own Capital	1,330,064.06
Loan from Banks	2,454,750.00
Loan for Working Capital	478,242.19
Total	4,263,056.26

FIXED ASSETS

(1) Land And Building:		Value (Rs.)		
Land & Building 200 sq. meter covered area on rent		96,000 per annum		
(2) Machinery And Equipment:				
S. N.	Description (Name of machine with specification)	Qty.	Rate	Value (Rs.)
Production Unit				
i	Vertical Mixer	1	75,000	75,000.00
ii	Hopper with Feeding screw	1	75,000	75,000.00
iii	Cooker Extruder	1	700,000	700,000.00
iv	Pneumatic Conveyor	1	150,000	150,000.00
v	Melting Tanks	2	100,000	200,000.00
vi	Flavour Spraying Pump	1	150,000	150,000.00

vii	Drying Over	1	300,000	300,000.00
viii	Doser for Powdered Flavour	1	100,000	100,000.00
ix	Elevator Belt	2	75,000	150,000.00
x	Storage Bin	1	150,000	150,000.00
xi	Electric Control Panels	2	100,000	200,000.00
xii	Discharge Belt	1	200,000	200,000.00
xiii	Packing Machine	1	450,000	450,000.00
xiv	Miscellaneous Equipments / items	-	-	30,000.00
Total Cost of Machinery & Equipments				2,930,000.00
Electrification & Installation Charges @ 10%				293,000.00
Total Cost of Production Unit				3,223,000.00
Furniture & Fixtures				50,000.00
3	Pre-Operative Expenses:	-	-	25,000.00
Total Fixed Capital (2+3)				3,248,000.00

SALES TURNOVER PER MONTH

Description	Qty. (Kg.)	Rate (Rs./Kg.)	Value (Rs.)
Extruded Snack Foods	4900	130	637000
Total			637,000.00

RAW MATERIAL REQUIREMENT & STOCK

Raw Material (per month):

Description with specification	Qty. (Kg.)	Rate (Rs./Kg.)	Value (Rs.)
Wheat Maida	2,250.00	30.00	67,500.00
Maize Rava	2,250.00	30.00	67,500.00
Vegetable Oil	1,000.00	80.00	80,000.00
Flavoured Material	400.00	-	40,000.00
Total			255,000.00

Annual Consumption

Wheat Maida	Rs	810,000.00
Maize Rava	Rs	810,000.00
Vegetable Oil	Rs	960,000.00
Flavoured Material	Rs	480,000.00
Total		3,060,000.00
Stock of Raw Material	30 days	251,506.85
Stock of WIP	02 days	4,438.36
Purchase Cost of Raw Material	Rs	3,315,945.21

WORKING CAPITAL REQUIREMENT

Particulars	Days	Year' 1
Raw Material	30	251,506.85
Work in Process	2	4,438.36
Finished Goods	10	148,439.82
Receivables	30	637,000.00
Advance/Security		200,000.00
Total		1,241,385.03
Less: Creditors	30	276,328.77
Net Current Assets		965,056.26
Paid Stock		128,056.26
75% of Paid Stock		96,042.19
60% of Book Debts		382,200.00
Bank Limits		478,242.19
Margin for Working Capital		486,814.06

SELLING & ADMINISTRATION EXPENSES

Particular	Year I
i Postage	20,000.00
ii Commission on sales	70,000.00
iii Office Expenses	40,000.00
iv Tour & Travel	30,000.00
v Printing & Stationary	25,000.00
vi Advertisement	55,000.00
vii Telephone	25,000.00
viii Repair & Maintenance	55,000.00
ix Conveyance	40,000.00
x Sales expenses	50,000.00
xi Insurance	30,000.00
xii Misc. Expenses	40,000.00
Total	480000.00

STAFF AND LABOUR EXPENSES

S. No.	Description	No.	Salary PM	Total Salaries-Year I
(a) Administrative & Supervisory				
i	Production Incharge cum accountant	1	15,000.00	180,000.00
Total Salaries				180,000.00
(b) Skilled & Unskilled-Wages				
i	Skilled Worker	1	10,000.00	120,000.00
ii	Semi Skilled Worker	2	8,000.00	192,000.00
iii	Helper	2	5,000.00	120,000.00
Total				432,000.00
Grand Total				612,000.00

**MANUFACTURING AND PROFIT & LOSS
ACCOUNT**

BALANCE SHEET

Particulars	Year' 1	Particulars	Year' 1
Sales Value of Extruded Snack Foods	7,644,000.00	Liabilities:	
Cost of Production:		Capital	1,330,064.06
Raw Material Consumed:		Reserve & Surplus	583,533.87
Opening Stock	-	Secured Loan:	
Add: Purchases	3,315,945.21	Term Loan	1,963,800.00
	3,315,945.21	Unsecured loan:	
Less: Closing Stock	251,506.85	Current Liabilities:	
Raw Material Consumption	3,064,438.36	Bank Borrowings	478,242.19
Add: Op Stock of WIP	-	Sundry Creditors	276,328.77
	3,064,438.36		4,631,968.89
Less: Cl Stock of WIP	4,438.36	Assets:	
	3,060,000.00	Fixed Assets:	
Power & Fuel	600,000.00	Gross Block:	3,273,000.00
Manufacturing Wages	432,000.00	Less: Depreciation	490,950.00
Bonus & Incentives	30,240.00		2,782,050.00
Packaging Materials	600,000.00	Current Assets:	
Rent	96,000.00	Inventories	404,385.03
Raw material storage & ins. Cost	4,800.00	Recievables	637,000.00
Carriage inward	29,843.51	Advance/Security	200,000.00
Depreciation	490,950.00	Cash & Bank	588,533.87
		Balance	
Total Cost of Production	5,343,833.51	Preliminary Expenses	20,000.00
Add: Op. Stock of Finish. Goods	-		<hr/> 4,631,968.89
	5,343,833.51	Difference	0.00
Less: Cls. Stock of F.Goods	148,439.82		
Cost of Sales	5,195,393.69		
Gross Profit	2,448,606.31		
	0.32		
Selling & Admin Cost:			
Expenses	480,000.00		
Salary	180,000.00		
Financial Expenses:			
Interest on Term Loan	334,459.69		
Interest on W.Capital	59,780.27		
Pre. Expenses	5,000.00		
Profit Before Taxation	1,389,366.35		
Taxation	416,809.91		
Net Profit After Taxation	972,556.45		
Cash withdrawal	389,022.58		
Transfer to Reserves	583,533.87		
Cumulative Reserves	583,533.87		
% of PBT on Sales	18.18		

RATIO ANALYSIS

Particulars	Year' 1
Net Profit ratio NP*100/Total sales	12.72
Rate of Return NP*100/Total Investment	22.81

BREAK EVEN ANALYSIS

Fixed Cost	
Rent	96,000.00
Interest on Borrowing	334,459.69
40% of Salaries	72,000.00
40% of Utilities	240,000.00
25% of Admin Exp	120,000.00
Depreciation	490,950.00
Total	1,353,409.69
Break Even Point	$\frac{\text{Fixed Cost} * 100}{\text{Fixed Cost} + \text{Profit}}$
	58.19

ADDRESS OF MACHINERY & EQUIPMENT SUPPLIERS:

- M/s Bajaj Processpack Maschinen Pvt. Ltd., 7/27, Jai Lakshmi Industrial Estate, Sahibabad Industrial Area, Sahibabad, Dist. Ghaziabad (U.P.) - 201301.
- M/s Kanchan Metals Pvt Ltd., 19G, Everest House, 46C, Jawaharlal Nehru Road, Kolkata (West Bengal) - 700 071.
- M/s KSJ Foods & Services Pvt. Ltd., 7/87, Vishnu Prasad, Mahanti Road, Vile Parle (E), Mumbai – 400057.
- M/s Econo Mode Food Equipment (India) Private Limited, B - 6, 5 - Acre, Kothari Compound, Tikuji - Ni - Wadi Road, Thane - 400607, Maharashtra.
- M/s Dynamech Engineers, 214, Palsikar Colony, Indore, Madhya Pradesh - 452004