

## 1 SOYA SAUCE BREWING

### 1.1 Introduction

Soya bean is a leguminous crop and is rich in proteins. Many value-added products are made from it like milk, paneer, cheese and sauce. Soya products are increasingly becoming popular especially amongst health-conscious people. Soya sauce is used as a taste enhancer as it has a typical bitter-sour and sweet taste as well as flavour. The preferred locations are Gujarat, MP, Maharashtra etc. But this note considers Madhya Pradesh as the prospective location since market for the soya sauce is consistently increasing in the state.

### 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 sauce brewing, technology and financial parameters of various components for preparation and submission of project proposal to bank for sanction of long term loan. 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 de-fatted soya flour. 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 (2.51 lakh MT), Indore (2.31 lakh MT) and Rajgarh (2.3 lakh MT). Citric acid will be required in small quantity.

Generally, the proportion of flour and water is 1:1. Other ingredients like salt, baking soda, vinegar, preservatives etc. could be procured easily as the requirement will not be much.

#### PROD. (000 MT, 2003-04)

ANUPPUR	0.70
ASHOKNAGAR	44.40
BALAGHAT	0.20
BARWANI	19.20
BETUL	136.70
BHOPAL	92.00
BURHANPUR	7.60
CHHATARPUR	11.70
CHHINDWARA	158.70
DATIA	0.50
DEWAS	384.10
DHAR	260.80
DINDORI	3.20
GUNA	130.70
GWALIOR	6.60
HARDA	202.00

HOSHANGABAD	205.50
INDORE	235.50
JABALPUR	0.90
JHABUA	22.40
KATNI	0.10
KHANDWA	98.30
KHARGONE	45.30
MANDLA	0.20
MANDSAUR	211.70
MORENA	0.20
NARSINGHPUR	117.60
NEEMUCH	122.60
PANNA	0.20
RAISEN	67.40
RAJGARH	286.40
RATLAM	181.90
REWA	8.20
SAGAR	160.80
SATNA	5.70
SEHORE	331.40
SEONI	84.30
SHAHDOL	0.70
SHAJAPUR	303.60
SHEOPUR KALAN	34.10
SHIVPURI	81.20
SIDHI	0.10
TIKAMGARH	42.60
UJJAIN	396.00
VIDISHA	106.90

#### 1.4 Market Opportunities

Market for soya-based products including soya sauce is in urban and semi-urban areas and while selecting the location of the plant, this aspect has to be kept in mind. Domestic use of soya sauce is limited to very few Indian households but restaurants, clubs, caterers, star hotels are major consumers. Since regular use of soya sauce is still limited to the top-end of the society, the product has to be sold through departmental stores, shopping malls and super markets. Marketing shall be very crucial and hence before finalising the project, a detailed market survey of the region has to be undertaken.

#### 1.5 Project description

##### 1.5.1 Applications

Soya sauce is used as taste and flavour enhancer with certain non-vegetarian, Chinese and western food varieties. It is prepared from de-fatted soya bean flour by hydrolysis process. It is also a rich source of proteins.

##### 1.5.2 Capacity of the Project

Total capacity of the unit is 50 MT per annum.

### 1.5.3 Manufacturing Process

The manufacturing process is simple. De-fatted soya flour is processed by using hydrolysis process. Flour and water along with other ingredients like salt, baking soda, vinegar, preservatives etc. are mixed homogenously to form a semi-liquid or paste-type mixture and it is passed through filter sieves to remove impurities. This mixture is then taken to SS neutralisation tanks and kept for about 2 hours before packing.

### 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>6.63</b>
Land	SqM	150	250.00	0.38
<b>Land Development</b>				
Land Area		150	500.00	0.75
<b>Building</b>				
<b>Production Block</b>				
Buildup Area	SqM	100	5,000.00	5.00
Contingencies		10%		0.50
<b>PLANT &amp; MACHINERY</b>				<b>6.84</b>
SS tanks with filter		2	60,000.00	1.20
SS collection and neutralization tank		4	70,000.00	2.80
Bottle washing and filling		1	70,000.00	0.70
Weighing scales		2	50,000.00	1.00
Contingencies		20%		1.14
<b>MISCELLANEOUS FIXED ASSETS</b>				<b>2.40</b>
Misc Assets	LS	1	200,000	2.00
Contingencies		20%		0.40
<b>PRE-OPERATIVE EXPENSES</b>				<b>2.14</b>
Establishment		1	54,000	0.54
Interest & Others		1	40,000	0.40
Security Deposits		1	120,000	1.20
<b>TOTAL</b>				<b>18.01</b>

The cost of the various components will depend on the location of the project. Item wise assumptions are as under:

#### 1.6.1 Plant and Machinery

The main machineries are walk in coolers, fermentation tanks, tray or tunnel drier, pasteurizer, plate freezer, packing line. The total cost of plant and machinery is Rs. 6.84 lakhs.

#### 1.6.2 Building

The main production block will cost around Rs. 5.50 lakhs.

### 1.6.3 Miscellaneous Assets

A provision of Rs. 2.40 lakhs would take care of all the requirements.

### 1.6.4 Preliminary & Pre-operative Expenses

A provision of Rs. 2.14 lakhs would take care of pre-production expenses like establishment, professional charges, security deposits etc.

### 1.6.5 Working Capital Assessment

ITEMS	Year 1	Year 3	Year 5
STOCK OF RAW MATERIAL & PACKING MATERIAL	0.97	1.49	1.49
SUNDRY DEBTORS	3.66	5.63	5.63
<b>TOTAL</b>	<b>4.63</b>	<b>7.12</b>	<b>7.12</b>
<b>MARGIN</b>	1.16	1.78	1.78
<b>MPBF</b>	3.47	5.34	5.34
<b>INTEREST ON WC</b>	0.38	0.59	0.59

### 1.6.6 Means of Finance

<b>EQUITY CAPITAL</b>			25.00%	<b>4.79</b>
<b>MOFPI SUBSIDY</b>	25%	50.00	25.00%	<b>4.79</b>
<b>TERM LOAN</b>				
FINANANCIAL INSTITUTIONS		10.00%	50.00%	<b>9.58</b>
<i>-Payable half yearly Installments</i>	10	1.00		
<b>TOTAL</b>			100%	<b>19.16</b>

### 1.6.7 Cash flow statement

PARTICULARS	Year 1	Year 3	Year 5	Year 7
<b>SOURCES OF FUNDS</b>				
EQUITY CAPITAL	-	-	-	-
SUBSIDY				
NET PROFIT	1.01	5.85	5.20	4.57
(INTEREST ADDED BACK)				
DEPRECIATION	1.08	1.08	1.08	1.08
PRELIMINARY EXP.W/O	0.31	0.31	0.31	0.31
INCREASE IN TERM LOAN	-	-	-	-
INCREASE IN BANK BORROWINGS-WC	3.47	1.33	-	-
<b>TOTAL</b>	<b>5.86</b>	<b>8.57</b>	<b>6.59</b>	<b>5.95</b>

### 1.6.8 Projected balance sheet

PARTICULARS	Year 1	Year 3	Year 5	Year 7
<b>LIABILITIES</b>				
EQUITY CAPITAL	4.79	4.79	4.79	4.79
RESERVES & SURPLUS	4.46	10.01	18.92	27.18
TERM LOAN	8.58	4.58	0.58	-
BANK BORROWINGS-WC	<b>3.47</b>	<b>5.34</b>	<b>5.34</b>	5.34
<b>TOTAL</b>	<b>21.30</b>	<b>24.72</b>	<b>29.63</b>	<b>37.31</b>

### 1.6.9 Profitability

Particulars	Year 1	Year 3	Year 5	Year 7
<b>INCOME</b>	24.38	37.50	37.50	37.50
<b>EXPENDITURE</b>	21.98	30.26	30.91	31.55
<b>VARIABLE</b>	14.23	20.64	20.64	20.64
<b>FIXED</b>	7.75	9.62	10.27	10.91
<b>GROSS PROFIT</b>	2.39	7.24	6.59	5.95
<b>PROFIT BEFORE TAX</b>	(0.33)	4.66	4.41	3.98
<b>RETAINED PROFIT</b>	(0.33)	4.66	4.41	3.98

### 1.6.10 Key Indicators

NET PRESENT VALUE at current Inflation (Rs. in lakhs)	<b>28.59</b>
INTERNAL RATE OF RETURN %	<b>31.40</b>
AVERAGE DSCR	<b>2.36</b>
BREAK EVEN POINT %	<b>76.41</b>
PAY BACK PERIOD ( YEARS)	<b>3.70</b>

### 1.6.11 Manpower Requirement

PARTICULARS	NO.
<b>SUPERVISORY STAFF</b>	
PRODUCTION SUPERVISORS	1
<b>WORKERS</b>	
SKILLED WORKERS	2
SEMI-SKILLED LABOUR	4
SALESMAN	1

### 1.6.12 Assumptions

<b>Project &amp; Financing</b>			
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	4
Moratorium		Months	6
<b>CAPACITY</b>			
Rated Capacity Per Annum	80% of Installed capacity	KLPA	50
Number of Operational Days		DAYS	300
Working Hours Per day		Hrs	16
<b>CAPACITY UTILIZATION</b>			
Year I			65%
Year II			75%
Year III			100%
<b>SALES PRICE</b>			
W S Price			75000
<b>OTHER EXPENSE</b>			
Commission			5.0%
Marketing Expenses			2.5%
<b>POWER</b>			
Connected Load		HP	30
<b>DEPRICIATION AS PER COMPANY'S ACT</b>			
BUILDING			3.34%

PLANT & MACHINERY	10.34%
MISC. FIXED ASSETS	7.07%
LAND & SITE DEVELOPMENT	1.63%
<b>MAINTENANCE</b>	
BUILDING	1.00%
PLANT & MACHINERY	3.00%
MISC. FIXED ASSETS	2.00%
LAND & SITE DEVELOPMENT	1.00%

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