

PROJECT PROFILE

ON

DHAL MILL

Month & Year

Aug 2010

**PREPARED BY
TANSTIA-FNF SERVICE CENTRE
B-22, INDUSTRIAL ESTATE
CHENNAI-600032**

Supported by

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STIFTUNG **FÜR DIE FREIHEIT**

DHAL MILL

1. Introduction

The dhal mill is a process industry to dehull the pulses and split them into halves or dhal and make it available to the consumer, ready for use. There are various pulses like red gram (tur), black gram (udad), Bengal gram (chana), masoor (lentils) etc and all these need dehulling before being made available in the market.

2. Market

Since there is always a constant demand in the consumer market, the demand for dhals is always present and on the increase. The products find placement in all retail outlets in the consumer market.

3. Packaging

Dhals being primarily traded by wholesalers, are packed in 50 kg gunny bags. In the retail consumer market, they are packed in 500 grams and 1000 grams units.

4. Production capacity

- The plant operates to three shifts a day with each shift of eight hours duration.
- The total raw material input will be 3 tonnes per shift of 8 hours or 9 tonnes per day. With refraction losses at 2%; hulls at 11%; and bran at 1%, the recovery will be 14% less than the input raw material.
- The time period required for achieving full capacity utilization is six months.

5. Sales revenue

- The sales revenue will entirely depend upon the procurement price of raw material used for milling. Gram is considered as a representative sample in this profile.

6. Production process outline.

The gram is first passed through the sieves of the preparatory section to remove chaff and twigs, followed by the destoner to remove stones. The cleaned gram is then passed through the mill where it is cracked, split into two halves and

the hulls separated from the dhal with the help of sieves. The hulls are disposed off to cattle feed manufacturers and the dhal packed in 50 kg gunnies.

7. Quality specifications

- The dhals should be free from stones, hulls and other contaminant material.

8. Pollution control measures

On dehulling, there is a lot of dust which must be trapped and not allowed to penetrate into the surroundings.

9. Energy conservation measures

Common measures will do.

10. Land and construction cost for the proposed unit

Land 1.0 acre - 2.0 lakhs. The total processing area required is 7900 square feet vide details given below.

SI	Description	Sq. feet
1	Processing area – pre preparation	2000
2	Raw material store	2000
3	Finished goods store	2000
4	Office space	500
5	Panel board room	200
6	Machinery spares room	200
7	Quality control laboratory	200
8	Packaging material store room	200
9	General store room	200
10	Toilet space	200
11	Miscellaneous space	200
12	Total	7900

Construction cost per square foot – Rs. 800.00

Total cost of civil works – Rs. 63.20 lakhs

Total cost of land and civil works – 65.20 lakhs

11. Costing of machinery and equipment

Rs. lakhs

Preparatory section

- | | |
|-----------------------------|------|
| • Destoner with accessories | 1.45 |
| • Chaff separator | 1.40 |
| • Elevators and conveyers | 2.00 |
| • Motors for above machines | 0.80 |

Process section

- | | |
|--|------|
| • Roller machine (1 no) | 1.20 |
| • Sieves (2 nos) | 1.50 |
| • Worm machine (2 nos) | 1.15 |
| • Bucket elevators (5 nos) | 3.66 |
| • Box fan or aspirator (1no) | 1.15 |
| • Accessories, bearings, shafts, counter shafts etc. | 1.45 |
| • Mild steel platforms for machinery | 1.60 |
| • Motors for above machines | 1.60 |
| • 20 HP A/C motor | 0.50 |
| • Tool kit, weighing scales and accessories | 0.60 |

Total machinery **20.06**

Laboratory equipment 1.00

Total cost of machinery and equipment **21.06**

12. Project cost

SI	Description	Rs. lakhs
1	Land	2.000
2	Civil works	63.200
3	Plant machinery	20.060
4	Laboratory equipment	1.000
5	Transport vehicle (2 LCV)	15.000
6	Pollution control equipment	0.000
7	Energy conservation equipment	0.000
8	Cost of power connection	1.000
9	Cost of electrification	1.500
10	Erection and commissioning	2.030
11	Cost of machinery spares	0.500
12	Cost of office equipment	1.000
13	Deposits if any	0.000
14	Company formation expenses	0.100
15	Gestation period expenses	1.000
16	Sales tax registration expenses	0.100
17	Initial advertisement and publicity	1.000
18	Contingencies	1.000
19	Working capital margin money	36.415
20	Total	146.905

13. Working capital requirements per month

a. Salaries and wages

SI	Description	No of persons	Total salary / month (Rs. lakhs)
1	Production Manager	1	0.400
2	Production supervisor cum chemist	3	0.750
3	Skilled workers	6	0.600
4	Unskilled workers	12	0.600
5	Administrative staff	2	0.500
6	Drivers	2	0.200
7	Sales coordinator	1	0.200
8	Security staff on hire	3	0.180
9	Total	30	3.430

b. Raw material requirement per month

SI	Description	Qty (kgs)	Rate / kg (Rs)	Value (Rs. lakhs)
1	Gram	189375	40	75.750
2	Water			0.200
3	Total raw material			76.950

c. Packaging material requirement per month

SI	Description	Qty	Rate / unit (Rs)	Value (Rs. lakhs)
1	Gunny bags	3786 nos	12.00	0.454
2	Total			0.454

Total raw + packaging material = Rs. 77.404 lakhs

d. Utilities per month

SI	Description	Rs. lakhs
1	Power 25000 kwh @ Rs. 5.50 per unit	1.375
2	Water	0.100
3	Boiler fuel	0.000
4	Total utilities	1.475

e. Contingent expenses per month

SI	Description	Rs. lakhs
1	Rent for processing shed	0.000
2	Postage and stationery	0.050
3	Telephones, fax etc.	0.050
4	Consumable stores	0.100
5	Repairs and maintenance	0.300
6	Local transports, loading and unloading	0.392
7	Advertisement and publicity @ 1% of sales	0.977
8	Insurance	0.020
9	Sales expenses @ 1% of sales	0.977
10	Miscellaneous expenses @ 1% of sales	0.977
11	Trade incentives @ 1% of sales	0.977
12	Taxes @ 4%	3.908

13	Total contingent expenses	8.728
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f. Total working capital requirement per month

SI	Description	Rs. lakhs
1	Salaries and wages	3.430
2	Raw material and packaging material	77.404
3	Utilities	1.475
4	Contingent expenses	8.728
5	Total	91.037

14. Means of finance

SI	Description	Rs. lakhs
1	Total Project Cost	146.905
2	Equity	48.478
3	Debt	98.427
4	Working capital margin money	36.415

15. Financial analysis

SI	Description	Rs. lakhs
1	Total recurring cost per year	1092.444
2	Depreciation on land and building	6.520
3	Depreciation on machinery	3.606
4	Depreciation on furnaces	0.000
5	Depreciation on moulds and fixtures	0.020
6	Depreciation on office equipment	0.100
7	Interest on long term loan @ 13.5%	13.287
8	Interest on short term borrowings@ 13.5%	7.374
9	Total cost of production	1123.351

16. Turnover per year

SI	Item	Qty	Rate/unit (Rs)	Total Rs. lakhs
1	Dhal	1954.350 MT	60,000	1172.592

17. Viability analysis

SI	Description	Value
1	Net profit before income tax (Rs. lakhs)	49.241
2	Net profit ratio	4.2%
3	Internal rate of return	21.3%
4	Break even percentage	47%
5	Debt service coverage ratio	1.980

List of machinery suppliers for dhal mill

1. Sidvin Machineries Private Limited, 10, 3rd Stage, Industrial Suburb, Mysore, 570008, Karnataka.; Tel: 0821-2485822; Fax: 0821 - 2489564