

MUSTARD POWDER



QUALITY AND STANDARDS : AGMARK specifications

PRODUCTION CAPACITY : 105 tpa

1.0 PRODUCT AND ITS APPLICATIONS

Mustard is an important oilseed in the country. India ranks high among the producers of mustard and rapeseed, with an annual production of more than 5 million tonnes. Major portion of the seed is used for extraction of edible oil. Dehusked mustard with its flavour and pungency finds use as table mustard. A pasty product prepared with mustard, salt and vinegar is quite popular in western countries. Mustard powder can also be used as condiment in pickles, meat and salad dressings. Indian black mustard known for its flavour and pungency, holds good potentialities for export.

2.0 MARKET POTENTIAL

A few units in India are making mustard powder. The conventional method of production has low recovery and several operational problems. The improved process of making mustard powder is simple which yields good product quality and high recovery.

3.0 BASIS AND PRESUMPTIONS

- a) The unit proposes to work at least 300 days per annum on single shift basis.
- b) The unit can achieve its full capacity utilization during the 3rd year of operation.
- c) The wages for skilled workers is taken as per prevailing rates in this type of industry.
- d) Interest rate for total capital investment is calculated @ 12% per annum.
- e) The entrepreneur is expected to raise 20-25% of the capital as margin money.
- f) The unit proposes to construct own building.
- g) Costs of machinery and equipment are based on average prices of machinery manufacturers.

4.0 IMPLEMENTATION SCHEDULE

Project implementation will take a period of 8 months. Break-up of the activities and relative time for each activity is shown below:

❖ Scheme preparation and approval	:	01 month
❖ SSI provisional registration	:	1-2 months
❖ Sanction of financial supports etc.	:	2-5 months
❖ Installation of machinery and power connection	:	6-8 months
❖ Trial run and production	:	01 month

5.0 TECHNICAL ASPECTS

5.1 Location

Nearness to market, availability of cheap labour and infrastructural facilities etc. are to be taken into account.

5.2 Availability of Raw Material

Mustard and rapeseed are grown in several states in the country. The main producing regions are Rajasthan, UP, Haryana, MP, Gujarat, West Bengal, Assam, Orissa, Bihar, Punjab and Arunachal Pradesh.

5.3 Process of Manufacture

Graded seeds are conditioned to loosen the husk. The seeds are dried and subjected to splitting and dehusking. The mixture of husk and the cotyledons are screened and are classified into fractions. The cotyledons are ground to desired fineness to obtain mustard powder on a triple roller mill and packed. The technology for manufacture is available at CFTRI, Mysore.

5.3 Quality Control and Standards: As per AGMARK specifications.

6.0 POLLUTION CONTROL

There is no major pollution problem associated with this industry except for disposal of waste which should be managed appropriately. The entrepreneurs are advised to take "No Objection Certificate" from the State Pollution Control Board.

7.0 ENERGY CONSERVATION

No coal / LDO or firewood is used in this process.

8.0 PRODUCTION CAPACITY

Quantity	:	105 tpa
Value	:	Rs. 31.50 lakh
Installed capacity	:	150 tpa or 500 kg/day
Working days	:	300/annum
Optimum capacity utilization	:	70%
Manpower	:	10

Utilities

Motive Power	:	25 kW
Water	:	5 kL/day

9.0 FINANCIAL ASPECTS

9.1 Fixed Capital

9.1.1 Land & Building

		Amount (Rs. lakh)
Land 300 sq.m. and development	:	2.25
Built up area 150 sq. m	:	4.50

Total cost of land and building	:	6.75

9.1.2 Machinery and Equipment

Description	Amount (Rs. lakh)
Plate mill, Grader, Classifier, Triple roller mill, Boiler, Jacketted kettle, Seed cleaner	: 4.75
Erection & electrification @10% cost of machinery & equipment	: 0.48
Office furniture & fixtures	: 0.47
Total :	----- 5.70

9.1.3 Pre-operative Expenses

Consultancy fee, project report, deposits with electricity department etc.	: 0.80
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9.1.4 Total Fixed Capital : 13.25 (9.1.1+9.1.2+9.1.3)

9.2 Recurring expenses per annum

9.2.1 Personnel

Designation	No.	Salary Per month	Amount (Rs.lakh)
Factory Manager	1	8000	0.96
Office Assistant	1	5000	0.60
Skilled workers	2	2000	0.48
Unskilled workers	6	1500	1.08
			3.12
Perquisites @15%			0.48

Total :	10		3.60

9.2.2 Raw Material including packaging materials

Particulars	Qty.(MT)	Rate	Amount (Rs. lakh)
Mustard seeds	140	9.00	12.60
Packaging material			03.10

Total:			15.70

9.2.3 Utilities	Amount (Rs. lakh)
Power 25 kWh	1.75
Water 1500 kL	0.02

Total:	1.77

9.2.4 Other Contingent Expenses	Amount (Rs. lakh)
Repairs and maintenance @10%	0.95
Consumables & spares	0.95
Transport & Travel	
Publicity	
Postage & stationery	
Telephone	
Insurance	0.10

Total:	2.00

9.2.5 Total Recurring Expenditure	Amount (Rs. lakh)
(9.2.1+9.2.2+9.2.3+9.2.4)	23.07

9.3 Working Capital	5.77
Recurring Expenditure for 3 months	

9.4 Total Capital Investment	Amount (Rs. lakh)
Fixed capital (Refer 9.1.4)	13.25
Working capital (Refer 9.3)	05.77

Total:	19.02

10.0 FINANCIAL ANALYSIS

10.1 Cost of Production (per annum)	Amount (Rs. lakh)
Recurring expenses (Refer 9.2.5)	23.07
Depreciation on building @5%	00.19
Depreciation on machinery @10%	00.53
Depreciation on furniture @20%	00.10
Interest on Capital Investment @12%	02.28

Total:	26.17

10.2 Sale Proceeds (Turnover) per year

Item	Qty. (MT)	Rate per MT	Amount (Rs.lakh)
Mustard powder	105	30/kg	31.50

10.3 Net Profit per year

= Sales - Cost of production

= 31.50 - 26.17

= Rs. 5.33 lakh

10.4 Net Profit Ratio

= $\frac{\text{Net profit} \times 100}{\text{Sales}}$

= $\frac{5.33 \times 100}{31.50}$

= 17%

10.5 Rate of Return on Investment

= $\frac{\text{Net profit} \times 100}{\text{Capital Investment}}$

= $\frac{5.33 \times 100}{19.02}$

= 28%

10.6 Annual Fixed Cost

	Amount (Rs. Lakh)
All depreciation	0.82
Interest	2.28
40% of salary, wages, utility, contingency	2.95
Insurance	0.10
Total:	<hr/> 6.15

10.7 Break even Point

= $\frac{\text{Annual Fixed Cost} \times 100}{\text{Annual Fixed Cost} + \text{Profit}}$

= $\frac{6.15 \times 100}{6.15 + 5.33}$

= $\frac{615}{11.48}$

= 54%

11.0 ADDRESSES OF MACHINERY AND EQUIPMENT SUPPLIERS

Binny Limited
65, Armanian Street
P.B. No. 66
Chennai – 600 001

Jyothi Industries
31, Pampa Mahakavi Road
Bangalore – 560 004

Quasar Engineers
Plot No. 53, Sector A
Industrial Area, Sanwer Road
Indore – 452 003

Thermax (India) Ltd.
Chinchwad
Pune – 411 019