

Model Project on Meat Gravy Concentrate

Submitted to – Directorate of Food Processing
Government of West Bengal



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PROJECT PROFILE ON MEAT GRAVY CONCENTRATE

I. INTRODUCTION

The meat production in India is 2.3 million tonnes per year (2010-2011). India exports more than 500,000 tons of meat, mostly buffalo meat. Indian buffalo meat is witnessing strong demand in international markets due to its lean character and near organic nature. West Bengal is one of the largest producer of meat in India apart from Andhra Pradesh, Maharashtra, Uttar Pradesh and Bihar. It is also the largest consumer of meat products including “fresh” meat.

II. OBJECTIVES

The commercial meat processing will have a following objective

- Production of ready to serve meat product.
- Preservation of meat and also production of hygienic meat product.
- Export of the canned meat product.

III. RAW MATERIAL AVAILABILITY

Around 12.00 million goats are slaughtered in Bengal every year. Bengal produces over 15.00% percent of the total goat meat production in India annually. Bengal black goat has high demand in the export market due to its low fat and low cholesterol character.

IV. MARKET OPPORTUNITIES

The people are becoming conscious about the health. Because of existing poor slaughte house conditions, quality of meat is affected. There is huge marketing potential for the processed canned meat products in India. Canned meat has great demand in domestic as well as international market. It is used in hotels, canteens, railways, airlines and for export.

V. PROJECT DESCRIPTION

• **Product and Its Uses**

Meat is highly perishable product. Canned meat can be preserved for a long duration with minimal loss in the quality. Canned meat would be ready to serve product and could be used instantly. Meat processing waste can be utilized for preparation of fish feed, animal feed and as a manure.

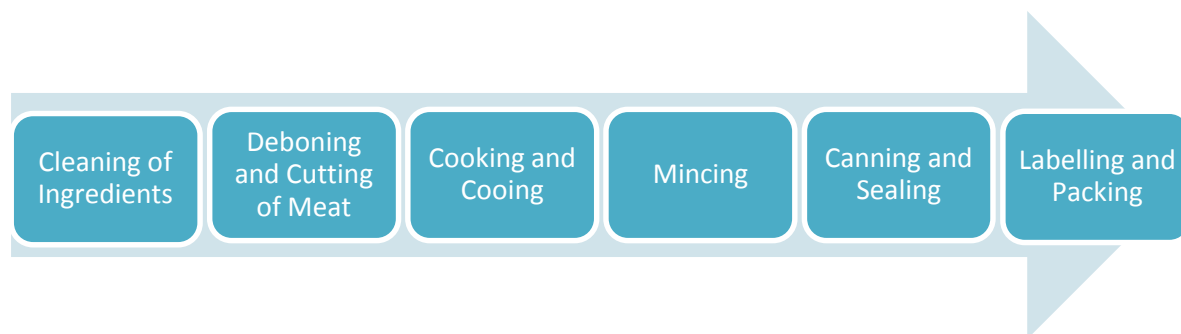
• **Capacity**

Capacity of meat processing plant is considered as 240MT per year.

• **Manufacturing Process with Flow Chart**

The process starts with cleaning and preparation of various ingredients and deboning of meat and cutting it into pieces of 6-7 cms. Then these ingredients are cooked and cooled. After mincing, all the ingredients are properly mixed and pre-heated at around 80-85 C. Finally, they are filled into lacquered cans; cans are sealed and processed/sterilised at a pressure of about 15 lbs PSI for about

40-45 minutes. Cans are immediately cooled, labelled and packed. The product should have a thick free-flowing consistency with a total solid content ranges from of 35 % to 40 %



VI. PROJECT COMPONENTS

- **Land and Building**

A plot of land of around 0.5 acre shall be required which would cost around Rs. 2.5 Lakh. The cost of land development will be Rs. 1.5 Lakhs.

- **Civil Works**

Main building and storage Area	300 sq. m
Other	500 sq.m

The construction cost is considered as Rs. 6000 per sq. meter. For main building hence the total construction cost for built up area is Rs. 18.00 Lakhs. An amount of Rs. 5 Lakhs is necessary to take care of other civil work.

- **Plant and Machineries**

Plant and Machinery Details				
Sr. No.	Name Of Machinery	Quantity In Nos.	Cost Per Unit	Price In Rupees
1	Spice Grinder 25 Kg Capacity (Set)	1	30000.00	30000.00
2	Mincer	1	45000.00	45000.00
3	SS Steam Jacketed Kettle 100 Kg Capacity	2	180000.00	180000.00
4	Roaster	1	50000.00	50000.00
5	Straight Line Exhaust	1	360000.00	360000.00
6	Canning Retort	1	190000.00	190000.00
7	Can Reformer	1	33000.00	33000.00
8	Can Seamer	1	150000.00	150000.00
9	Mini Boiler	1	135000.00	135000.00
10	Racks For Cooling	2	45000.00	90000.00
11	Weighing Scale , Knives , Tables Etc. (Set)	1	200000.00	200000.00
12	Laboratory Instruments. (Set)	1	50000.00	50000.00

			1513000.00
	Excise duty	12.36%	187006.80
	Total invoice value		1700006.80
	Transportation cost (lump sum)		50000.00
	VAT against C form	2.0%	34000.14
	Entry tax	1.0%	17000.07
	Irreccion	LS	50000.00
	Sub total		1851007.00
		Grand Total in INR Lakh	18.51

- **Miscellaneous Fixed Assets**

The cost of miscellaneous fixed assets is considered as Rs. 1.5 Lakhs. Cost of miscellaneous fixed assets includes cost of office furniture and other infrastructure, telephone installation, electrical infrastructure etc.

- **Preliminary Preoperative Expenses**

Provision of Rs. 1.00 Lakhs will be necessary to take care of the expenses like registration, travelling etc.

- **Contingency**

Contingency charges are considered as a 2 % of the cost of project excluding the pre-operative expenses and the land cost.

VII. PROJECT COST

SR. No.	Particulars	Qty.	Rate in Rupees	Amount (INR. Lakh)
1	Land in Acre	0.5	5000000	2.5
2	Land Development Sq. Mt	2000	LS	1.50
3	Civil Work	300	6000	18.00
4	Other Civil work	500	1000	5.00
5	Plant and Machinery			18.51
6	Miscellaneous Fixed Assets			1.50
7	Contingency			0.89
8	Preliminary and Preoperative Expenses			1.00
9	Working capital Margin			10.41
	TOTAL			59.31

VIII. MEAN OF FINANACE

Share	25%	14.83
Bank loan	75%	44.48
Total Amount in Rs Lakh		59.31

IX. WORKING CAPITAL ASSESMENT

Working capital required to run the plant is enlisted below:

Working Capital Assessment in Rs. Lakh				
Particulars	Days	Year 1	Year 2	Year 3
Raw material	2	1.13	1.58	2.04
WIP	1	0.65	0.91	1.17
Finished Goods	30	19.52	27.29	35.05
Debtors	30	20.32	28.44	36.21
Total		41.62	58.22	74.46
Creditors		0.00	0.00	0.00
Total		0.00	0.00	0.00
WCG		41.62	58.22	74.46
Margin	25%	10.41	14.55	18.62
MPBF		31.22	43.66	55.85
Interest	14%	4.37	6.11	7.82

X. MANPOWER REQUIREMENT

a. Administrative and Supervisory

Particulars	No.	Salary Per Month in Rs.	Total Pay/Year in Lakh
Watchman Cum Peon	1	5000.00	0.60
Production cum QC manager	1	20000.00	2.40
Food technologist	1	15000.00	1.80
Supervisor (production)	1	10000.00	1.20
Supervisor (Sales cum Purchase)	1	10000.00	1.20
Accountant cum Clark cum cashier	1	10000.00	1.20
Mechanic	1	8000.00	0.96
Boiler Attendant	1	8000.00	0.96
Helpers	5	4000.00	2.40
Store In charge	1	10000.00	1.20
Total Salary in INR Lakh			13.92

XI. PROJECT PROFITABILITY

• Installed Capacity and Capacity Utilization

The capacity of meat processing plant is to produce 240 MT of processed canned meat per year. During first year only 50% capacity will be utilized, in second year 70 % and third year onwards 90% of total capacity will be utilized.

- **Yield and Production**

At 100 % capacity utilization around 240000 containers of 1 kg of canned meat per year will be produced.

- **Sales Revenue**

The sale revenue at 100% capacity utilization will be,

Products	Price/unit (Rs)	Income (Rs in Lakhs)
Meat Gravy Concentrate	183.50	440.40

- **Profit Calculations**

Installed Capacity In Numbers Of Cans	Year 1	Year 2	Year 3	Year 4	Year 5
Meat Gravy Concentrate	240000	240000	240000	240000	240000
Capacity Utilisation In Number Of Cans	50%	70%	90%	90%	90%
Meat Gravy Concentrate	120000	168000	216000	216000	216000
Sales Value In Rs. Lakh					
Meat Gravy Concentrate	220.20	308.28	396.36	396.36	396.36
Total Income In Rs. Lakh	220.20	308.28	396.36	396.36	396.36
Total Expenditure In Rs. Lakh	205.01	286.61	364.77	364.87	364.97
PBDIT	15.19	21.67	31.59	31.49	31.39
Depreciation	4.60	4.03	3.53	3.09	2.71
Interest On Term Loan	5.34	5.34	4.50	3.54	2.58
Interest On Working Capital	4.37	6.11	7.82	7.82	7.82
Intangible Assets Written Off	0.00	0.30	0.30	0.30	0.30
Profit After Depreciation And Interest	0.88	5.89	15.44	16.74	17.98
Tax	0.32	2.12	5.56	6.03	6.47
Profit After Depreciation Interest And Tax	0.56	3.77	9.88	10.71	11.51
Surplus Available For Repayment	10.50	13.14	17.91	17.34	16.80
Cash Accruals	5.16	7.80	13.41	13.81	14.22
Net Cash Accrual	5.16	7.80	13.11	13.21	13.63

XII. FINANCIAL PARAMETERS

- **Cash Flow Statement**

The statement of cash flow is concerned with the flow of cash in and out of the business. Cash inflow means the source of cash which includes equity, Loan from bank and the cash accruals from the business. Cash outflow is a sum of cash required for the applications like increase in fixed assets, for repayment of term loan, preoperative expenses and cash required for the payment of dividend.

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Cash inflow	64.47	7.80	13.41	13.81	14.22
Opening balance	0.00	5.16	5.96	11.37	16.88
Surplus	5.16	0.80	5.41	5.51	5.93
Closing Balance	5.16	5.96	11.37	16.88	22.81

- **Break Even Analysis**

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Sales Revenue	220.20	308.28	396.36	396.36	396.36
Total Variable Cost	195.18	272.86	350.53	350.53	350.53
Total Fixed Cost	15.17	19.05	18.63	17.65	16.68
Contribution per Unit	25.02	35.42	45.83	45.83	45.83
Break Even Point (%)	60.63%	53.77%	40.65%	38.52%	36.40%

- **Debt Service Coverage Ratio (DSCR)**

DSCR	Year 1	Year 2	Year 3	Year 4	Year 5
Coverage Available	10.50	13.14	17.91	17.34	16.80
Debt	5.34	12.34	12.50	11.54	10.58
DSCR Ratio	1.97	1.06	1.43	1.50	1.59
Average DSCR Ratio	1.54				

The debt service coverage ratio based on the assumed techno economic parameters is found satisfactory. The average DSCR is 1.54.

- **Internal Rate of Return (IRR)**

The financial indicators like Net Present Worth (NPW), Benefit Cost Ratio (BCR), Internal Rate of Return (IRR) etc. were analysed by discounting cash flow @15% discounting rate. The internal rate of return is found to be 58.87% and BCR is about 1.04.

- **Projected Balance Sheet**

Liabilities		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7
Equity	14.83	14.83	14.83	14.83	14.83	14.83	14.83	14.83
Term Loan	44.48	44.48	37.48	29.48	21.48	13.48	5.48	0.00
Reserve & Surpluses		0.56	4.33	13.92	24.03	34.95	46.08	57.90
Total		59.87	56.64	58.22	60.34	63.25	66.39	72.72
Assets								
Gross Fixed Assets		58.31	58.31	58.31	58.31	58.31	58.31	58.31
Less Depreciation		4.60	8.63	12.16	15.25	17.96	20.34	22.43
Net Fixed Assets		53.71	49.68	46.15	43.06	40.34	37.96	35.87
Intangible Assets		1.00	1.00	0.70	0.40	0.10	-0.20	-0.20
Cash & Bank Balance		5.16	5.96	11.37	16.88	22.81	28.62	37.05
Total		59.87	56.64	58.22	60.34	63.25	66.39	72.72
TNW	14.83	74.70	71.47	73.05	75.17	78.08	81.21	87.55
TOL	44.48	44.48	37.48	29.48	21.48	13.48	5.48	0.00
TOL/TNW	3.00	0.60	0.52	0.40	0.29	0.17	0.07	0.00

XIII. ASSUMPTIONS

- The unit will work for 8 hours a day for 300 days per annum.
- Capacity utilization: First year -50%, In Second year 70% and third year onwards - will be 90%.

- c. The wages for unskilled workers are taken as per prevailing rates in this type of industry.
- d. Interest rate for term loan is 12% per annum and that is for working capital is 14% per annum.
- e. Margin money considered at 25% of the financial outlay.
- f. Insurance charges for the fixed assets considered as 0.5% of the depreciated cost of the assets.
- g. Repayment period of seven years with one year grace period for repayment of principal.
- h. Costs of machinery and equipment are based on average prices of machinery manufacturers.
- i. Power cost is considered as Rs. 5.63 per unit and that for the fuel is Rs. 55 per litre.
- j. The cost of water is considered as 30 paise per litre.
- k. Depreciation rate of 10%, 13.91% and 15% has been considered for civil structures, plant & machineries and miscellaneous fixed assets respectively.
- l. Repair and maintenance is considered as a percentage of total project cost excluding preliminary preoperative expenses, land and land development cost. The percentages are 0.10, 0.25 and 0.5 for first three years respectively and 0.75 for fourth year onwards.
- m. The administrative expenses will be considered as Lump sum Rs. 50 thousand per annum.
- n. The 0.5% of total income would be considered to take care of promotion and marketing expenses.
- o. Insurance of the fixed assets is a function of their depreciated cost. It is considered as a 0.5% of depreciated cost (WDV method) of assets.
- p. Land cost is considered as Rs.5 Lakh per acre.

XIV. ADDRESS OF SUPPLIER OF PLANT AND MACHINERY

1. Zoy Impex

E - 1, Sector - 22, U. P. S. I. D. C.,
Industrial Area, Meerut Road,
Near Samtel Divice Limited,
Ghaziabad - 201001, Uttar Pradesh, India

2. Hisense Infratech Private Limited

138 - A, Taimoor Nagar Maharani Bagh,
New Delhi - 110025, Delhi, India

3. Food Tech Equipments Company

52- A, IInd Floor, Opposite PNB,
Dilshad Garden Industrial Area,
Delhi - 110095, Delhi, India

4. Mark 1 Packaging Systems Pvt Ltd

No. 75, Hasti Industrial Estate,
Shilphatta Road, Mahape, Navi Mumbai - 400 707,
Maharashtra, India