CHAPTER – 1
INTRODUCTION

1.1 INTRODUCTION OF THE SUBJECT:

Soybean is considered highly nutritive crop. Additionally it has high yield potential. Soybean is known as the ‘golden bean’ and ‘miracle crop’ because of its several uses. It is an excellent source of protein and oil. It contains about 43% of good quality protein, 21% carbohydrates, 5% minerals, 8% moisture, 20% fat, 4% fiber and reasonable amounts of vitamins. Soybean is considered as a rich source of protein because it contains 43% protein as against 7% in rice, 12% in wheat, 10% in maize and 20 – 25% in other pulses. Soybean protein is rich in the valuable amino acid lysine in which most of the cereals are deficient. Enriching cereal flour with soybean improves nutritive quality. Soybean has a tremendous potential to meet the protein – calories malnutrition of the ever increasing Indian population. Soy based food products are also suitable to diabetic patients as they contain less carbohydrates and low cholesterol. Its oil is used as cooking medium and also for making vegetable ghee and for several other industrial products such as soy milk, soya flour, soya cake, biscuits, varnish, paints and many other products which are mentioned in detail in the Chapter 4 of the thesis namely ‘Products of Soybean’. Soy lecithin, a by-product of oil industry is used as emulsifier in cosmetics and pharmaceuticals.

Soybean builds up the soil by fixing large amounts of atmospheric nitrogen through the root modules and also through leaf fall on the ground at maturity. It can be used as fodder, forage that can be
made into hay, silage etc. Its forage and cake are excellent nutritive foods for livestock and poultry.

Soybean being the richest, cheapest and easiest source of best quality proteins and fats and having a vast multiplicity of uses as food and industrial products is called a ‘wonder or miracle crop’.

Approximately 85% of soybean produced in India is utilized for oil extraction, 10% for seed and 5% for food and this is the reason for analyzing the Soybean Processing Industry.

Until early 80’s the economy of India was heavily dependent on agriculture and thus promotion of agro products and processed food was the further and obvious option and soybean is one of such major agriculture products. The prominence of soybean crop in India is fast growing. The characteristics of the crop are suitable for the modern style of cropping. Soya is now considered as a cash crop. Soybean (Glycine Max) is the world’s leading oil seed crop, which stands next only to groundnuts and rapeseed mustard in India. It is a seasonal leguminous crop and has a good adaptability towards a wide range of soil and climate. It has ability to fix atmospheric nitrogen. Soya and its derivative products are valued more in terms of human consumption and higher margins to the cultivating farmers in India. It is a Kharif crop which is normally sown in the month of June – July and harvested in the month of October – November. (Details relating to this are mentioned in Chapter 3 – Production Method of Soybean) It is a good rotational crop and is intercropped with maize, cotton, sugarcane, upland paddy and orchard plantations.
India stands fifth in the production of soybean next to USA, Brazil, Argentina and China. In the year 2009 - 10 the production of these countries in Million Metric Ton (MMT) was USA – 90.6 MMT, Brazil 70.0 MMT, Argentina 49.5 MMT and China 15.2 MMT. The production in India during this period was 9.6 MMT.

Table No. 1.1

SOYBEAN PRODUCTION IN LEADING COUNTRIES IN 2013-14

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Country</th>
<th>Production(MMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>USA</td>
<td>85.7 MMT</td>
</tr>
<tr>
<td>2.</td>
<td>Brazil</td>
<td>88.0 MMT</td>
</tr>
<tr>
<td>3.</td>
<td>Argentina</td>
<td>53.5 MMT</td>
</tr>
<tr>
<td>4.</td>
<td>China</td>
<td>12.1 MMT</td>
</tr>
<tr>
<td>5.</td>
<td>India</td>
<td>11.8 MMT</td>
</tr>
</tbody>
</table>

Source: www.sopa.org

These four countries command almost 90% of the world production of soybean. As seen that although India is the 5th largest producer but presently its share in world soybean production is 4%.

In India, soybean is mainly grown in the state of Madhya Pradesh, Maharashtra, Rajasthan, Andhra Pradesh, Karnataka, Chattisgarh and a very few other parts of India. The preponderent share is of Madhya Pradesh. In the year 2010 the total soybean production in
India was 101.283 lakh metric ton out of which the share of the state of M.P. was 60.987 lakh metric ton. So Madhya Pradesh is appropriately called the soybean state of India. Not only this, soybean is a very important crop of M.P., about 55.084 lakh hectare of M.P. was under soybean cultivation in the year 2010. More than 40 lakhs farmers are engaged in soybean cultivation in M.P. and an equal number of people are employed in soybean extraction plants. Thus for M.P., soybean has emerged as a potential employment generator as well as foreign exchange earner. The importance of M.P. for soybean can be gauged from the fact that The Soybean Processor Association of India (SOPA) and Directorate of Soybean Research (DSR) both have their head quarters in Indore, M.P.

Though soybean crop was introduced in M.P. during the later part of 1960’s still from the above mentioned facts and figures it can be very clearly seen that soybean’s spread in the state has been remarkable. Because of the phenomenal increase in area and production together with expansion in processing units, India has earned a prominent position on the world map of soybean industry. Infact, it proved to be a fortune crop in terms of edible oil production, export earnings and rural prosperity. The maximum credit of this goes to Madhya Pradesh.

Soya processing industry can be called as major thrust sector for Madhya Pradesh because as said before it a major producer of Soya and its products but this industry is facing a lot of challenges and problems. Looking into these problems it is estimated that there would be difficulty in enhancing soybean production in years to come. The price of the Soya and its products depends on the domestic crop output, global demand and supply scenario and international prices. The farmers are provided
with low returns, which make them to shift to alternate crops like castor and cotton. The minimal return is due to the high cost of production and low realization from the output.

The soybean productivity in India and Madhya Pradesh is less than one ton per hectare. If the yield factor between global average and India is compared it can be seen that the productivity for the world stands at more than 2 tons per hectare, much higher than the Indian soybean yield. Besides the low yield, the industrial units face infrastructure problems, inadequacy of power, lack of efficient and quick transport, non – availability of proper market for these soy products and consumer acceptability.

A few other aspects of this problem are availability of the cheaper imported soybean due to the surplus scenario prevailing in the international market, hike in import duty on oil and oilseeds, declining palm oil prices, lower profit margin for crushing units due to low capacity utilization etc. At present, the crushing units are operating at 40% capacity. The high raw material cost and unrealistic minimum support price add more to problems.

In this regard, there is a need to understand the profitability of soybean as whole pulse as well as processed soy products and the financial condition of the Soya processing industries. Therefore, in this thesis, an attempt has been made to find out the economics of soybean production and its value addition in Madhya Pradesh.

If there is a collective effort from the Government side and from the side of agriculture scientist, farmers and industrialist, soybean can make a major contribution to the economy of M.P.
1.2 REVIEW OF RELATED LITERATURE:

In this chapter, past studies in the field of soybean production, cultivation, products and value addition have been reviewed and compiled to enable a better understanding of these issues. Many studies have been performed and researches have been taken up by many scholars as well as official of Soybean Processors Association of India, Solvent Extractors Association of India as well as Directorate of Soybean Research. Almost all newspapers contain news about soybean, its oil, prices, minimum support price, government polices and industry related other issues. Many agricultural related journals and magazines contain studies and articles related to soybean.

The review of literature is presented as follows:

1. Ranade DH & Verma SK (Year 2007) :

   **Suitability Reclaimed Land for Soybean Based Cropping System Studies**

   Conducted between 2003 and 2005 on black soils of Malwa Region brought out that deep tillage plays a vital role in increasing the productivity of the crops through reduced infestation of weeds and increased water retention capacity of soil consequent upon improvement in its physical environment as indicated by lower values in bulk density of soil. This not only led to increasing productivity of soybean but also made the planting of Rabi crops feasible without pre-sowing irrigation. The studies further revealed that the waste land reclaimed by spreading excavated soil from tank can immediately be brought under cultivation for soybean based cropping system. Successful raising of rained soybean
(Kharif) followed by gram (Rabi) has been demonstrated on such reclaimed land.

2. Ahirwar RF, Nahatkar SB & Sharma HO (Year 2007) :-

Profitability and Input Use Efficiency in Cultivation of Soybean in Malwa Plateau of Madhya Pradesh

Madhya Pradesh is designated as the ‘Soya State’ as it has major share in area (67%) and production (57%) of soybean in India. In this study, an effort has been made to examine the profitability and input use efficiency in cultivation of soybean at different size of farms in soybean producing district (Ujjain) of Malwa Plateau agro – climatic zone of Madhya Pradesh which is selected purposively having maximum area under cultivation of soybean in the state.

It was observed from the analyzed data that the total cost of cultivation was maximum on large (Rs. 8574.80/ha) as compared to medium (8538.19/ha) and small (Rs. 7680.73/ha) size of farms revealing, that soybean production involves high expenditure on purchased inputs viz. seed, fertilizers, insecticides and hired mechanical power.

The maximum gross income was found on medium (Rs. 13400/ha) followed by large (Rs. 12969.50/ha) and small (Rs. 11813.00/ha) size of farms. As far as the cost benefit ratio is concerned, it was found to be maximum on medium (1:1.57), followed by small (1:1.54) and large (1:1.51) size of farms. The further increase in soybean production is possible only through up-gradation of existing production technology.

Forage Soybean Yield and Quality Response to Plant Density and Row Distance

We conducted a study to determine the effect of row distance and plant density on yield and quality components of ‘Donegal’, a soybean cultivar specifically developed for forage production in the north eastern United States. Dry matter yield ranged from 4.5 to 6.3 Mg ha − 1 and 8.7 to 13.9 Mg ha − 1 in 2000 and 2001, respectively. Yield in rows spaced 18 cm apart was significantly higher than in rows spaced 76 cm apart. Soybean plants started to lodge between 56 and 84 cm after planting. At most sampling dates, the canopy was lower and individual plants were shorter in 18 – compared with 76 cm rows. Soybean attained the beginning seed (R 5.5) stage before a killing frost in both years. At that stage, soybean averaged 155g kg-l crude protein (CP), 362 g kg – 1 acid detergent fiber (ADF), and 469 g kg – 1 neutral detergent fiber (NDF). Acid detergent fiber NDF, and CP increased between beginning pod (R3) and R 5.5 growth stages in 2000 and 2001. Forage quality in 2001 was lower at 76 – compared with 18 – cm rows. Plant densities between 234 650 and 550 750 plants ha – 1 had no consistent effect on forage yield or quality. Donegal showed good potential as a forage crop in the northeastern United States.


Soybean Oil

Its nutritional value related to polyunsaturated fatty acid metabolism. Soybean oil is valuable food item in the human diet. It is rich in PUFA & is a readily available source of essential fatty acids
PUFA’s are incorporated into bio-membranes. As moieties of phospholipids and play a vital role in the properties of bio-membranes PUFA also serve as precursors for prostaglandin and eicosanoids and there is a close structural relationship of PUFA as essential fatty acids and as prostaglandin precursors. Dietary PUFA functions as effective and beneficial hypocholesterolemic nutrients, but a moderate amount of their consumption is recommended.

5. **Husain S.M. (Year 2009) :-**

**Soybean Seed and its Production Techniques**

Soybean has become very popular oil seed crop in India in a short span of about three decades. Soybean seed production and processing in India is beset with many problems that are mainly due to delicate nature of the seed and tropical climate of country. Soybean seed is very delicate and poor in storability and faces the problem of poor germination and reduced vigor. The storage of soybean seed needs special care. Temperature and moisture are most critical factors in storage. Low seed multiplication ratio (1:12), rain fed nature of production system, incomplete seed chain and limited seed storage facilities with controlled conditions, soybean seed is readily prone to mechanical injury are few problems faced during seed production. Strategies given for improvement are :- The ODI standards for soybean should be raised, the seed multiplication chain should be strictly monitored, processing and transportation specification should be standardized, storage facilities should be created and strengthened. Breeding for improving seed quality are factors responsible for seed longevity.
6. White (Year 2001)

**Profitability of Soybean vis-à-vis corn**

White reported that U.S. farmers announced intentions to grow 76.7 million acres of soybeans in 2001, matching the level of corn planting intentions for the first time since 1983 when soybean planting exceeded corn due to drought and the payment-in-kind program. Though harvested acres was down slightly from intentions, 74.1 million acres for soybean and 69.2 million acres for corn, the trend remains in place for soybeans to emerge as the most important of the field crops. This analysis illustrated how soybean planting intentions changed from last year as a result of changes this year in price-related factors, including benefits from marketing loans, prices of competing crops and higher fertilizer and fuel costs in corn production.

7. Shrivastav and Mishra (Year 2002)

**Soybean Vs Paddy**

They studied the opinion of farmers which revealed that soybean crop rotted due to heavy rains in all the years resulting in low yields of 6 quintals per hectare, whereas in paddy it was 18 quintals per hectare. They found that paddy was less risky and economically more competing crop than soybean in Bilaspur district of Chhattisgarh.

8. Rude and Goddard (Year 1995)

**Cost and returns of Soy value added products**

They indicated the measures of market power and returns to scale worked out for the Canadian dairy industry with the estimation of a cost
system. A two stage production process resulted in a cost function which was additively separable between raw milk costs and processing costs for other inputs. The processing cost component was multiplicatively separable between an input price index and an aggregate input which was a transformation of output.


**Profitability of Soybean vis – a – vis competing crops**

Rao reported that soybean was the competing crop, especially in central and western India replacing sorghum. Cotton, sunflower, maize, groundnut, pulses and soybean are replacing pearl millet. Some factors responsible for replacement of sorghum and pearl millet by these competing crops are low productivity and profitability of sorghum and pearl millet vis – a – vis competing crops, increased irrigation availability and price support to other cash crops. Thus, yield improvements and value – addition through industrial utilization may enhance the profitability and alleviate rural poverty.


**India’s export of Soy Products**

India is among largest soybean producer in world. Others are U.S.A., Canada, China, Brazil and Argentina. India has always been active soybean products exporter in world reason being the establishment of soybean processing industries and availability of soybean in country. India’s export markets are mainly in Asian, European and African countries. India’s main export strength lies in its Non GMO Soy products as India is among very few countries having Non GMO
soybean crops. The worldwide protest against GMO has given good amount of instant recognition in International soy products market. But due to unfavorable rain condition and low rate of processing, India has experienced slow – down in its exports moreover the shutting – down of soybean processing plants in past years have given a huge setback to its total export scenario. Board for industrial financial and reconstruction has taken many initiatives to cope – up with this problem and looking towards the reconstruction of Indian Soybean Industry.

11. Saxena (Year 2010)

Export Potential of Indian Soya Products to Dubai

Around 25% of Islamic population over 15 years eats soy foods due to the bean’s many beneficial properties. This ultimately widened the potential of Soy Value Added products in Dubai market. But the main obstacle is the competitiveness of rates in International market. As of now there is no such incentive for the export of Soy Value Added products from India which increases the cost in International market relative to China. There is huge potential of soy value added products in Dubai, but it needs a proper quality, consistency along with competitiveness in rates.

12. Ankit Jaiswal (Year 2009)

Economics of Production and Value Addition to Soybean in Madhya Pradesh

Soybean is known as the ‘golden bean’, ‘miracle crop’ etc., because of its several uses. The present utilization pattern of soybean in India indicated that 85 per cent used for oil extraction, 10 per cent for
seed and only 5 per cent for food and feed. Therefore, processing is an important function of soybean. In recent years jowar and maize in rainfed areas have been competing with soybean in Madhya Pradesh. In the present study effort is made to study profitability of soybean vis-à-vis its competing crops in addition to value addition. The study indicated that net returns in soybean over jowar (868.72%) and maize (121.67%) were significantly higher. Similarly, benefit cost ratio over Cost was higher in case of soybean (1.29) than that of maize (1.16) and jowar (1.05) which clearly indicated that soybean cultivation was more profitable than any of competing crops. For every rupee investment in soymilk and tofu processing, Rs. 1.42 was obtained as returns, indicating its profitability. Benefit cost ratio was more than unity (1.18) showing profitability of converting soybean into soy flour. In this regard, there is need to understand the profitability of soybean as whole pulse as well as processed soy products. Therefore, in the present study, an attempt is made to find out the economics of soybean production and its value addition in Madhya Pradesh state. An assessment of profitability of processing of soybean into different value added products clearly indicated that the processing units involved in processing soymilk and tofu together were more profitable than those involved in processing of soybean into soy flour only. Since the value addition is profitable over raw soybean, farmers may be motivated to take up value addition to soybean. Further, small scale entrepreneurs may be encouraged to establish the above enterprises for widening the soybean industry.

13. Addis Ababa (Year2008)

Project Profile on the Establishment of Soybean Production Farm
The project profile deals with the establishment of soybean production farm in Amhara National Regional State. The following presents the main findings of the study. Demand projection divulges that the demand for soybean is substantial and is increasing with time. Accordingly, the planned plant is set to produce 450 quintals annually. The total investment cost of the project including working capital is estimated at birr 638.35 thousand and creates more than 41 job opportunity and birr 309.32 thousand of income. The financial result indicates that the project will generate profit beginning from the first year of operation. Moreover, the project will break even at 42.8% of capacity utilization and it will payback fully the initial investment less working capital in 3 years. The result further show that the calculated IRR of the project is 32% and NPV discounted at 18% of birr 342,268.85. In addition to this, the proposed project possesses wide range of economic and social benefits such as increasing the level of investment, tax revenue and employment creation.

The findings of the project was as follows:

I. Profitability

According to the projected income statement the project would generate profit beginning from the first year of operation. Ratios such as the percentage of net profit to total sales, return on equity and return on total investment are 13%, 31% and 29% in the first year and are gradually rising. Furthermore, the income statement and other profitability indicators show that the project is viable.

II. Breakeven Analysis

The breakeven point of the project is estimated by using income statement projection. Accordingly, the project would break even at 42.8% of capacity utilization.
III. Payback Period
Investment cost and income statement projection are used in estimating the project payback period. The projects would payback fully the initial investment less working capital in 3 years.

IV. Simple Rate of Return
For the envisaged plant the simple rate of return equals to 27.6%.

V. Internal Rate of Return (IRR) and Net Present Value
Based on cash flow statement, the calculated IRR of the project was 32% and the net present value at 18% discount.

VI. Sensitivity Analysis
The envisaged plant was profitable even with considerable cost increment. That is, the plant maintains to be profitable starting from the first year when 10% cost increment takes place in the sector.

Success Story of Soybean in M.P. Information and Management Technology for Soybean Industries

Soybean appears to have been introduced first in Northern India either from China through Himalayan mountain ranges or from Java through Burma. The exact time of its introduction is not definitely known. V.C. Andolle in 1884 believed that Soybean was of recent introduction in India. But the fact that a small black seeded variety was grown since 1882 at Nagpur farm of Erstwhile Central provinces, indicates that crop was introduced in India much earlier. Investigation of Hooper in 1911 and of Wood House and Taxler go to show that Soybean was cultivated from the borders of Afghanistan Eastward to Burma. Hooper records nine varieties from India most of which had small pods,
small seeds tender twining stems. Although time of introduction of soybean to India and USA is more or less same but it could not be so much popular in India because of the indifferent attitude of the cultivators shown at that time due to lack of market, unavailability of early high yielding varieties and indifferent taste. It could not be consumed directly just like groundnut. Soybean was cultivated in North Indian tract extending from Punjab to Khasia and Manipur hills in Assam and in Sindh. It was also grown on the slopes of Himalayas up to an altitude of 6000’ in U.P., Bihar and West Bengal. Scattered areas were also under the crop in C.P. and Berar and adjoining districts of Bombay State. Various Indian names for Soybean are Bhat, Bhatwan – Ramkulthi Bhat (Punjabi) Quarikalay (Bengali). It was only roundabout 1936 that some stimulus was given for the cultivation of yellow variety at Poona, Amraoti, Begalkot, Buroach, Coimbatore, Punjab and Indore etc. But due to lack of market and non – availability of high yielding early varieties the programme could not receive impetus. The farmers believed that consumption of Soybean in diet creates constipation to the cattle and human beings.

The cultivation and trials of Soybean were carried out for number of years but no good early variety having high oil content and better yields could be evolved. The research work on Soybean was discontinued as per decision of State Agriculture Research Committee as the crop could not become popular amongst the cultivators due to the following few reasons.

1. There was no market for the produce of the crop.
2. No early variety having good yield and high oil content was available.
3. The crop was only being grown as forage crop due to good vegetable growth of the variety and less yield of grain.

4. There existed no demand for seed.

Looking to manifold uses high nutritive and medicinal value and its importance in cropping pattern, the efforts have been made to evolve suitable high yielding varieties with high oil content adaptable to the locality. Mr. Bay, Extension Adviser in Kharif 1963 and 1964 at U.P.A.U. Pantnagar, undertook the preliminary studies. The trails laid out, gave the indication that Soybean varieties of U.S.A. could be adopted to Indian conditions.


The concept of this project is to check whether HDFC BANK is performing well year after year or lacking in performance. The performances can be evaluated by doing Financial Analysis of Financial Statements of Bank. The purpose of this project is to evaluate the performance of HDFC Bank. It primarily aims at learning the various factors that can help in evaluation process. I have tried to find out the reasons or ground where it is lacking. I have also tried to find out the areas of improvement. In order to do financial analysis of company the various tools like Ratio Analysis, Comparative Financial Statement and Trend Percentages have been used. In statistical tools, I’ve used Correlation, Time Series Analysis (Trend Values). In Hypothesis testing, I’ve used ANOVA TEST. The project also includes Objective of Study, Research Methodology, Analysis and Interpretation, Findings
Recommendations, Limitation of Study, Conclusion, Bibliography and Annexure.

Findings:

- Since the profit of the bank has been increased by 20.29% during last fiscal so financials of bank is satisfactory.

- If the Current Ratio is less than 2:1, it indicates lack of liquidity and shortage of working capital. But a much higher ratio, even though it is beneficial to the short-term creditors, is not necessarily good for the company. A much higher ratio than 2:1 may indicate the poor investment policies of the management. So liquidity of Bank is satisfactory.

- Since the Debt Service Ratio indicates the interest paying capability of firm and ideal Ratio is 6 to 7 times. So interest paying capacity of the firm is moderate.

- Operating Ratio is a measurement of the efficiency and profitability of the business enterprise. The ratio indicates the extent of sales that is absorbed by the cost of goods sold and operating expenses. Lower the operating ratio, the better it is, because it will leave higher margin of profit on sales.

- Since profit is the overall objective of a business enterprise, Return on Gross Capital Employed Ratio is a barometer of the overall performance of the enterprise. It measures how efficiently the capital employed in the business is being used.

- Operating Ratio and Operating Profit Ratio are inter-related and total of both these Ratio is 100. Both Ratios indicated the profitability of firm.
1.3 RATIONALE :

Considering all the facts and figures there is a clear indication that Madhya Pradesh is Soy state of India. Soybean is widely cultivated in M.P. and this has become an opportunity for soybean processing industry.

Due to extensive availability of raw material many Soya processing plants have emerged in M.P. As it is known that the soybean industry falls in the category of large scale production units and so the investments are huge. But looking into the present condition and scenario it is visible that Soya processing industry, inspite of being a thrust sector of M.P. and also having a reasonably old history is, still in the position of instability and dilemma.

Due to many constraints, problems and lack of enough support many Soya plants have been shut down and many are not in a position to repay loans taken from financial institutions. But this industry has a very bright and good future.

Statistics reveals that the cultivation, yield, production and exports of soybean have been increasing year after year. Another major factor is that soybean oil is the major edible oil consumed by the people.

After the study of oil consumption pattern it is understood that in the last decade previous to which ground nut oil was the main edible oil, soybean is emerging as one of the main edible oils mainly due to its nutritional value and lower price as compared to groundnut oil. In addition to this Soya Processing Industry offers to produce and market a
wide variety of soy products and different kind of by-products including animal feeds.

Soybean is named as miracle or wonder crop the fruits of which have not been completely reaped. When the area under cultivation in India and M.P. is compared with that of the other major soybean producing nations of the world and the yield and production the results are not very satisfactory.

The Soya processing industry has made a lot of developments in past years but the outcomes are not at par. There are few plants which have emerged very successfully as compared to others.

Therefore, I want to study as to what guidelines and measures are needed to make this industry stable.

When the area cultivated and numbers of plants in M.P. are studied, it can be seen that this industry is particularly well developed in Malwa Region of M.P. As mentioned earlier there are a few plants that have performed extremely well and so through the study of these units there is a possibility of coming up with suggestions and measures which may be useful for the entire Soya processing industry of India.

The importance of this study lies in analyzing financial condition and finding solutions to the existing problems of this industry so that soybean emerges as a true Golden Harvest.
1.4 AIMS AND OBJECTIVES OF STUDY:

The main aims and objectives underlying the study were as follows:-

1. **To study the development of this industry in M.P.**
   
The Soya processing industry has a reasonably old history in M.P. and with years it has developed. The details of this development can be received only through deep study.

2. **To analyze the trend in soybean production, extraction, market prices and employment related issues.**
   
   This study is basically aimed at gathering information about above mentioned issues because the detailed study of this could be beneficial for the industry.

3. **To analyze the problems of the industry and attempt to suggest some solutions to overcome these problems.**
   
   Without deep study it is not possible to understand the problem. Once the problems are diagnosed it is easy to solve them. Hence by analyzing the problems, suggestions can be made.

4. **To study the future prospects and export potential of this industry.**
   
   Export is a very important sector of an economy and soybean is a thrust sector as far as exports are concerned. Thus this study aims to find out more possibilities for increasing exports.

5. **To analyze the financial conditions of soybean units.**
   
   Through the financial analysis and detailed insight of Soya processing units suggestions are possible.
1.5 HYPOTHESIS:
1. The numbers of plants and units in Soya processing industry has increased.
2. Soybean oil is emerging as the main edible oil.
3. Soya processing industry is well developed in Malwa Region but it is facing problems.
4. Soya processing industry has immense export potential.

1.6 RESEARCH METHODOLOGY:

A general description of the study area, the data base, the sampling techniques, tools and techniques used for analysis is presented in this section. For better understanding, this section is arranged in an appropriate sequence with the following sub-headings:

- Description of the study area.
- Nature and sources of data.
- Data Collection.
- Contact Method.
- Sampling Design.
- Sampling units and size of sample.
- Data Analysis and Methodology
Description of the study area:

The state of Madhya Pradesh has the dominant share of soybean cultivation and production. This is the reason that the study is purposively confined to Madhya Pradesh.

Madhya Pradesh is located at North latitude 15°40’ and 22°00’ and East longitudes 72°30’ and 80°30’. The state is bounded in North by Uttar Pradesh, East by Chhattisgarh, South by Maharashtra and West by Gujarat and Rajasthan. At present, administratively it is divided into 48 districts. The state has a total area of 3,08,000 Sq.km. and population more than 6 crores. Out of the total area of the state, 64% is cultivable. Like most of the other parts of India, the climate of Madhya Pradesh state is sub tropical monsoon type. Generally, there are three distinct seasons within a year viz. summer from March to May, rainy season from June to September with post monsoon rainfall in October and winter from December to February.

The distribution of area and production of soybean in Madhya Pradesh is mainly and predominantly confined to Malwa Region.

The industrial study of this thesis is based on the selected plants operating in this industry. The plants are based in Indore and Dewas.

Nature and sources of data

This study has taken the advantage of presence of major soybean growers, extraction plants & organizations like Soybean Processors Association of India (SOPA) & Directorate of Soybean Research (DSR) in the vicinity of Indore.

(a) Sources of Primary Data:-
• Local Soybean Processing Plants/Units
• Soybean Processors Association of India
• Directorate of Soybean Research

(b) Sources of Secondary Data:
• Various Annual and published reports
• Articles in Magazines & Newspapers
• Internet

➢ Data Collection
Data was collected by a personal interview and survey. A questionnaire was prepared to collect information relating to installed capacity, employment, governmental support, management of finance, problems being faced by the industry, suggestions etc.

➢ Contact Method
The heads of various plants were contacted for having desired information. The respondents were contacted personally.

➢ Sampling Design
The domain of research was limited to cities of Malwa Region of M.P. The information was sought through finance, production and marketing heads of selected soya processing plants.

➢ Sampling units and size of sample
The plants and offices of Soya Processing Industry and heads of different plants constituted the sampling units. The size of sample was 5.
➢ **Data Analysis and Methodology**
Bar, graph, pie, chart, tabulation and latest statistical methods and computer software were used to analyze the collected data. Cash Flow Analysis, Time Series Analysis, Cross Section Analysis, Common Size Statement and Ratio Analysis were adopted for the purpose of data analysis.

**Limitations of the Study**
➢ This research was conducted on the basis of the Annual reports published by the companies so the authenticity of the research is as much as the authenticity of the reports.
➢ The study was confined to the plants situated in the Malwa region and so the plants in other areas could not be surveyed.

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