CHAPTER 1
INTRODUCTORY BACKGROUND

1.1 Introduction

Agriculture in India played an important role in the economic development of the country. Agriculture was the backbone of India and it provided food, clothes, shelter and many other basic necessities of people. Agriculture supplied all varieties of raw materials to feed industries and met all needs of people. Agriculture became a promising occupation by yielding more income due to the revolution of farm technology, increased investment of capital, improved skill and hardworking of farmers and favorable policies of the Government of India. Therefore, India became self sufficient in food production and it was identified as the fourth largest country in the world in the production of grains.

In India, 70.20 per cent of people lived in rural area where agriculture was the main source of livelihood. 2/3 people relied on agriculture, 40 per cent of industries obtained raw materials from agriculture. Mahatma Gandhi exclaimed “India lives in its villages.” The rapid agricultural development reduced unemployment in India and improved standard of living of Indians.

Globalization and liberalization produced new opportunities to improve agriculture. Agriculture needed increased production and improved productivity. Agriculture of India produced quality products for which world wise appreciation was remarked. In the world wide competition, Indian agricultural sector adopted a new cropping pattern which helped to collect more yield automatically and poverty eradication was possible.
Simultaneously reduction in unemployment, installation of varieties of industries furnished to improve the standard of people of India. New farm technologies were felt necessary for sustaining steady growth in agriculture.

For the rapid growth and solid improvement in agriculture required new trends of exploring novel methods of cultivation, high yielding seeds and plants, chemicals and fertilizers, pesticides, insecticides, etc. Agriculture was supported with water facilities, additional land for cultivation, new markets for the immediate sale of agricultural products. The real role of agricultural scientists was essential for the research and implementation of novel standards of agricultural implements.

The role of agriculture in Indian economy became remarkable. During 2001-02, about 58.20 per cent people were absorbed in agriculture. During 2003-04, national income was represented by agriculture to the extent of 21.01 per cent. During 1950-51, agricultural production was 51 million tonnes, while during 2002-03 it was increased to 206 million tonnes. Agricultural exports were 6,734 million U.S. dollars which was 12.77 per cent of total exports. Application of fertilizers was 0.5 kg per hectare during 1951-52 which increased to 90.10 kg per hectare during 2001-02.

The above statistics revealed that Indian agriculture was transformed into significant progress during the planning era. Agricultural development decreased the flow of rural population to urban centers. Educated people returned to agriculture for further improvements. Educated farmers improved the methods of cultivation by using chemical fertilizers, water facilities, pesticides and fungicides. Farmers shifted from grain productions to cash
crops like sugarcane, grapes, turmeric, tobacco, betelvine, etc. Qualified farmers experimented improvements from which financial status of farmers was much bettered and standard of living was also improved.

Betelvine (Piper betle Linn.) was an important commercial cash crop. In India the area under betelvine cultivation was 42287 hectares, in Maharashtra it was 4093 hectares. Betelvine leaves were used for chewing in India and other Asian countries. It was grown inside the artificial created forest area where humidity was more.

The genetic name of the betelvine leaf was known as Piper which was derived from Sanskrit word Pippalli. Betelvine was originally cultivated in Malaysia. In India, betelvine was known in different words in different languages. In Sanskrit, it was named as Nagavali, Tamulum, etc. In Hindi, Bengali, Marathi and Gujarathi, it was called as Pan, in Telagu as Tamalapaka, Kill, Nagarati, etc. in Kannada as Viledyali, in Malayalam as Verillal.

The betelvine leaves were absolutely indispensable for celebrating marriages, many religious and social functions. Betelvine leaves were treated as holy symptoms for preserving bliss in the family and friendship. All holy days used betelvine leaves for creating and preserving reciprocity among friends and relatives.

Betelvine leaves had medicinal values which were beneficial to sweeten the mouth and remove bad smell of the mouth. Betelvine leaves serve as the best medicine to remove acidity, cough, indigestion, septic, etc. Betel leaves were useful for curing Asthma, Bronchitis etc. People were habituated to chew betelvine leaves to wipeout uneasiness and exhaustiveness.
Mostly betelvine leaves were used by many in regular intervals to obtain enthusiasm for all functions to do emotionally.

The betelvine plant was considered a perennial, creeping climber. Betelvine leaves were known as broad with pointed tips. It was identified as ever-green element to maintain freshness to all chewing people. Betelvine leaves were born alternatively on the stem and branches of the betel vines. For the proper growth and production of betelvine, it required the conditions of shade. The shaded conditions were supplied for fast growing plants. Supports were also given to betelvine for climbing. The cultivation practices varied from region to region. The betelvine cultivation was a highly labour-intensive crop which provided a sound livelihood to many farmers and farm labourers. Nearly 20 lakhs families were engaged in the cultivation and selling of betelvine leaves in various states of India. Betelvine crop was a peculiar type of cash crop which provided socio economic status in the society. The earnings from the sale of betel leaves were sound and attractive to the cultivators throughout the year, at regular intervals. Betelvine cultivators obtained financial support in the whole year to do many other farming functions. Farmers collected seasonal income from other crops while betelvine cultivation produced income through the year to the pleasant survival. Majority of the members of the family were engaged in the plantation, training of vine, provision of manures, fertilizers, water and plucking of betelvine leaves.

1.2 The Study

From the above, it was discovered that the betelvine crop was evaluated as the important cash crop to many Indian farmers. It played a vital role in providing a sound and standard of
living to thousands of betelvine cultivators. Sangli district was evaluated with water facilities, skilled labour-force for training and harvesting as one of the famous district in the cultivation of betelvine leaves. The Sangli district was endowed with many fortunate factors which facilitated the easy growth of betelvine leaves. Such factors were fertile soil, and tying, plucking, and lowering of betelvine. Sangli was also holding favorable elements like environment, transportation, market facilities, and willingness of farmers in Sangli district in general and Miraj and Walva tahsils in particular.

Under the study, efforts were made to study the cost of cultivation, total cost of sale of betel leaves, gross and net earnings from sale of betel leaves and price spread in case of various type of betel leaves. Betelvine cultivators experienced different problems in various areas of betelvine. There was a deep requirement to study many functional areas of betelvine cultivation.

The need for a study of betelvine cultivation in the study area was justified as follows.

1) There was no detailed study on betelvine cultivation in the selected area.
2) The study will enlighten the betelvine cultivation practices.
3) The study needs for to know the SWOT (Strength, Weakness, Opportunities and Threat) analysis of betelvine cultivation.

1.3 Objectives of the Study

1) To find out the main problems faced by betelvine cultivators in the sample area.
2) To find out the financial position of farmers in the sample area.
3) To find out cost behavior of betelvine crop.
4) To find out the returned structure from sale of betel leaves and price spread of various types of leaves in the market.
5) To find out impact of betelvine crop on employment generation in the sample area.
6) To suggest remedial measures to overcome the problems faced by betelvine cultivators.

1.4 Hypotheses of the Study
1) The availability of skilled farm labourers and favorable environmental factors was an essential pre-condition for the development of betelvine gardens in the sample area.
2) The labour cost lead to increased high cost of cultivation as compared to other cost of cultivation.
3) The most of betelvine gardens was located in Miraj and Walva tehsils due to favorable environmental factors.
4) Own funds were the main source of working and fixed capital.
5) The major problems in betelvine cultivation were uniformly distributed.

1.5 Research Design and Methodology
1.5.1 Selection of Area
The study was mainly based on the actual factual information on the farm level. All information were collected from the sample betelvine cultivators pertaining to different aspects such as cultivation activities, employment, costs, income and many other major problems. The area under betelvine cultivation was increasing day by day in Sangli district. Miraj and Walva which were noted tahsils showed increasing trend for more cultivation of betelvine and therefore more area was brought under cultivation in
these two tahsils. Due to increment in betelvine cultivation, the researcher selected these two tahsils for the intensive study.

1.5.2 Selection of Villages

The list of villages growing betelvine leaves in each selected tahsils were obtained from the respective revenue and agriculture departments. The list of five villages was selected from each of tahsil with the maximum proportion to the area under betelvine cultivation. The selected villages and number of sample cultivators were as follows.

Table No. 1.1
Tahsil-wise and Village-wise Sample Cultivators

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Name of Sample</th>
<th>Name of Sample Villages</th>
<th>No. of Sample cultivators</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Miraj</td>
<td>1) Arag</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) Bedag</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3) Narwad</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4) Maishal</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5) Malgaon</td>
<td>6</td>
</tr>
<tr>
<td>02</td>
<td>Walva</td>
<td>6) Lavenmachi</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7) Yade Machindra</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8) Dhayari</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9) Rethare Hamaksha</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10) Tupari</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>60</td>
</tr>
</tbody>
</table>

Five villages from each of tahsil were selected purposely based on maximum area under the betelvine cultivation. Thus 10 villages were selected with specific purpose. The sampling techniques were adopted for the investigation of two stage sampling. At the first stage, village as the primary unit and the second was in regard to betelvine cultivators.

1.5.3 Selection of Samples

The first selection in regard to betelvine cultivators was made available from the revenue record. The
sample cultivators were arranged in ascending order and classified into three size groups.

1) The first size was known as small size group in which the cultivators cultivate betelvine upto one acre.
2) Medium size of group where the cultivators cultivated betelvine above one acre and upto two acres.
3) Large size of group where the cultivators cultivated betelvine more than two acres.

Six betelvine cultivators were selected from each of the selected villages out of which two from small size of group, two from medium size of group and two from large size of group. Thus, total sample in two tahsils accounted to 60 betelvine cultivators. The total samples from two tahsils were further classified that 20 cultivators from small size of group, 20 cultivators from medium size of group and 20 cultivators from large size of group.

1.5.4 Period of the Study

For the current research study the researcher selected only one agricultural year for its precise collection, analysis and presentation. The year 2004-05 has been selected for its analytical study.

1.5.5 Sources of Data

Data was collected through the use of primary and secondary methods.

1.5.5.1 Primary Data

Primary data became more useful and reliable to the researcher. The following techniques of primary data collection were sincerely utilized for the valid collections.
1) Questionnaire

A detailed and comprehensive questionnaire was prepared to cover objectives and hypotheses of the study. The questionnaire was prepared with the initial discussion with farmers, research guide and other experts in the aspects. All 60 sample farmers were contacted personally by the researcher to collect precise data. The following topics were included in questionnaire.

a) General information.
b) Total area and plantation of betelvine.
c) Production and sale of betel leaves.
d) Financing for the betelvine cultivation.
e) Fixed and variable costs.
f) Employment.
g) Financial position of the respondents.
h) Motivating factors.
i) Major problems of betelvine cultivators.
j) Accounting.
k) Irrigation.
l) Measures of plant protections.
m) Marketing and transportation.
n) Packing and storing.
o) Manures and Fertilizers.
p) Major working expenses.
q) Harvesting.
r) Facilities provided to labourers.

2) Personal Interviews and Discussions

Personal interviews were arranged for the free and fair discussions. Betelvine cultivators and related experts were
consulted and frequent meetings were conducted to collect additional facts and figures.

3) Personal Betelvine Garden Visits

The researcher visited number of many betelvine gardens of the sample area to know the routing methods of betelvine cultivation.

4) Observations

The researcher observed all the practices and experiments of Betelvine cultivation. Due to the keen observation, the researcher discovered all the novelties in the cultivation of betelvine on current improvements.

1.5.5.2 Secondary Data

The secondary data were collected through the printed and published facts. The following sources were most useful to the researcher to collect secondary data.

1) Annual Report of All India coordinated Research Project on Betelvine.
3) National symposium of Betelvine production Technology.
4) Published reports and survey concerned to betelvine.
5) Published sources were collected from various libraries such as books, periodicals and news papers.
6) Research papers, Projects reports Ph.D. theses, etc. were referred.
7) Web sites related to betelvine leaves.

The researcher visited number of libraries such as Mahamta Phule Krishi Vidyapeeth, Rahuri, Agricultural Research Centre, Kasabe Digraj where All India co-ordinated Research
Project on Betelvine is running, Khardekar Library, Shivaji University, Kolhapur and Government Agricultural college, Kolhapur.

1.6. Processing and Analysis of Data

The collected facts and figures from primary and secondary sources were processed by editing, coding, classification, tabulation, etc. various tables were designed to arrange the data in concise and in logical order.

The processed facts and figures were analyzed by using various statistical techniques such as percentages, averages Chi-square test etc. The data were presented with the help of charts, maps, graphs, etc.

1.7 Significance of the Study

The present study will help to the cultivators of betelvine for the overall improvement of their practices. Managerial aspect of betelvine cultivation remained neglected in the sample area. The present research study will enlighten to manage betelvine cultivation on scientific basis. It is also valuable to the concerned betelvine cultivators and agricultural institutions. This study will also be useful to the central and state Governments to formulate policy for the betelvine crop. Betelvine cultivation helped to providing multiplier effect on rural employment to improve standard of living of cultivators. The study will also be useful to the concerned departments of central and state Governments and it will help to solve the problems of betelvine cultivation.
1.8 Scope of the Study

The present research study was applicable to only Sangli district in which Miraj and Walva tahsils were selected. Sixty farmers were selected and personal contacts, questionnaires were solicited.

The period was confined to only one year namely 2004-05 and data were selected for that year only. The study was mainly concentrated on managerial aspects of betelvine cultivation in Sangli district.

1.9 Limitations of the Study

The study was applicable to only betelvine cultivation in Sangli district pertaining to 60 sample farmers. The researcher relied fully on the cultivators of the betelvine who supplied the required facts and figures.

The data for the years immediately proceeding the data collection year 2004-05 were not available properly. Hence the researcher confined his study by fixing for one year only viz. 2004-05.

1.10 Arrangement of Chapters

The entire research study was divided into seven chapters which have been elaborated as follows.

Chapter – 1 deals with introductory background of the agricultural sector and importance of betelvine crop. This chapter enlightened it full objectives, hypotheses scope of the study, methodology etc. The chapter throws light on the sample area, sample villages, sample period, varieties of samples, source of
data, processing and analysis of data, significance of the study and arrangement of facts.

Chapter-2 evaluated and enlightened the review of literature which presented the views of different authors in regard to betelvine crop. It reviewed the propagation, cultivation, supply of fertilizers, irrigation, drainage, disease management, harvesting of betel leaves, medicinal value, classification of betelvine leaves, varieties, plantation of betelvines, intercropping, grading, packing, marketing, storage of betelvine leaves, cost of cultivation, income of betel leaves on sales, etc.

Chapter -3 dealt with the socio-economic importance of the sample area under study. It includes physical features of Sangli district, climate, rainfall, land utilization pattern, transportation, population, literacy, infrastructure, cropping pattern, co-operative institutions, irrigation facilities, live stock, industries, education institutions, industrial training institutions, employment generation etc.

Chapter- 4 related to general characteristics of the betelvine cultivation of India, Maharashtra as well as the sample area. The important betelvine characteristics of cultivation of the sample area such as land holdings, climate, soil preparation of land, layout of betelvine garden, planting season, methods of planting, spacing, cost of planting, irrigation, drainage, manures and fertilizers, pesticide and disease control, harvesting, yield, packages, cost of cultivation, income, transportation and marketing were discussed.

Chapter -5 identified a review of the selected farmers. An attempt was made to know the general information, educational qualifications, area under cultivations, plantation of betelvine,
employment, financial position, inducing factors for betelvine
cultivation and major problems faced by the selected respondents.

Chapter-6 related to a detailed analysis and interpretation of the data. It dealt with cost and income of betelvine
crop of the selected 60 respondents. It also included the analysis
and interpretation of fixed and variable cost of cultivation,
marketing cost and total cost. Besides this, the chapter dealt with
the total sale, income, net income derived from the sale of
betelvine leaves and price spread in case of different types of
leaves.

The last chapter dealt with summery, findings, conclusions and suggestions. The conclusions and suggestions
included the expert opinions of learned scholars. The results of the
study will be helpful for improvement in betelvine cultivation and
decision making.