

**PROJECT PROFILE  
ON MEDICINAL  
SEEDS DUST  
(POWDER)**

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## INTRODUCTION

India system of classical system of medicines Ayurveda, Yunani, Siddha, etc. is concurrently undergoing a change. Mainly medicinal plants and herbs are the raw materials of traditional health care medicines. In India there are about 6500 of herbal species are found. People are now becoming health conscious and using herbal products for their sickness and fitness.

The transformation of Indian classical health care practices increasingly depending upon ready to use commercially prepared herbal formulations on one hand, and the resurgence of global interest in herbal-based wellness on the other is directly dependent on uninterrupted supplies of medicinal plants. Whereas some medicinal plants have been brought under commercial cultivation, major diversity of medicinal plants continues to be sourced from forests. Indian states like Rajasthan, Madhya Pradesh, Chhattisgarh, Uttarakhand, Odisha, Kerala, Tamil Nadu, Maharashtra, West Bengal are the main producers of herbal plants.

Fenugreek is an annual plant belonging to the Fabaceae family. It's a semi-arid plant with little rounded leaves and yellow cubic seeds. The seedling is grown worldwide. It is native to the Mediterranean and widely grown in Europe and Asia, with India being Fenugreek's largest producer. Fenugreek seeds have a taste similar to maple, which is sweet and nutty and which is used to cover up medicine taste.

## PRODUCTS AND ITS APPLICATION

- One of the most important species of human food is fenugreek. It gives the human body natural food fibre and other essential nutrient items.
- Its leaves and seeds are used in Ayurvedic medicine as well as in food.
- Fenugreek, an aromatic and flavourful spice, is widely used in both edible and medicinal applications. Fenugreek has a deep spicy and sweet taste that is similar to that of seasoning.
- “Kasuri-Methi” is well-known for its wonderful aroma and is also used in culinary preparations.
- Fenugreek powder is used in the preparation of pickles and vegetable dishes, among other things. Fenugreek seeds are available in both whole and powdered forms. Roasting them reduces the bitterness while still enhancing the taste. The chemical substance responsible for the plant's distinct odor is the solution, which is found in the seeds.
- Fenugreek is taken by mouth for digestive problems such as loss of appetite, upset stomach, constipation, inflammation of the stomach (gastritis).
- Fenugreek is also used for diabetes, painful menstruation, polycystic ovary syndrome, and obesity.

## DESIRED QUALIFICATION FOR PROMOTER

Indian households from the ancient times use fenugreek as spice. Fenugreek powder is also used for diabetes. Fenugreek powder preparation does not require any specific qualification.

## INDUSTRY OUTLOOK/TREND

India is also a prominent exporter of Fenugreek powder to the world. The country has exported 3288.05 thousand tonnes of fenugreek powder to the world for the worth of Rs. 3887.39 lakhs during the year 2020-21.

Major Export Destinations in the year 2020-21 were USA, United Arab Emeritus, South Africa, Germany, UK, Canada, France, etc. India's Export of Fenugreek powder (HS Code: 91009924 is give below:

Year	Export (Rs. Lakh)
2017-2018	2,354.20
2018-2019	1,962.12
2019-2020	2,429.31
2020-2021	3,887.29
2021-2022(Apr-Jun)	1,166.38

Source: Ministry of Commerce & Industries, Govt. of India

## MARKET POTENTIAL AND MARKETING ISSUES, IF ANY

The global demand for Fenugreek Powder has increased as consumer awareness of health and health practices has grown. Fenugreek Powder is simply ground fenugreek seeds. Fenugreek, also known as "methi" in the Indian subcontinent, is widely used. In India and other parts of Asia Pacific, fenugreek powder is used as a seasoning. Consumers are more interested in Fenugreek Powder because it is extracted from a natural source and has a variety of health benefits. Fenugreek Powder has been shown to boost milk production in breastfeeding mothers while also lowering cholesterol, diabetes, and blood sugar levels. Fenugreek Powder is widely used in nutraceuticals due to its numerous benefits. Fenugreek Powder supplements have been found to help men increase their testosterone levels and libido. Fenugreek Powders were often used to treat the common cold, flu, gallstones, diarrhea, constipation, high blood pressure, and other ailments due to the presence of lutein, zeaxanthin, and lycopene. In the forecast period of 2021-2026, the global fenugreek seed and its product market is expected to expand at a CAGR of 10%.

### BASIS AND PRESUMPTIONS

1. Production Capacity of Fenugreek Powder is 800 Kg. per day. First year, Capacity has been taken @ 40%.
2. Working shift of 8 hours per day has been considered.
3. Raw Material stock is for 10 days and finished goods Closing Stock has been taken for 10 days.
4. Credit period to Sundry Debtors has been given for 7 days.
5. Credit period by the Sundry Creditors has been provided for 7 days.
6. Depreciation and Income tax has been taken as per the Income tax Act, 1961.
7. Interest on working Capital Loan and Term loan has been taken at 11%.
8. Salary and wages rates are taken as per the Current Market Scenario.
9. Power Consumption has been taken at 16 KW.
10. Increase in sales and raw material costing has been taken @ 5% on a yearly basis.

## RAW MATERIAL REQUIREMENTS

Fenugreek seed: the seed that is obtained from farmers' fields that are separated and cleaned from chaff, dust, and dirt. The moisture content of the seeds should be 9%. Packaging material i.e. plastic sacks, polybags etc.

Year	Capacity Utilization (%)	Rate (Rs. Per Kg)	Amount (Rs. Lakh)
1 <sup>st</sup> year	40	36	34.56
2 <sup>nd</sup> year	45	38	41.04
3 <sup>rd</sup> year	50	40	48.00

4 <sup>th</sup> year	55	42	55.44
5 <sup>th</sup> year	60	44	63.36

## MANUFACTURING PROCESS

**Raw Material Procurement:** Raw materials should be received & stored in hygienic condition. The quality of the raw material should be checked carefully.

**Vibratory pre- cleaning:** Vibratory pre-cleaning is the first step in the process of removing large and small impurities from farm produce. Pre-cleaning is a cleaning operation that removes impurities such as stones, leaves, sticks, sand, fine dust, and other contaminants before silo storage.

**Destoning:** The aim of this process is that removes stones and other particles impurities from the Fenugreek seed.

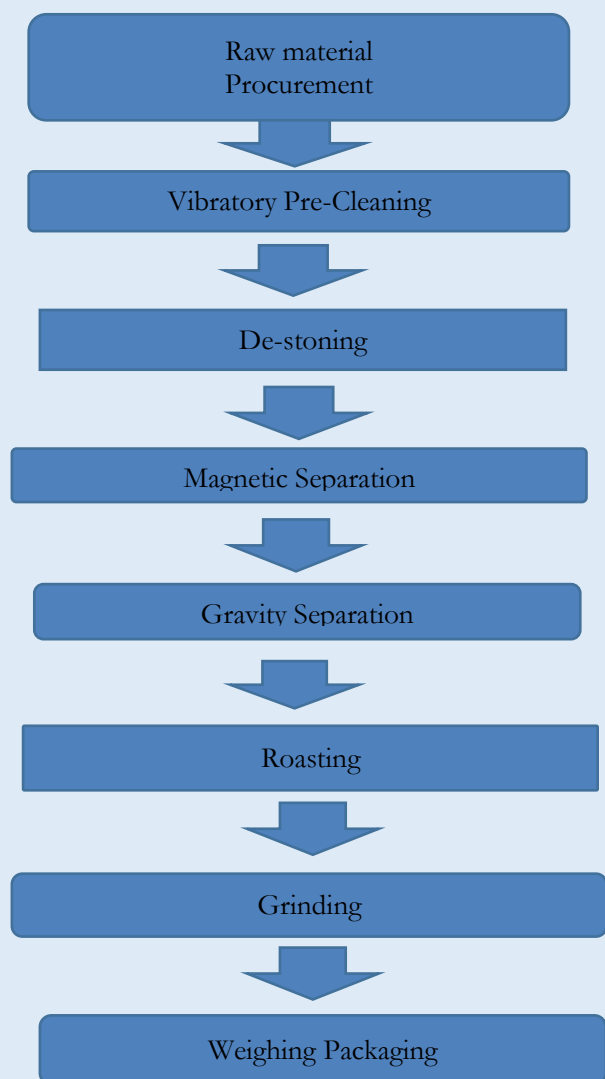
**Magnetic separation:** The Fenugreek seeds first passes by a magnetic separator that removes ferrous metal particles. It is also necessary to ensure that no metal pieces are in the finished product.

**Gravity separation:** The gravity separator separates products of same size but with difference in specific weight.

**Roasting:** After cleaning, dry roast the fenugreek seed on a low flame until it turns an achieved mild golden-brown colour. Allow it to cool, and the seeds will be ready to grind.

**Grinding:** a method of adding value to a product. After grinding, spices are more vulnerable to spoilage. Fenugreek seeds are available as whole seeds and ground powder.

**Weighing Packaging:** The packaging is done in a simple manner: the fenugreek seed powder is fed into the packaging machine's holding tank, which then weighs and fills the Fenugreek seed powder into the sacs. It simply fills the sacs to the desired weight and sews the other end. Process flow chart of preparation of fenugreek powder is given below:



# COMPUTATION OF PRODUCTION OF FENUGREEK POWDER

Items to be manufactured: Fenugreek Powder

Machine capacity per hour	100 Kg
Total working Hours	8 hrs
Machine capacity per day	800 Kg
Working days in a month	25 Days
Working days in annum	300 Days
Wastage Considered	10%
Raw material requirement	240000 Kg
Final Output per annum after wastage	216000 Kg
Final Product to be packed	in 1 Kg packet
Number of packets per annum	216000 packets

## YEAR-WISE PRODUCTION OF FENUGREEK POWDER

Production	Capacity Utilization (%)	Number of Packets (1 kg)
1 <sup>st</sup> year	40	86,400
2 <sup>nd</sup> year	45	97,200
3 <sup>rd</sup> year	50	1,08,000
4 <sup>th</sup> year	55	1,18,800
5 <sup>th</sup> year	60	1,29,600

## COMPUTATION OF SALE

Particulars	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year	5 <sup>th</sup> year
Op Stock	-	2880	3240	3600	3960
Production	86400	97200	108000	118800	129600
Less: Closing Stock	2880	3240	3600	3960	4320
Net Sale	83520	96840	107640	118440	129240
Sale Price per packet	95.00	100.00	105.00	110.00	116.00
Sale (in Lacs)	79.34	96.84	113.02	130.28	149.92

## LAND

Particulars	Units	Value (in Rs. Lakh)
Land (rent)	2500 to 3500 Sq. Ft.	0.30

## MANPOWER REQUIREMENT (PER MONTH)

Particulars	Wages Rs. Per month	No of Employees	Total Salary
Plant Operator	16000	3	48000
Supervisor	20000	1	20000
Skilled	15000	3	45000
Unskilled	7500	4	30000
Total salary per month			143000
Total annual labour charges	(in Lacs)		17.16

## UTILITY CHARGES (PER MONTH)

Particulars	Value	Description
Power connection required	16	KWH
Consumption per day	128	Units
Consumption per month	3200	Units
Rate per unit	10	Rs.
Power bill per month	32000	Rs.

## MACHINERY SPECIFICATIONS

Machine	Unit	Price
Vibrating Pre-Cleaner	1	150000
De-stoner	1	175000
Magnetic Separator	1	100000
Gravity separator	1	130000
Seed Roaster machine	1	105000
Grinding machine	1	165000
Sifting Machine	1	200000
Packaging Machine	1	380000
Material handling and others expenses (Unloading Bins, silos, bucket elevator, belt conveyors etc.)	-	350000

Note: Total Machinery cost shall be Rs 17.55 lakh including equipment's but excluding GST and Transportation Cost.

## MISCELLANEOUS FIXED ASSETS

Particulars	Price
Water supply	50000
Furniture & Fixtures	150000
Computer, printers	100000

## TOTAL COST OF PROJECT

Particulars	Amount (In Rs. Lacs)
Land & Building	Owned
Plant & Machinery	17.55
Miscellaneous Assets	2.50
Working Capital	4.34
Total	24.39

## WORKING CAPITAL CALCULATIONS

Particulars	Computation of Closing Stock & Working Capital (in Lacs)				
	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year
Finished Goods	2.14	2.51	2.89	3.30	3.75
Raw Material	1.15	1.37	1.60	1.85	2.11
Closing stock	3.29	3.88	4.49	5.15	5.87

## COMPUTATION OF WORKING CAPITAL REQUIREMENT

Traditional Method	(in Lacs)				
Particulars	Amount	Own Margin		Bank Finance	
<b>Finished Goods &amp; Raw Material</b>	<b>3.29</b>				
<b>Less: Creditors</b>	<b>0.81</b>				
Paid Stock	2.48	10%	0.25	90%	2.24
Sundry Debtors	1.85	10%	0.19	90%	1.67
	4.34		0.43		3.90
<b>MPBF</b>					<b>3.90</b>
<b>Working capital Limit Demand (from Bank)</b>					<b>3.90</b>
<b>Working Capital Margin</b>					<b>0.43</b>



## PROFITABILITY CALCULATION

Year	I	II	III	IV	V
Capacity Utilisation %	40%	45%	50%	55%	60%
<b>SALES</b>					
Gross Sale (in lakhs)					
Fenugreek Powder	79.34	96.84	113.02	130.28	149.92
Total	79.34	96.84	113.02	130.28	149.92
<b>COST OF SALES</b>					
Raw Material Consumed	34.56	41.04	48.00	55.44	63.36
Electricity Expenses	3.84	4.22	4.65	5.11	5.62
Depreciation	2.88	2.46	2.10	1.80	1.54
Wages & labour	17.16	20.59	23.68	27.23	31.32
Repair & maintenance	2.38	2.91	3.39	3.91	4.50
Packaging	3.33	4.07	4.75	5.47	6.30
Cost of Production	64.16	75.29	86.57	98.96	112.63
Add: Opening Stock /WIP	-	2.14	2.51	2.89	3.30
Less: Closing Stock /WIP	2.14	2.51	2.89	3.30	3.75
Cost of Sales	62.02	74.92	86.19	98.55	112.18
<b>GROSS PROFIT</b>	17.33	21.92	26.83	31.73	37.74
<b>GROSS PROFIT (%)</b>	21.84%	22.64%	23.74%	24.36%	25.17%
Salary to Staff	8.46	10.58	12.90	14.84	17.06
Interest on Term Loan	1.08	0.95	0.69	0.42	0.15
Interest on working Capital	0.43	0.43	0.43	0.43	0.43
Rent	3.60	4.32	5.18	6.22	7.46
Selling & adm. Exp.	1.59	2.42	3.05	3.65	4.20
Total	15.16	18.70	22.25	25.55	29.30
Net Profit	2.17	3.22	4.58	6.18	8.44
	2.73%	3.33%	4.05%	4.75%	5.63%
Taxation	-	-	-	0.38	0.85
Profit (After Tax)	2.17	3.22	4.58	5.81	7.60

## BREAK EVEN POINT ANALYSIS

Year	I	II	III	IV	V
Net Sales & Other Income	79.34	96.84	113.02	130.28	149.92
<b>Less: Op. WIP Goods</b>	-	2.14	2.51	2.89	3.30
<b>Add: CI.WIP Goods</b>	2.14	2.51	2.89	3.30	3.75
Total Sales	81.48	97.21	113.40	130.70	150.37
Variable & Semi Variable Exp.					
<b>Raw Material Consumed</b>	34.56	41.04	48.00	55.44	63.36
<b>Electricity Exp at 85%</b>	3.26	3.59	3.95	4.34	4.78
<b>Wages &amp; Salary at 60%</b>	15.37	18.70	21.95	25.24	29.03
<b>Selling &amp; administrative Expenses 80%</b>	1.27	1.94	2.44	2.92	3.36
<b>Interest on working Capital</b>	0.429211	0.429211	0.429211	0.429211	0.429211
<b>Repair &amp; Maintenance</b>	2.38	2.91	3.39	3.91	4.50
<b>Packaging</b>	3.33	4.07	4.75	5.47	6.30
Total Variable & Semi Variable Exp	60.61	62.67	84.91	97.75	111.75
Contribution	20.88	24.54	28.49	32.94	38.63
Fixed & Semi Fixed Expenses					
<b>Electricity Exp at 15%</b>	0.58	0.63	0.70	0.77	0.84
<b>Wages &amp; Salary at 40%</b>	10.25	12.47	14.63	16.83	19.35
<b>Interest on Term Loan</b>	1.08	0.95	0.69	0.42	0.15
<b>Depreciation</b>	2.88	2.46	2.10	1.80	1.54
<b>Selling &amp; administrative Expenses 20%</b>	0.32	0.48	0.61	0.73	0.84
<b>Rent</b>	3.60	4.32	5.18	6.22	7.46
<b>Total Fixed Expenses</b>	18.71	21.32	23.91	26.76	30.18
<b>Capacity Utilization (%)</b>	40	45	50	55	60
<b>Operating Profit</b>	2.17	3.22	4.58	6.18	8.44
<b>Break Even Point (%)</b>	36	39	42	45	47
<b>Break Even Sales</b>	73.02	84.46	95.18	106.16	117.51

## Addresses of Raw Material and Plant Machinery Suppliers

- M/s. Modern Mechanical Works  
1501, Qsim Jon Street,  
Delhi-110006.
- M/s. Associated Instrument Manufacturers Pvt. Ltd.  
26, Asaf Ali Road,  
New Delhi-110006.
- M/s. Amar Engineering works  
W-28, Raja Garden,  
New Delhi-110027.
- M/s. Emkay (India) Trading Co.  
286, Garhiaya, Jama Masjid,  
New Delhi-110006.
- M/s. Rank and Co.  
A-95/3, Wazirpur Industrial Estate,  
New Delhi-110052.
- M/s. Juta Biotech  
215, Syndicate House,  
3, Old Rohtak Road, Inderlok,  
Delhi-110035.
- M/s. International Machinery Manufacturing Co.  
3259, Farhat Ullah Street,  
Kucha Pandit,  
Lal Kuan,  
Delhi-110006
- M/s. Brintex Sales Corporation  
Electrical Division,  
55, Tagore Garden,  
New Delhi-110027
- M/s. Harrisons Pharma Machinery (P) Ltd.  
4648/21, Shedumal Building,  
Darya Ganj,  
New Delhi-110002
- M/s. Techmac Engineering Works  
310, Usha Kiran Building,  
Commercial Complex,  
Azadpur, Delhi-110033.
- M/s. Bio Products Pvt. Ltd.  
221, Patparganj Industrial Area,  
Delhi.
- M/s. Engineers Syndicate  
A-2, F.F. Ring Road,  
Rajouri Garden,  
New Delhi-110027.
- M/s. Co-operative Drug Factory of Ranikhet  
Ranikhet,  
Uttarakhand

## References

Shikakai Powder Making: <https://www.youtube.com/watch?v=G8NSYyHqfNQ>  
Tulsi Powder Making: [https://www.youtube.com/watch?v=Fr\\_IRhIMTMw](https://www.youtube.com/watch?v=Fr_IRhIMTMw)  
Mulethi Powder Making: <https://www.youtube.com/watch?v=VDIe3O10UU8>  
Powder making: <https://www.youtube.com/watch?v=PaPa4QoGFG0>

## **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.

### **DISCLAIMER:**

This is an indicative illustration of project profile; the above calculation can vary with the locations. 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.

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