PROJECT REPORT

Of

GROUNDNUT OIL

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Groundnut Unit**.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

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PROJECT REPORT

ON

GROUNDNUT OIL

Groundnut oil production in India is financially a profitable venture with huge export potential. In addition, you can initiate the groundnut oil processing operation as small and medium scale basis according to the desired output and project cost. Initiating a groundnut oil production business requires feasibility study preparation, procurement and installation of machines in the appropriate accommodation, recruitment of personnel and project commercial take-off. One metric ton of groundnut seed produces an average of 420 LTR of groundnut oil, 420Kg of groundnut cake, and 40Kg of groundnut sludge.

Groundnut Oil Production Market Potential

Groundnuts are a popular source of food throughout the world. Groundnut oil is used for cooking food and as a shortening or as a base for confectioneries and they can be used to make peanut butter. Groundnut oil ranks at the top among edible oils exported from India. It is a premium oil and its cost is also high. Most other edible oils are priced lower than groundnut oil. Groundnut oil is available in the

market in refined and filtered forms. Although filtered oils are nutritionally superior in quality.

The size of the global groundnut oil market is about 188,000 MT, during FY2013. Additionally, India exports about 16,500 MT of groundnut. With liberal export policies and a good domestic crop, exports are expected to exceed 25,000 MT in FY 2015.

Groundnut Oil Production License & Registration

In establishing a groundnut oil production unit, you will need to obtain several different license and registration from different Government authority.

- Company Registration with ROC
- Trade License
- *SSI Registration*
- Factory License
- *Food Operator License from* fssai
- *BIS Certification*
- 'No Objection' from Pollution Control Board
- AGMARK Certification
- Fire License

The Food Standards and Safety Rules, 2011, and rules made under IS 544: 1968 permit additions of antioxidants in groundnut oil for a higher shelf life of the oil. However, under the scheme of labeling of environment-friendly products, the presence of antioxidants within a prescribed limit is a requirement as per notification of the Ministry of Environment and Forests. These are the common license and certification requirement. Check with your local DIC authority about any other required formalities.

Finance For Groundnut Oil Production Unit

Alike any manufacturing industry groundnut oil production business also involves two types of cost factors. One is fixed capital and another one is working capital. A refinance scheme facility is available with NABARD. For fixed capital, you will need to apply term loan or mortgage loan. For working capital requirement, you can go for cash credit or the overdraft facility with your nearby bank or any financial institution.

Groundnut Oil Production Unit Setup & Machinery

Selecting a right location for factory operation is an important aspect. Major required utilities are water and electricity. Easy availability of transport facility and labour is important. Create a floor plan indicating specific space for raw material storage, finished products storage, production unit area, administrative work space, store room for oil cakes and space for miscellaneous usage. Generally,

you will need to have 0.50 acre of non agricultural land for establishing an improved groundnut oil expelling unit. Here, you can instal plant with a processing capacity of 240 MT /annum. Additionally, the land must come with proper elevation.

Machinery required as follows:

- Pre-cleaner for cleaning the oil seeds
- Cans and trays for handling oil seeds
- Batch type solar dryer
- Tapering screw types mechanical oil expeller
- Filter press
- Steel drums for storing edible oil and sedimentation of impurities
- Weighing balance
- Semiautomatic bottle filling machine
- Molded polycarbonate bottle capping cum sealing machine

If you want to go for pouch packing, you will need to have automatic pouch filling and sealing machine.

Raw Material For Groundnut Oil Production

The principal raw material required for the production of groundnut oil is groundnut seed. And you can procure this locally. The seed gives 44.5-50% oil, 50-55% meal. However, other required raw materials are caustic soda, bleaching earth, and packaging consumables.

Groundnut Oil Production Process & Technology

Basically, you can divide the edible oil technology into two groups. These are mechanical pressing and solvent extraction. For oilseeds with high oil content such as groundnut, you will need to apply first mechanical pressing. Here, you can extract over 85% of the oil. However, you can extract the remaining oil in the expeller cake with a solvent. As per mechanical pressing technology, you can divide the groundnut oil production process into three stages. These are seed preparation, pressing and crude oil refining.

Storage → Cleaning → Dehulling → Grinding or rolling → Heating → Pressing oil cakes → Refining impurities → Purified Edible Oil

1. Cleaning

The first step in preparing oil seeds for oil extraction is to clean them. Clean properly so that the oil is not contaminated with foreign materials. Therefore, it helps to proceed the extraction process as efficiently as possible. During the process, carefully inspect the seeds

to remove stones, sand, dirt and spoilt seeds. Additionally, you can use dry screening technique to remove all material that is over or undersized. Sometimes washing is also resorted to but it must be avoided as the plant tissue will have to be dried at a later stage.

2. Dehulling

During the process, remove the outer seed coat of the oil seed. Generally, you can use a power operated dehuller for the operation. Removal of the outer seed coat is necessary as it does not contain oil and inclusion of it in the unit operations makes the oil extraction process less efficient. Some seeds such as groundnut can be shelled by hand. Some other such as sunflower seeds are usually hulled in machines. Still others, like safflower and colza, cannot be shelled.

3. Grinding or rolling

Seed is not usually pressed whole since oil extraction is more efficient if the seed is in smaller particles. Herein lies the relevance of the grinding process. Grinding is the process for reducing the particle size. Additionally, you can use small motor powered hammer mills for the unit operation. Another alternate process used for reduction of particle size is rolling the oilseeds to produce flakes for oil extraction. Many large-scale commercial plants find this the most effective approach. Additionally, with large oilseeds, it may be necessary to grind the seed first, and then put the pieces through the flaking rollers.

4. Heating

It is the final step for preparing the raw material for oil extraction. Heating leads to increased oil yield. Heating helps in killing those enzymes present in the plant tissue which have a deteriorating effect on oil quality. Moreover, if you don't use the oilseed cake for feed or feed, heating is useful as it increases protein availability. Sometimes, you can press the oil bearing material without heating it. Oil extracted in this way is called cold press oil.

5. Pressing

During processing, press the conditioned oil seeds/oil bearing material using a lever press, hydraulic press or a mechanical expeller to remove the oil.

6. Refining

When you use the lower quality feedstock for oil extraction, you can use this process. Basically, it helps in removing undesirable cloudiness, color, and flavor from the extracted oil.

In groundnut oil production, mentioning the shelf life on packets or labels is mandatory.

Financial Analysis

COST OF PROJECT

S.NO.	PARTICULARS	TOTAL COST	MARGIN 25%	LOAN
1	Land & Building		0.00	own
2	Plant and Machinery	5.90	1.48	4.43
3	Furniture & Fixture	0.10	0.03	0.08
4	Contingencies	0.75	0.19	0.56
5	Pre and Post operative and	0.20	0.20	0.00
6	Margin for Working Capital	41.13	10.36	30.77
	Total	**48.08**	12.25	35.83

MEANS OF FINANCE

S.NO.	PARTICULARS		AMOUNT
1	Own Contribution		12.25
2	Term Loan		5.06
3	Working capital		30.77
	Total		**48.08**
		DE Ratio	2.92

PRODUCTION CAPACITY(Per annum)

S.NO.	PARTICULARS	Production/year	Weight/unit(gms)	Quantity(Tonnes)
1	Groundnut Oil			84.00
	At 100% Capacity			
	Total			84.00

TOTAL CAPITAL INVESTMENT			Rs.
1	Total Fixed Capital		6.95
2	Working Capital for 3 Months		41.13
	Total		48.08

FIXED CAPITAL

(i)	Land and building			Amount(In Rs.)
	3000 sq Ft area			own
	constructed area1500 sq mt			
	(Factory shed, godown, office)			

(ii) Machinery and Equipment

S.no.	Description	Qty. nos.	Price/unit	Amount(In Rs.)
1	Pre-cleaner for cleaning the oil seeds			10,000.00
2	Cans and trays for handling oil seeds			15,000.00
3	Batch type solar dryer			35,000
4	Tapering screw types mechanical oil expeller			350,000
5	Filter press			125,000
6	Steel drums for storing edible oil and sedimentation of impurities			15,000
7	Weighing balance			5,000
8	Semiautomatic bottle filling machine			35,000.00
				590000.00
	Total	*In Lac*		5.90
Pre and Post-Operative Expenses				0.20
Furniture and Fixture/ Office Equipment				0.10
Contingencies				0.75
	Total Fixed Capital			**6.95**

	TOTAL WORKING CAPITAL 1.5 MONTHS				Rs.
1	Salary and Wages				197,400.00
2	Raw Material				15,700,000.00
3	Utilities				80,797.20
4	Other selling and administrative Expenses				474,800.00
	Total				164.53
	Working Capital for 1.5 months		Rs in Lakhs		41.13

B. **WORKING CAPITAL**

(i) **Staff and Labour**

S.No.	Designation	No.	Salary(Rs.)		Total(In. Rs.)
1	Skilled Workers	2	6,000.00		12,000.00
2	Semi-skilled Workers	2	4,500.00		9,000.00
3	Helpers	1	2,500.00		2,500.00
		5			**23,500.00**
					282,000.00
	Total Annual Salary	**For 210 days**	**70%**		**197,400.00**

(ii) Raw Materials

No of Days 210
Installed capacity 240 tonnes
Cap Utilisation 100%

S.No.	Particulrs	Rate(Rs)	Quantity(Tonne)		Total(In. Rs.)
1	Groundnut seeds	65,000.00	240.00		15,600,000.00
2	Packing materials like tins, jars or plastic pouches				100,000.00
	Total				**15,700,000.00**

(iii) Utilities

CALCULATION OF POWER EXPENSE			
Total Power Load Required		7.5	HP
No of Days		210	
No of Hours		8	
Total Power Expense		9399.6	KWH
(i) Power Supply from UPPCL	100%	9400	
COST OF POWER			
(I) Cost of power from UPPCL		65,797.20	
(@7/- per Unit)			
Add : Fixed Cost		15,000.00	
Add : Lubricants		-	
Total Annual Power Expense		**80,797.20**	

(iv) Other Expenses

S.No.	Particulars		Amount(In.Rs)
1	Rent		0.00
2	Repair and Maintenance		15000.00
3	Postage and Stationery		5000.00
4	Telephone Charges		5000.00
5	Transporatation and Freight		20000.00
6	Insurance		10000.00
7	Sales Expenses	2% of Sales	194800.00
8	Other Maufacturing Expenses		25000.00
9	Miscellaneous Expenses		200000.00
	Total		474800.00

(i) Cost of Production

S.No.	Particulars		In. Rs.
1	Total Recurring Expenditure		164.53
2	Depreciation on Plant and Machinery @ 15%		0.89
3	Depreciation of Furniture/Fixture & Office Equipment @ 10 %		0.01
4	Finance Cost		4.30
	TOTAL COST OF PRODUCTION	(in Lacs)	169.72

(ii) Turnover (per annum)

S.No.	Particulars	Qty(Nos.)MT	Rate (in Rs)	In. Rs.
1	Groundnut Oil	204	90,000.00	18,360,000.00
	groundnut seeds will yield 85% of Oil			
	De oiled Cake	80	14,000.00	1,120,000.00
	TOTAL TURNOVER			19,480,000.00
		(In Lacs)		194.80

(ii)	**Profit [ii-i]**	(In Lacs)		**25.08**
	At 100% capacity utilization			
	Percentage profit on sales			**12.87%**

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