BESAN PLANT

1. INTRODUCTION

Bengal gram is called Chickpea or Gram (Ciceraritinum L.) in South Asia and Garbanzo bean in most of the developed world. Bengal gram is a major pulse crop in India, widely grown for centuries and accounts for nearly 40 percent of the total pulse production.

2. PRODUCTS AND ITS APPLICATION:

BESAN is a product obtained by grinding, dried and decuticled Bengal Gram (L: Cicer arietinum). Besan is a bengal gram flour widely consumed in India. It is yellowish in colour and possess characteristic bengal gram taste and smell. Khesaru dal and other colouring matter shall not be added to true besan flour.

Plant Capacity & Product Mix:

It is proposed to produce 30 MT of besan per day, i.e. 900 ton/year. Total 37.5 MT bengal gram will be processed in the plant per day to produce 30 MT of besan per day. Remaining 7.5 MT will be husk and other process losses including moisture, dust removal etc. Out of 30 MT besan, 17 MT will be of super fine A-grade and remaining 13 MT will be B-grade besan.

3. DESIRED QUALIFICATION FOR PROMOTER:

The entrepreneur must be aware of sourcing and trading of Bengal gram whole and well versed with markets of besan for retail and bulk selling in India and abroad. The manufacturing process can be understood easily after some runs but marketing skill is must to sale besan in a competitive markets in India and abroad.

4. INDUSTRY OUTLOOK/TREND

Indian snacks and namkeen industry is growing at the rate of 10% per annum with increase in urbanization, changing life style and growth in per capita income. Besan is rich in nutrition and it is very common in Indian food preparations. The growth in demand is also due to increase in population and rising exports of products made from besan.

5. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY:

India is the major growing country of the world, accounting for 61.65 percent of the total world area under Bengal gram during 2002 and 68.13 percent of the total world production. Bengal gram is widely appreciated as health food. It is a protein-rich supplement to cereal-based diets, especially to the poor in developing countries, where people are vegetarians or cannot afford animal protein. The pulse proteins are rich in lysine and have low sulfur containing amino acids. It offers the most practical means of eradicating protein malnutrition among vegetarian children and nursing mothers. Bengal gram has a very important role in human diet in our country.

India has exported about 12,000 tons of besan worth Rs. 7800 lakhs in year 2015-16 (APEDA) mainly to USA, UK, Australia, Kuwait, Canada, New Zealand, UAE, Singapore, Saudi Arabia, Oman and other countries.

6. RAW MATERIAL REQUIREMENTS:

	per day, tons	**300.00**	**Per Yr. in MT**		**Per Annum**
INGREDIENTS	**Qty./Day**	**Qty./Yr. tons**	**Qty./yr. MT**	**Rate/ton**	**Rs. Lakhs**
Whole Bengal Gram	37.50	11,250.00	11,250.00	56,750.00	6,384.38
Total		11,250.00	11,250.00	Rs.	**6,384.38**
Wastage @ 2%					6,512.06
Total Cost of Raw Materials				Rounding	6,512.06

7. MANUFACTURING PROCESS:

Whole bengal gram delivered at the site are first physically cleaned and separated from stone, dust, dirt and other foreign material. Cleaned material is conveyed into soaking-cum-drying bins where it isconditioned with little water and dried by blowing air to loosen its outer skin for separation. This process take about four hours' time. It is then subjected for spilting outer skin (husk) in a dal mill. The spilt dal is again moisturized and conditioned for four hours. It is then subjected to final milling to extract maximum percentage of flour the final milling is carried out in emery roller machines. Thusobtained flour is further pass through battery of sieving machines toobtained super fine grade and fine grade material. The husk separatedis collected from other chutes, whereas other sieved coarse materialagain feed-back for milling into roller machine. Finally, besan ispacked directly in gunny bags, poly-line gunny bags for bulk selling and in laminated pouches or poly-bags for retail selling.

8. MANPOWER REQUIREMENT:

Requirement of Manpower

Manpower Total Requirements	Persons
Technical Staff	3
Adm. Staff	4
Marketing Staff	6
Labour	20
Total	33

9. IMPLEMENTATION SCHEDULE:

Project Stages	MONTHS									
	1	2	3	4	5	6	7	8	9	10
Purchase of Land										
Completion of Building										
Ordering of Machinery										
Delivery of Machinery										
Term/Wkg Loan Sanction										
Installation of Machinery										
Commissioning of Plant										
RM/Inputs Procurement										
Manpower Appointments										
Commercial Production										

10. COST OF PROJECT:

Costing Heads	Qty.	Rate/Unit	Rs. Lakh
Land in Sq. M. + Expenses	800	1,000.00	8.00
Building	400	9,000.00	36.00
Plant & Machinery			43.69
Other Capital Investment			10.00
Contingency			5.00
Total Cost of Project			**102.69**

11. MEANS OF FINANCE:

Means Heads	Rs. Lakhs
Promoters Capital	25.67
Term Loan	58.62
MFPI Subsidy	18.40
Unsecured Deposits	-
Total Means of Finance	**102.69**

12. WORKING CAPITAL CALCULATION:

Calculation of Working Capital

Particulars	Total Amount	Stock Days	Value of Stock Period	Promoter Margin	Promoter Share	Bank Borrowings
Raw Material	6,512.06	15	325.60	0.60	195.36	130.24
Packing Material	18.00	30	1.80	0.75	1.35	0.45
Work in Process	6,644.02	3	66.44	0.40	26.58	39.86
FP Stock	7,456.50	15	372.83	0.40	149.13	223.70
Bills Receivable	7,456.50	15	372.83	0.40	149.13	223.70
Working Expense	12.00	30	1.20	1.00	1.20	0.00
Total:	**28,099.09**		1,140.69		**522.75**	**617.95**

13. LIST OF MACHINERY REQUIRED:

Sr. No.	Equipment	Qty.
1	Reel Machines	2
2	Milling Separator	2
3	Water Wheel Damper	3
4	Washer Whizzer	2
5	Eccentric Sieving Machine	2
6	Emery Roller Machine	2
7	Micro Pulverisers	2
8	Low Pressure Blower with Cyclones	1
9	Worm Conveyors	2
10	Elevators, Gravity Pipes, Spouts, etc.	8
11	Electrification, Workshop, Weighing Scales	3
12	Lab Equipment& Other Misc. Equipment	4

- Beater Manufacturing Company
  D/24, Jay Bonnaza Industrial Estate,
  Ashok Chakravarti Road Ashok Nagar,
  Kandivali East,
  Mumbai - 400101, Maharashtra

- Rising Industries
  TeghoriaLoknath Mandir,
  Jhowtala Ghosh Dutta Para,
  Near Honda Service Center,
  Rajarhat, Kolkata - 700157,
  West Bengal

14. PROFITABILITY CALCULATIONS:

Profitability calculations

Sr. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
A	**Gross Sales**	4697.595	5368.68	6039.765	6039.765	6039.765
	Less:					
1	Raw Materials	4558.442	5209.648	5860.854	5860.854	5860.854
2	Packing Material	12.6	14.4	16.2	16.2	16.2
3	Fuel	3.528	4.032	4.536	4.536	4.536
4	Power	7.056	8.064	9.072	9.072	9.072
5	Manpower	42.627	48.095	53.557	53.557	53.557
6	Depreciation	10.437	11.928	13.419	13.419	13.419
7	Sundry Expenses	4.2	4.8	5.4	5.4	5.4
8	Interest on Term Loan	4.921	5.624	6.327	6.327	6.327
9	Interest on WC Loan	7.875	9	10.125	10.125	10.125
9	Repairs & Maintenance	3.5	4	4.5	4.5	4.5
B	**Production Cost**	4655.186	5319.588	5983.99	5983.99	5983.99
C	**Gross Profit (A-B):**	42.409	49.092	55.775	55.775	55.775
	Taxes @ 30%	12.7227	14.7276	16.7325	16.7325	16.7325
	Net Profit	29.6863	34.3644	39.0425	39.0425	39.0425

The proposed unit will have the production capacity of 8100MT per year of besan. The unit cost of power is taken at Rs. 8. The depreciation on building is taken at the rate of 5% whereas for plant and machinery it is at 10%.

The average sales price of Besan is taken at the rate of Rs. 83,000 per MT for proposed project.

15. BREAKEVEN ANALYSIS:

Particulars	Rs. In lacs.
Break Even Point	
Annual Fixed Cost x100/	61.87
Annual Fixed Cost + Profit	

16. STATUTORY / GOVERNMENT APPROVALS

There is statutory requirement of FSSAI license for setting up of food processing industry. Moreover, MSME& GST registration, IEC Code for Export of end products and local authority clearance may be required for Shops and Establishment, for Fire and Safety requirement and registration for ESI, PF and Labour laws may be required if applicable. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

17. BACKWARD AND FORWARD INTEGRATION

For forward integration entrepreneur may think of manufacturing namkeen and snack products for Indian market. However there is little scope for backward integration.

18. TRAINING CENTERS/COURSES

For food processing industry training and short term courses are available at Indian Institute of Food Processing Technology, Thanjavur, Tamil Nadu and Central Food Technological Institute, Mysore.

Udyamimitraportal (link : www.udyamimitra.in) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

Disclaimer:

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.