MEDICINAL GRADE OIL: MUSTARD OIL

1 INTRODUCTION

Consumption of edible oil is substantial throughout the country. All Indian households use it every day. Various types of edible oils are available in the country e.g. Groundnut, cottonseed, rapeseed, sunflower, mustard etc.

Edible oils are made from respective oil seeds by extraction process and there are some national as well as regional brands. The North-East region of the country including Meghalaya consumes mustard oil in large quantity.

2 PRODUCT AND ITS APPLICATION

2.1 Applications

Edible oil is an integral part of the Indian palate since long. India is perhaps the largest producer and consumer of different types of edible oils. Preference for the type of edible oil differs from state to state, e.g. People from Western India prefer groundnut or cottonseed

oil whereas North-East States like mustard oil. Hence this note is confined to mustard oil.

2.2 Compliances and quality standards

Compliance with PFA Act is necessary whereas registration under AGMARK is advisable. BIS has specified quality standards vide 546 IS 546:1975.

3. DESIRED QUALIFICATION FOR PROMOTER

The promoter should ideally be having formal qualifications in the field of food processing. Short term training in relevant field would also do.

4. INDUSTRY OUTLOOK/TREND

With changing lifestyle and consciousness about better healthcare, use of edible oil with low fat & calorie are the modern trend. These agents are gaining popularity as nowadays most people prefer natural products.

5. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY

Due to peculiar food habits and preparation methods, Indians use large quantities of edible oils every day. With growing population, demand is increasing every year and the country is importing semi-processed edible oils since long.
As per our preliminary survey, Mustard oil is preferred as a cooking medium by the people of Meghalaya. As per one estimate, there are some oil mills in Meghalaya but even then mustard seeds are sold to other states and mustard oil produced in other states is sold in Meghalaya in ample quantity. Thus, good quality mustard oil produced locally can be sold in the market.

6. RAW MATERIAL REQUIREMENTS

The all-important raw material shall be mustard seeds. The average recovery of oil is considered to be 30%. Hence to produce 72 tons of edible oil per year at 100% capacity utilisation, mustard seeds to the extent of 240 tons shall be required. In view of production of mustard seeds in excess of 75,000 tons every year, no difficulty is envisaged in procurement.

Other materials in small quantities like additives and purifying agents shall be available easily. Packing materials like tins, jars or plastic pouches shall be required for which prior arrangement is advisable.

7. MANUFACTURING PROCESS

The process of manufacture is well established and conventional. To begin with, dry mustard seeds are fed to Table Ghani or oil extractor wherein about 90% of the oil is extracted.

Further processing in expeller results in additional extraction of oil. Liquid oil and solid portion is then separated in filters. The solid portion known as oil cake is sold as cattle feed. Edible oil is packed either in tins, jars or food grade plastic pouches.

The oil contents depend upon quality of seeds but the average recovery of oil from seeds is in the range of 30% to 34%.

8. MANPOWER REQUIREMENTS

The manpower requirement is estimated as below

Error: Reference source not foundParticulars	**Nos.**	**Monthly Salary (Rs)**	**Total Monthly Salary (Rs)**
Skilled Worker	2	2,070	4,140
Semi-skilled Workers	2	1,725	3,450
Helpers	2	1,380	2,760
Salesman	1	2,875	2,875
		Total	**13,225**

9. IMPLEMENTATION SCHEDULE

Sr. No	Activity	Time
1	Preparation of Project profile	
2	E M Registration & approval from Director of Ayurveda	One month
3	Financial/Loan from Banker or Financial Institutions	Two months
4	Power connection/Building construction Six months	One month
5	Machinery procurement & Trial run.	Two months
6	Recruitment of Staff & Labour	One month
7	Actual commercial production	One month

10. COST OF PROJECT

The total cost of project is estimated as below:

Sr. No.	Error: Reference source not foundP articulars	Rs in lakhs
1	Land and Building	5.50
2	Plant and Machinery	2.70
3	Miscellaneous Assets	0.55
4	P&P Expenses	0.40
5	Contingencies @ 10% on Land & Building and Plant and Machinery	0.80
6	Working Capital Margin	1.35
	Total	**11.30**

11. MEANS OF FINANCE

Sr. No.	Error: Reference source not foundParticulars	Rs in lakhs
1	Promoters' Contribution @ 25 %	2.80
2	Loan from Bank/FI	8.50
3	**Total**	**11.30**

4	Debt Equity Ratio	1.96 : 1
5	Promoters' Contribution	25%

12. WORKING CAPITAL CALCULATION

Sr. No.	Particulars	Duration	Estimated cost (Rs. Lacs)
1	Raw materials/ Packing materials	1 month	**1.70**
2	Working expenses	1 month	**1.00**
3	Finished goods	15 days	**1.00**
4	Receivable	7 days	**0.80**
		Total	**4.50**

13. LIST OF MACHINERY REQUIRED

Keeping in mind, the demand potential and economic viability of the project, it is advisable to install machinery to produce 72 tons of mustard oil every year at 100%capacity. In this industry, plant is operated for about 210-220 days per year due to seasonal availability of oil seeds.

To have this rated production capacity, following machines are needed.

Sr. No.	Error: Reference source not foundParticulars	Qty.	Price (Rs)
1	Table Ghani	1	70,000
2	Oil Expellers	2	80,000
3	Filter Press	1	60,000
4	Other Support Equipments, electric motor and testing facilities	--	60,000
		Total	**2,70,000**

Indicative Sources:

- Royal pack industries, Goregaon, Mumbai
- Ridhdhi Pharma machineries, Andheri (East), Mumbai
- Ambica Machineries, Vatva, Ahmedabad

- ARV Engineering, Thane

14. PROFITABILITY CALCULATIONS

a) Production Capacity and Build up

Production capacity at 100% would be 72 tons of mustard oil considering working of about 220-230 days every year. It is assumed that the plant would be operated at 60% and 75% respectively during first 2 years.

b) Sales Revenue at 100%

Error: Reference source not foundProduct	**Qty. (Tons)**	**Selling Price (Rs)**	**Sales (Rs. In lakhs)**
Mustard Oil	72	78,000	56.16
De-oiled Cake	80	6,000	4.80
		Total	**60.96**

Profitability Projections

Particulars	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**
Capacity utilisation (%)	**60**	**75**	**80**	**80**	**80**
Sales	36.60	45.75	48.80	48.80	48.80
Expenses	28.80	37.00	39.00	39.00	39.00
Gross profit	7.80	8.75	9.80	9.80	9.80
Profit to Sales (%)	21.00	19.00	20.00	20.00	20.00

Note: The profitability basis and projections are indicative and on approximate basis only.

Key Assumptions and The basis of profitability calculation:

As mentioned above, installed capacity of 72 tons of Mustard oil considering working of about 220-230 days every year has been assumed. The capacity build up is taken considering the sales related from OEM/ Retail network that is built up by the entrepreneur based on his prior experience in the industry.

This project has to have different categories of Mustard oil. The sales prices of these products vary. Accordingly an average sales price of Rs. 78000/-/- per unit has been assumed. Further for De-oiled Cake the average sales price is assumed @ 6000/- per ton.The cost of production, inclusive of major cost heads such as raw materials, labour & power has been considered based on prevailing industry standards and assumed @ 70 %.

On indicative basis, power Costs are considered at Rs 5/- per Kwh and fuel cost is considered at Rs. 50/- per litre. The depreciation of plant is taken at 10-12 % and Interest costs are taken at 12 % depending on type of industry. All these are wherever applicable.

It may be kindly noted that basis / assumptions for such kind and size of the projects in a profile can be on indicative basis only. At the same time it does provide a reasonably accurate scenario.

15. BREAKEVEN ANALYSES

FC X 100: 11.00 X 100 = 1100

FC + Profit : 12.00 +9.00=

BEP = 52.00 %

16. STATUTORY/ GOVERNMENT APPROVALS

Generally quality of such oils are fully dependent on the quality of raw materials and process of manufacture. The quality control process of Herbal / Natural formulations can be contained from 'Pharmacopica Laboratory of India Medicine, near ALTC, Ghaziabad (U.P)'. The products are to be manufactured as per Indian system of medicines of Ministry of Health. Provisions of Drugs & Cosmetics Act apply. 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. Promoter has to take approval from pollution control board.

17. BACKWARD AND FORWARD INTEGRATION

As forward integration, Entrepreneur may think of going for the production of newer dosage forms like spray.

18. TRAINING CENTERS/COURSES

For Herbal & allied industry training and short term courses may be availed from the Institutions of Ayurvedic Research & Education in respective states. Also EDP centers.

Udyamimitra portal (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.

Source:- Udyami Mitra/Sidbi