PROJECT PROFILE
ENERGY FOOD

1. INTRODUCTION

With growing health awareness many people have become very selective about their diet and there is a marked preference for low calorie high protein food supplements. At the same time poor people cannot afford costly energy food available in the market. Thus, there is a growing market for good quality health food if the prices are reasonable. Growing children are yet another target group.

2. OBJECTIVES

The objective of the profiles is to encourage and assist prospective entrepreneurs in MSME sector in and guiding making them aware of the opportunities of this sector. It is also being developed by the Directorate of the Food Processing Industries, Government of West Bengal to help entrepreneurs with knowledge about raw materials availability, knowledge of market, source of technology and plant and machinery suppliers. M/s ITV Agro & Food Technologies Pvt. Ltd., New Delhi has helped in developing the project profile.

3. RAW MATERIAL AVAILABILITY

Materials like wheat, gram dal, edible groundnut cake, jiggery shall be available locally. Major requirement will be wheat for which arrangement for bulk supply must be made. Printed polythene bags with cartons and BOPP tape shall be the packing material.

4. MARKET OPPORTUNITIES

There are many health foods especially targeted at urban markets as they are high priced. But bulk of them are for children. But there is a large semi urban and rural market wherein these products are considered to be very costly. With greater health awareness, people are preferring diet food but presently such products are not easily available in the low price range. If such product is made available then many people who cannot afford the high priced diet food would go for it. Hence, affordable pricing would play a major role.

5. PROJECT DESCRIPTION

a) Product & Its uses

Energy food is prepared from easily available ingredients like wheat, gram dal, Jaggery, edible groundnut cake and minerals and vitamins. It is ready to eat food item and does not require extensive cooking. Some water or milk can be added depending upon individual choice. It can also be used along with other materials while making halwa, chapatti etc. This product is a common product and can be produced across the nation. However, this profile considers West Bengal as a potential location.

b) Capacity

The proposed capacity of the plant is to produce 200 MT / annum of finished product.

c) Manufacturing process

It is not very complicated. Cleaned wheat is roasted in the roaster into golden brown colour and then ground in a hammer mill. Similarly, gram dal and edible groundnut cake are also roasted and ground. Jaggery is mixed with calcium carbonate and wheat flour and processed in multi-mill to obtain coarse flour. Finally, all the ingredients alongwith pre-mixed minerals and vitamins are thoroughly mixed and packed. The typical mix could be 60% wheat flour, 10% gram dal,10% edible groundnut

cake, 15-16% jiggery and balance would be calcium carbonate and vitamins. It is imperative to maintain strict quality control.

6. PROJECT COMPONENTS & COST

a) Land & Building

Land of around 200 sq. mtrs. with built up area of 125 sq.mtrs. would be adequate. Main production area would not require more than 60 sq. mtrs. but storage and packing would occupy considerable space . Cost of land is assumed to be 1.00 lac whereas construction cost is taken at Rs. 7.50 lacs.

b) Plant & Machinery

Rated annual capacity of 200 tonnes would need the following equipments.

Item	**Qty**	**Price (Rs. in lacs)**
Electrically-operated Roaster	1	3.75
Hammer Mill	1	1.60
Multi-mill	1	1.90
Homogeniser	1	2.10
Sieves, SS Utensils, Weighing scales etc.	-	1.60
	Total	10.95

c) Miscellaneous Assets

Other assets like furniture & fixtures, packing tables, plastic tubs, storage racks etc. would cost Rs. 1.80 lacs.

d) Utilities

Total power requirement shall be 30 HP whereas per day water requirement shall be around 5000 ltrs. The annual cost of utilities is estimated at Rs. 1.50 lacs.

e) Prel. & Pre Operative Expenses

Pre-production expenses like registration, establishment, administrative and travelling charges, interest during implementation, trial runs etc. are likely to be Rs. 1.50 lacs.

f) Working Capital Assessment

At 60% capacity utilization in the first year, the working capital needs would be as under : (Rs. in lacs)

Particulars	**Period**	**Margin**	**Total**	**Bank**	**Promoters**
Stock of packing Material	½ month	30%	1.31	0.92	0.39
Stock of Finished Goods	½ month	25%	1.90	1.42	0.48
Receivable	½ month	25%	2.25	1.69	0.56
			5.46	4.31	1.15

g) Project cost & Means of finance

Item	**Amount (Rs. in lacs)**
Land and Building	7.50
Plant and Machinery	10.95
Miscellaneous Assets	1.80
P & P Expenses	1.50
Contingencies @ 10% on building and plant & machinery	1.74
Working capital margin	1.15
Total	24.64
Means of Finance	
Promoters' contribution	9.85
Term loan from Bank /FI	14.79
Total	24.64

Debt Equity Ratio	1.5:1
Promoters contribution	40%

Financial assistance in the form of grant is available from the Ministry of Food Processing Industries, Govt. of India, towards expenditure on technical civil works and plant and machinery for eligible projects subject to certain terms and conditions.

7) PROJECTED PROFITABILITY

a) Production Capacity

The rated production capacity of the plant is 200 ton / year of finished products whereas actual capacity utilization is expected to be 60% and 75%. during 1st year 2nd year respectively.

b) Sales Revenue at 100%

Assuming selling price of Rs. 45,000 / ton, the annual sales at 100% activity level would be Rs. 90.00 lacs.

c) Raw Material Required at 100%

Requirement of various raw material is as under :

(Rs. in lacs)

Product	**Qty (Tons)**	**Rate (Rs. / Ton)**	**Value**
Wheat	120	20,000	24.00
Gram dal	20	45,000	9.00
Edible groundnut cake	20	30,000	6.00
Jaggery	30	25,000	7.50
Vitamins, minerals, Calcium Carbonate etc.	-	-	1.50
Packing materials	-	-	4.50
	Total		**52.50**

d) Projected Profitability

(Rs. in lacs)

S. No.	Particulars	1st year	2nd year
A.	**Installed capacity**	**200 Tonnes**	
	Capacity Utilisation	60%	75%
	Sales Realisation	54.0	67.50
B.	**Cost of Production**		
	Raw & packing Materials	31.50	39.37
	Utilities	0.90	1.12
	Salaries	5.16	5.67
	Stores and Spares	0.90	1.12
	Repairs and Maintenance	0.60	0.75
	Selling Expenses @ 10%	5.40	6.75
	Administrative Expenses	1.20	1.50
	Total	45.66	56.28
C.	**Profit before Interest & Depreciation**	**8.34**	**11.22**
	Interest on Term Loan	1.47	1.17
	Interest on Working Capital	0.52	0.65
	Depreciation.	1.74	1.57
	Profit before tax	4.61	7.83
	Profit after tax	4.61	7.83
	Cash Accruals	6.35	9.40
	Repayment of Term Loan	Nil	3.00

e) Break Even Point Analysis

(Rs. in lacs)

S. No.	Particulars	Amount	
(A)	**Sales**		**67.50**
(B)	**Variable Costs**		
	Raw material & Packing material	39.37	
	Utilities(70%)	0.78	
	Salaries (70%)	3.97	
	Stores and Spares	1.12	
	Selling Exps (70%)	4.72	
	Admn Expenses (50%)	0.75	
	Interest on WC	0.65	**51.36**
(C)	**Contribution (A) – (B)**		**16.14**
(D)	**Fixed Costs**		**6.74**
(E)	**Break Even Point**		**42%**

f) Debt Service Coverage Ratio (DSCR)

(Rs. in lacs)

Particulars	1st year	2nd year	3rd year
Cash Accruals	6.35	9.40	11.28
Interest on TL	1.47	1.17	0.87
Total (A)	7.82	10.57	12.15
Interest on TL	1.42	1.17	0.87
Repayment of TL	Nil	3.00	3.00
Total (B)	1.42	4.17	3.87
DSCR (A) / (B)	5.50	2.53	3.13
Average DSCR	3.72		

g) Internal Rate of Return (IRR)

Cost of the project is Rs. 24.64 lacs **(Rs. in lacs)**

Year	**Cash Accruals**	**20%**	**24%**
1	6.35	5.52	4.95
2	9.40	7.10	4.62
3	11.28	7.40	5.91
4	11.28	6.67	4.77
5	11.28	5.60	3.84
Total		**32.29**	**24.09**

The IRR is around 24%

h) Manpower requirement

Particulars	**Nos.**	**Monthly**	**Total Monthly Salary (Rs.)**
Skilled workers	2	7,500	15,000
Helpers	4	5,000	20,000
Salesman	1	8,000	8000
		Total	**43,000**

8. ASSUMPTIONS

- The plant will work for 300 days in a year. :
- The operating capacity is 60% , 75%, 90 % during 1st year , 2nd year and 3rd year respectively.
- The interest on term loan is taken at 10% per annum and on working capital it is 12% per annum.
- Price of raw material and selling price of finished products is taken at Rs. 20,000 / ton and Rs. 45,000/ ton respectively.

9. SOURCES OF TECHNOLOGY

CFTRI, Mysore, has successfully developed the technical know-how for the product. BIS has laid down the quality standard. The compliance under FSSAI act is a must.

10. PLANT & MACHINERY SUPPLIERS

1. Gurunanak Engg. Works (P) Ltd.
   C-33, Sector – 88, Phase – II, Gautam Budh Nagar (UP)
   Ph. : 9810378448 / 120-243674

2. Kailash Engg. Works
   H1-81, Napasar RIICO Industrial Area,
   Bikaner (Rajasthan)
   Ph. 151-2762534

3. Pagariya Food Products P. Ltd.
   15/1, 3rd cross, Kasturbanagar,
   Mysore Road, Bengalore – 560026
   Ph. 09953361350
   www. indiamart.com