

## 1 SOYA PANEER

### 1.1 Introduction

Soya bean is a leguminous crop and is rich in proteins. Many value-added products are made from it like milk, sauce, paneer etc. Soya products are increasingly becoming popular especially amongst health conscious people. This product has potential in states like Maharashtra, MP, and Gujarat etc. But this note considers Madhya Pradesh as the preferred location.

Soya paneer is made from soya milk which is a rich source of high quality proteins and vitamins. Paneer is made by coagulating soya bean milk. It is white & soft.

### 1.2 Objective

The primary objective of the model report is to facilitate the entrepreneurs in understanding the importance of setting up unit of Soya panner. This model report will serve as guidance to the entrepreneurs on starting up such a new project and basic technical knowledge for setting up such a facility.

### 1.3 Raw Material Availability

The most important raw material will be good quality Soybeans. Total production of soyabeans in MP in year 2004-05 is 37.47 lakh MT. Dewas district reportedly produces around 3.16 lakh tonnes of Soya beans followed by Ujjain (2.59 lakh MT), Shajapur (2.51lakh MT), Indore (2.31 lakh MT) and Rajgarh (2.3 lakh MT). Citric acid will be required in small quantity.

### 1.4 Market Opportunities

Soya beans are very nutritious and their acceptance is increasing rapidly. Soya sauce, soya milk and soya bean edible oil are some of the examples. With increasing health awareness, soya-based products are preferred. Yet another favourable aspect of soya paneer would be its price. As against the price of milk paneer which is in excess of Rs.130/- per kg; soya paneer can be offered at half the price. This would be a major feature. At the same time, it is still a new concept and soya paneer is gradually being accepted by the consumers. Hence adequate marketing efforts coupled with attractive commission to the middlemen shall have to be offered. Nearby semi-urban and urban locations should be targeted.

## 1.5 Project description

### 1.5.1 Applications

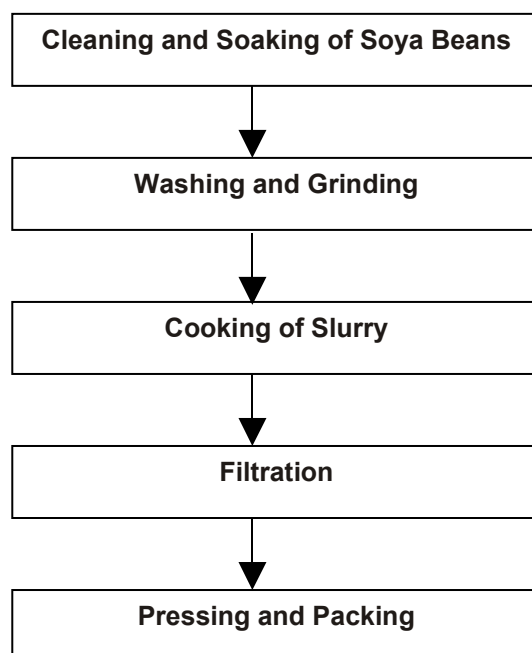
Paneer is one of the popular milk-based products. Many vegetarian preparations are made from it. Milk paneer is an established product but it is a costly product. Soya paneer would be an ideal substitute in terms of price as well as nutritious values.

### 1.5.2 Capacity of the Project

Rated production capacity of 26 tonnes considering 350 working days is suggested.

### 1.5.3 Manufacturing process

Soya bean milk will not be available easily and hence it is contemplated to produce it in-house. Good quality soya beans shall have to be cleaned and then soaked in water for around 4 hours. Then they are washed in warm water before grinding them in water. Quantity of water is 7-8 times more than the beans with some hot water poured in the grinder through a hopper during the process. Grinding time is about 25 minutes. Then the slurry is cooked in grinder-cum-cooker for about 3 minutes at a temperature of around 120°C. Then this slurry is filtered through muslin cloth to obtain soya milk. Small quantity of citric acid is added to the milk and this coagulated material is pressed in the mechanical press for about half an hour which removes bulk of the water and finally paneer is packed. The process flow chart is as under:



## 1.6 Project component and cost

Major components of the projects and their costs are described in the table hereunder:

Particulars	Unit	Qty	Cost/unit	Total
<b>LAND &amp; BUILDING</b>				<b>5.63</b>
Land	SqM	200	250.00	0.50
<b>Land Development</b>				
Land Area		200	500.00	1.00
<b>Building</b>				
<b>Production Block</b>				
Main Production Area	SqM	40	5,000.00	2.00
Misc Handling Area	SqM	35	5,000.00	1.75
Contingencies		10%		0.38
<b>PLANT &amp; MACHINERY</b>				<b>1.98</b>
Filter Press		1	10,000.00	0.10
Grinder cum cooker		1	80,000.00	0.80
Gas fired furnace		1	15,000.00	0.15
Deep freezer		1	35,000.00	0.35
SS vessels and weighing scales	LS	1	30,000.00	0.30
Contingencies		20%		0.28
<b>MISCELLANEOUS FIXED ASSETS</b>				<b>0.30</b>
Miscellaneous assets	LS	1	25,000	0.25
Contingencies		20%		0.05
<b>PRE-OPERATIVE EXPENSES</b>				<b>0.94</b>
Establishment		1	39,000	0.39
Interest etc		1	25,000	0.25
Security Deposits		1	30,000	0.30
<b>TOTAL</b>				<b>8.85</b>

## 1.7 Plant and Machinery

The total cost of plant and machinery mentioned above in the project cost is Rs. 1.98 lakhs.

## 1.8 Building

The main production block will cost around Rs. 4.13 lakhs.

## 1.9 Miscellaneous Assets

A provision of Rs. 30000/- would take care of all the requirements.

## 1.10 Preliminary & Pre-operative Expenses

A provision of Rs. 9400/- would take care of pre-production expenses like establishment, professional charges, security deposits etc.

## 1.11 Working Capital Assessment

ITEMS	Year 1	Year 3	Year 5
STOCK OF RAW MATERIAL & PACKING MATERIAL	1.24	1.65	1.65
SUNDRY DEBTORS	4.30	5.73	5.73
<b>TOTAL</b>	<b>5.54</b>	<b>7.38</b>	<b>7.38</b>
<b>MARGIN</b>	1.38	1.85	1.85
<b>MPBF</b>	4.15	5.54	5.54
<b>INTEREST ON WC</b>	0.46	0.61	0.61

### 1.12 Means of Finance

<b>EQUITY CAPITAL</b>			25.00%	<b>2.56</b>
<b>MOFPI SUBSIDY</b>	25%	50.00	25.00%	<b>2.56</b>
<b>TERM LOAN</b>				
FINANANCIAL INSTITUTIONS		10.00%	50.00%	<b>5.11</b>
<i>-Payable half yearly Installments</i>	10	0.50		
<b>TOTAL</b>			100%	<b>10.23</b>

### 1.13 Cash flow statement

PARTICULARS	Year 1	Year 3	Year 5	Year 7
<b>SOURCES OF FUNDS</b>				
EQUITY CAPITAL	-	-	-	-
SUBSIDY				
NET PROFIT	1.01	2.86	2.36	1.84
(INTEREST ADDED BACK)				
DEPRECIATION	0.39	0.39	0.39	0.39
PRELIMINARY EXP.W/O	0.13	0.13	0.13	0.13
INCREASE IN TERM LOAN	-	-	-	-
INCREASE IN BANK BORROWINGS-WC	4.15	0.83	-	-
<b>TOTAL</b>	<b>5.68</b>	<b>4.22</b>	<b>2.89</b>	<b>2.36</b>

### 1.14 Projected balance sheet

PARTICULARS	Year 1	Year 3	Year 5	Year 7
<b>LIABILITIES</b>				
EQUITY CAPITAL	2.56	2.56	2.56	2.56
RESERVES & SURPLUS	2.60	5.16	8.58	11.31
TERM LOAN	4.61	2.61	0.61	-
BANK BORROWINGS-WC	<b>4.15</b>	<b>5.54</b>	<b>5.54</b>	5.54
<b>TOTAL</b>	<b>13.92</b>	<b>15.87</b>	<b>17.29</b>	<b>19.40</b>

### 1.15 Profitability

Particulars	Year 1	Year 3	Year 5	Year 7
<b>INCOME</b>	15.75	21.00	21.00	21.00
<b>EXPENDITURE</b>	14.22	17.61	18.11	18.64
<b>VARIABLE</b>	8.32	10.84	10.77	10.70
<b>FIXED</b>	5.90	6.77	7.34	7.94
<b>GROSS PROFIT</b>	1.53	3.39	2.89	2.36
<b>PROFIT BEFORE TAX</b>	0.04	1.92	1.62	1.23
<b>RETAINED PROFIT</b>	0.04	1.92	1.62	1.23

### 1.16 Key Indicators

NET PRESENT VALUE at current Inflation Rs. in lakhs)	13.77
INTERNAL RATE OF RETURN %	29.76
AVERAGE DSCR	1.67
BREAK EVEN POINT %	88.07
PAY BACK PERIOD ( YEARS)	4.30

### 1.17 Manpower Requirement

PARTICULARS		NO.
SUPERVISORY STAFF		1
WORKERS		
	Production Supervisors	2
	Semi-Skilled Labour	4
	Salesman	1

### 1.18 Assumptions

Project & Financing			
Contingencies on Building			10%
Contingencies on Equipment			20%
Term Loan			50%
Rate of Interest on Term Loan			10%
Subsidy Considered	Subject to ceiling		25%
Expected time of Installation		Months	2
Moratorium		Months	6
CAPACITY			
Rated Capacity Per Annum	90% of Installed capacity	TPA	30
Number of Operational Days	DAYS		350
Working Hours Per day	Hrs		16
CAPACITY UTILIZATION			
Year I			75%
Year II			85%
Year III			100%
SALES PRICE			
W S Price			70000
OTHER EXPENSE			
Commission			10.0%
Marketing Expenses			2.5%
POWER			
Connected Load	HP		8
DEPRICIATION AS PER COMPANY'S ACT			
BUILDING			3.34%
PLANT & MACHINERY			10.34%
MISC. FIXED ASSETS			7.07%
LAND & SITE DEVELOPMENT			1.63%
MAINTENANCE			
BUILDING			1.00%
PLANT & MACHINERY			3.00%
MISC. FIXED ASSETS			2.00%
LAND & SITE DEVELOPMENT			1.00%

### 1.19 Sources of technology

- De Leval Pvt. Ltd., A-3, Abhimanshree Society,

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Pashan Road, Pune-411008, Tel. No. 25675881/2, Fax: 25675916

- Foodmac Engg., Pvt. Ltd., 37038, Sector II,  
Parwanoo-173220(HP). Tel No. 233294/5, Fax: 233296
- Sahyog Steel Fabrications, 28, Bhojrajpara, Gondal-360311.  
Tel No. 224075
- Milkcraft Projects and Consultants Pvt. Ltd. , A-417,  
Kalkaji Double Storey, New Delhi-110019. Tel No. 26473112

**The actual cost of project may deviate on change of any of the assumptions.**