CHAPTER 1
INTRODUCTION

1.1. Introduction:

Indian economy is agricultural and in agricultural India 65 to 70 percent people live in rural area. Most of people are depend on agriculture and agricultural business. In supplementary business to farming is animal husbandry, dairy-farming, fishery and poultry-farming.

Mainly dairy-farming is included in agri supplementary business quantity of people involved in dairy-farming is more. World's population is near about 600 crore. Population of cow-lineage animal is near about 130 crore. There is one cattle for every four people in world. Out of world total cattle’s nearly, 17 percent milky cattle’s are in India. Our world is divided into two parts, Developed and developing countries. India is developing country. In Indian industry dairy farming has important role. More than eight lace villages in India 72 million villagers are involved in dairy farming. India’s Milk production is 88 metric tons, which is 14 percent of the world. India is first rank holder in the World.

Milk producers get essential milk food through dairy-farming, as well as get dung. Crop-production increases by using dung. Bulls and male buffaloes are used to work in farming and for cultivating. Maintenance of milky animals are on hey, grass and waste parts of crops and grain produced in field. Dairy-farming is on the principle of co-operative, so they have guarantee of market, and proper rate for milk. Milk producers’ social and economical conditions have now improved.

In recent period, dairy farming business is one of the independent business. It is done on large scale by modern system so most of people have got availability of employment in large scale in this business.
1.2. Evolution of Dairy-farming:

People of World have knowledge of milk and milk products from beginning. In Koutilay's Economics there is information about food for elephants, horses and cows. Emperor Ashoka have built veterinary hospitals with human hospitals. Chandragupta Mourya opened veterinary clinics. In Christians holy book the 'Bible' there is reference of milk given to Angle by a boy of Adam, a shepherd man at Hibran. Also this is reference of in ancient time Greeks and Romans used butter to heal a wound and used for hairs. Before 10000 years B.C. people of Mesopotamia, from Iraq, East Siriya, Turkestian and Sumerian people had knowledge of making milk products from milk, we get information from drawing.

Through scientific reference they came to know that origin of cow may before 2.5 to 3 crore years. An ancestor of all cow lineage of world is 'Boss promigins' and Indian cow-lineage is 'Boss Nomadic us'. Origin of these two cow-lineage may be from common cow-lineage before Epstein 1972 in North pole region. According to some scientists’ opinion native place of cow's genesis may be recognize south east Asia. According to Thomas and Shastri, before 8000 to 10,000 years B.C. since, to later of Stone Age, brutal human being have been domesticated cows and dogs, and got milk and meet from cow. When they settled in the form of tribe in south Turkasthan.

In previous period animal husbandry and dairy farming was not the perspective from occupational. Purpose of keeping animals as pet was only to use milk in religious programme, use milk and milk products in diet, and fulfill need of food, to use bulls and male buffalos in farming, and get meat as a food. Milk business, farming and development of human culture, are complementary to each-other. Farming needs cattle. Cattles feeds on hey, grass-chaff produced from agricultural. Human get a good quality of
organic fertilizer from dung of cattle’s. So production of provisions increases. Previous time this business was not viewed as professional, because of less population. But later because of increased population and urbanization need of milk increased in large amount. There was good profit from milk selling. It helped in incensement milk production, force was given on milk production and dairy farming got good motivation\(^5\).

### 1.3. Progress of Dairy farming in the world:

Taking into consideration the importance of milk and milk products in human life and in economy, milky substances looked as an occupational point of view. Milk is perishable substance. Milk can retain systematic up to 4-5 hours after takeout from udder of milky cattle’s.

To preserve long time, it is essential to do various processes and make milky products. Still man had made various attempts\(^6\). Considering on World level, in middle of 19\(^{th}\) century dairy farming reached from family level to industry level. Obviously this change occurred in western world, because industrial revolution first occurred there. In the world, dairy farming was first started in Kesin village at Burni in Switzerland country on 1815. After 5-6 years co-operative society established at Denmark. Later in Europe and in America Dairy Farming developed in large scale\(^7\). Making lactose (milk powder) from milk invented in 1828. In 1856 "Gel Bald arm" got first patent of making milk powder (lactose) from milk in America. And the modern system of making milk powder developed. At 1878 scientist 'Gustav Lawal' found system of separation cream from milk.

Technique of preserve milk by chilling developed at the time 1880-90. So it was possible to transit milk from milk creating centre to faraway place. Cities widened rapidly as well as people's living of standard raised rapidly. As a result demand of milk increased. So industrialization of dairy farming was compulsory with the industrialization of other sector.
In 1888 'Niklos Gebart' of Switzerland and in 1890 'Stiwan Babkok' of America discovered system of measure fatty substance in milk. So it became possible to decide quality of milk, and give payment on the basis of quality of milk.

Similarly the system of pasteurization to preserve milk for longtime without getting sour, searched by American scientist, 'Luis Pashchar' in 1895. Because of this system milk can be heated up to specific temperature like 60 to 68 centigrade and chilled. Milk can't become totally germless in this pasteurization process, but milk can retain without disadvantages to health and stored for some days in good condition. It helps to keep constant quality of milk and possible to transport long away. At the beginning of 20th century in 1914 vehicles with insulated tanks were used to transport milk. It became possible to transport milk to far away.

Like this various systems were used to preserve milk and to make milk products in dairy farming. Having facility of processing on milk and making products milk production got motivation in World. Milk got good price because demand for milk in cities. After using milk, remaining milk was usual to make different milk substance and it used in human's diet at large quantity. So there was incensement of delicacy factories. In short, because of these all reasons this was radical change in traditional family based dairy farming and this business govt. industrial business nature.

1.4. Development of Dairy Farming in India:

Before A.D. 8 to 10 thousand years in India is reference of cows and buffaloes were domesticated and used for milk, farming and for transporting. In India cow has important position from ancient time. In 'Ved' there is importance of cow-nurturing. In 'Hindu' culture cows were known as 'Godhan' or Gomata. In vedic period at the time of worshiping, milk, curd, ghee, and cow-urine were used. Before B.C. 321 to 296 Great
economist 'Kautilya' has given reference and importance of animal husbandry and dairy farming in his holy book

Before B.C. 2500 to 650 up to means in ancient time in India dairy farming was in prosperous condition. Lord Shikrkrushna has persuaded the importance of milk to people of Gokul. There is reference of milk, butter. In Ved, Upnishade and Mahabharata, Person having more cows and buffalos were considered as rich persons. In A.D. 650 to 1850 in this period dairy farming declined. Demand of milk increased due to war, earthquake, famine, skrike, increasing population new research, industrialization. But due to less milk production, quality of milk demand increased due to increasing population and development in farming. Similarly hey, fodder, chaff and grass produced at the time of food and crop production. So these were nutritious atmosphere for milk production.

All these facilities were in ownership of private people and of milkmen. They tried to fulfill demand of milk by mixing water in milk, and tried to fulfill needs, so this business developed but there was no increase in quality. In this period dairy farming was done as a complementary business of farming. There was no attention to increase in milk production, improve quality of milk and milk products, to get economic benefit by creating and selling milk and milk products. In this period, there was no business progress. In Ancient time in India dairy farming was not considered as an independence business. Farming and animal husbandry was considered as a part of Indian lifestyle and Indian culture. After becoming Independence this business was considered as a occupational point of view. In India 60 to 70 percent people live in rural area. Farming is the main business of nearly 62 percent people. They practice a business of animal husbandry and dairy farming with farming. So they get employment 24.2 percent share is of agriculture related business like dairy farming, animal husbandry, forests,
fishery and mining in India's Gross Domestic products. 11 percent share is merely of dairy products. Dairy farming have developed in co-operative and Government sector, so people got employment from dairy farming. Their financial conditions have been raised\textsuperscript{11}.

\textbf{1.5. Development of co-operative Dairy Farming in India:}

If we make a glance on development process of co-operative dairy farming of India, we can understand that Government has taken intentionally steps in dairy farming after independence, period, co-operative principle adopted in this business like other sectors of started on 1862 in Pune.

Information about species of cattle’s, different diseases were given to farmers from this place. On 1868 commission was appointed for health of livestock. With recommendation of commission first veterinary college established at Hissar in Haryana. Development of co-operative movement in India is from poor people’s exploitation. Credit societies started to establish to become free from net of money-lenders. In 1883 a law was passed in Madras state to give loan to farmers on the basis of land security. Farmers can get loan on low rate of interest. According to decision of Lord Karzan on 1904 first co-operative credit supply society law passed. According to this law this credit supply society stated to supply only for agriculture sector: so second law about co-operative credit supply 1912 too was passed. Ex. Labours co-operative society, customer's co-operative society, Trade co-operative society, milk co-operative society, Industrial co-operative society, co-operative sugar factories, so co-operative movement spread on every level of society. All economically powerless factors came together to start solve their economical problems\textsuperscript{12}.

First military dairy at Allahabad established on 1886 in India. First animal counting was done in 1919. First co-operative dairy was founded at
Khetra, Allahabad in Uttar Pradesh. Later another milk co-operative dairy established at Baroda, Belgon, Hubali, Calcutta, and Bagalkot. Government consciously made attempts to develop dairy-farming, like other sectors of humans other economic business, principle of co-operative also adopted in dairy-farming. So this business developed in three sectors like Government, private and co-operative.

'Wargis Kurian' has a valuable contribution who succeed dairy farming on co-operative level in India. Dr. Kuriyan got degree of engineering in milk from University of America. Having noble goal to utilize his education for our country, he came to his village 'Anand' in Kheda district of Gujrat state. Taking help of 'Tribhuwanbhai patel' a social worker he founded 'Kheda District co-operative milk producing society' on co-operative nature (principle) of milk producing farmers. And hence forth in real the beginning of co-operative dairy-farming was become. Anand is place of taluka. To give market price on their daily quality of milk was the main basic of this society.

To develop co-operative dairy farming throughout India, "National Dairy Development Board" was founded on 1965. Its President was Dr.Wargis Kuriyan. Head quarter is at Anand. Main purposes of this Board were as following. To make modernization in technique of milk production business in our country. Make abundance of milk in Mumbai, Delhi, Chennai, Calcutta these four metropolitan cities of our country, on the basis of Anand co-operative milk society. To increase production of milk. To obtain fixed market to milk producers. To fix proper rate of purchasing and selling of milk. To improve economic condition of milk producers. To fulfill milk requirement of urban area of country.

After foundation of 'National Dairy Development Board' 'Operation flood' scheme was started on 1970. So on Anand pattern stress was given on
establishment of co-operative milk society. District milk producer's federation on district level, Taluka milk producer’s federation on Taluka level and primary co-operative milk society on village level was established. Similarly state federation was established on state level.

Indian Government began operation flood programme on 1970 to develop dairy farming. Period of this scheme was up to 31 March 1981. In this period at first cow-shed of cows-buffaloes of four cities were joined to each-other, collecting their milk together. They made proper arrangement of distribution.

Then decision was taken to start second 'Operation flood' programme from 1981 to prescribe all constituent states period of this scheme was up to 31 March 1995. Twenty districts of Maharashtra state was involved in this scheme, similarly from 1st April 1985 for the third 'Operation flood' scheme co-operation of World Bank was taken and period of this scheme was until 1990. According to this scheme 60,000 milk co-operative societies are acting (working) and they are distributing per day 7.3 million milk. Attempts of Kuriyan 'Anand pattern' of dairy-farming was run throughout the country and after success ding of pattern there was enormous incensement of milk production. India made big progress in milk production. In the year 1951 milk production was 17.4 million tones. Milk production increased in the year 2005-2006 and reached up to 106.9 million tones. In the year 1990-91, 63,415 milk producing co-operative societies were in India. In country now 96,000 co-operative milk producing societies are working, and near about 1.5 crore families are involved in milk production. Through dairy farming employment and production throughout year has become available to these families.

Means there is large increment in milk production. India is on first rank in milk producing countries. After the year 1980 dairy farming is
developing rapidly in India. This progress is only because of different programmes of operation flood\textsuperscript{17}.

According to observation of 'World food and Agriculture organization' on 1999 out of total livestock in World, 14.87 percent livestock is only in India. Average per yield period milk production of one cattle is 2071 Kilogram according to survey in 1999 of selected countries. On World level we can see the average milk production of countries like, Canada 6830, England 6175, Australia 4906, New Zealand 3462, Turki 1579, Pakistan 1078, India 1014, Bangladesh 206 kilograms. Per head milk availability of India is less than comparing other countries. But that is increasing. In 1951 per head milk availability was 132 grammes; in 1990 it were 178 grammes, 199 grammes in 1995, 217 grammes in 1999-2000 and 232 grammes in 2005-06\textsuperscript{18}.

In dairy-farming contribution of ladies is very much more comparing to gents. Out of total women, 38 percent women work in field in rural area of India. 20 percent works in their own farm and 29 percent women are in animal husbandry and forest farming. They have large share in rural area\textsuperscript{19}.

1.6. Dairy-farming development and opportunities in Maharashtra:

Foundation of Maharashtra state was on 1\textsuperscript{st} May 1960 on the basis of language region structure. Before 1956 to 60 Mumbai was part of bilingual state. From the view point of administrative, Marathwada, Vidharbha, Kokan and West Maharashtra, these are four divisions of Maharashtra. On the view point of dairy-farming there are seven divisions in Maharashtra like Pune, Nashik, Aurangabad, Amravati, Nagpur, Kokan and Mumbai.

Co-operative movement started very early in Maharashtra than other states of India. Co-operative dairy farming made more progress than other sector. In 1967 'Are' Gawali wada was established to give unadulterated milk to people of Mumbai city. So there was regular supply of milk to
people of Mumbai city. There was in creation in milk production. Similarly to fulfill milk demand in other region of Maharashtra stress was given on development of dairy-farming. So Maharashtra Government created new independent dairy farming department. Authority of registration of dairies, and control over them was given to this department. Then decision was taken to develop dairy-farming on co-operative nature. Until 1964 there was total control of Government on dairy-farming. Later 1964 co-operative sector got speed on June 9, 1967 'Maharashtra state co-operative milk federation' was established. And in year 1970 'Operation Flood' started. First Milk dairy plant to process on milk in state was acted in 1971 at 'Kattraj' Pune.

To develop dairy-farming in state and to keep continuity in milk purchasing from producers, on 1961 having capacity of 2.5 lacs liter per day dairy-farm was established at Warali. In 1975 at 'Kurla' in Mumbai dairy-farm was established having capacity of 4.00 lacs liter per day to process on milk. In 1981 Maharashtra Government and milk federation with collaboration having capacity of 4.00 lacs liter per day milk processing plant was established. On processing on milk Homogenized and pasteurized milk packed in bags and distributed in throughout Maharashtra state.

This business got different nature after starting of 'Operation flood' programmes structure of co-operative dairies in state was as following. State co-operative milk federation, District or Taluka co-operative milk federation, primary co-operative societies, Net of co-operative societies was created on the basis of Taluka federation and Union federation. In this scheme there was guaranteed market in village for permanent selling of milk to milk producers. Because of guaranteed rate for milk and all transaction was through co-operative society exploitation of milk process
destroyed. Milk used to get good rates. Milk producer used to get money within fifteen days. So there was constant growth in milk production.

An important law made because of co-operation in milk production business. Under this law there was creation of facilities to create milk chilling, making ice factories and facilities of transporting precede milk with the help of an insulated motor tanker to the cities. This was useful to people of rural area to send milk to urban area. Milk was transported through special modes to cities. Remaining milk was proceed making shrikhand, Ghee, Pannir, Cheeze and like other substances. Thus many facilities were created to make milky substances.  

1.7. Research Methodology:

In the general sense, Research refers to search for knowledge through objective. Research is an academic activity hence the term should be used in a technical sense. Research is an original contribution to the existing stock of knowledge making for its advancement. It is the pursuit of truth with the help of study, observation, comparison and experiment. The systematic approach concerning generalization and formulation of a theory is also research. As such the team ‘research’ refers to the systematic method consisting of enunciating the problem, formulating a hypothesis, collecting the facts or data, analyzing the facts and reaching certain conclusions either in the form of solutions towards the concerned problem or in certain generalizations for some theoretical formulation.  

1.8. Concept of Research:

Research is a broad term having a reference to different kinds of scientific inquiries conducted in the field of social sciences and to some extent of the behavioral science. There are various definitions and each definition aims at discussing the functions and scope of research.
The very common meaning of research is “a search for knowledge”. Research is an art of scientific investigation. It is a movement from the known to the unknown. Curiosity is an essential natural feeling of every human being. Whenever the unknown fact confronts us, we try to find the meaning and causes of that fact. This feeling of human being is the mother of all knowledge and the method which he employs for obtaining the knowledge of whatever the unknown is call as research. Thus, research is a voyage of discovery. It is a scientific and systematic search for pertinent information on a specific topic. It is an organized enquiry. It clarifies doubtful facts. It corrects the misconceived facts or ideas. It seeks to find explanations to unexplained phenomenon. In fact, research is an original contribution to the existing stock of knowledge making for its advancement. It is the pursuit of truth with the help of study, observation, comparison and experiment. Thus research is nothing but the search for knowledge through objective. It is a systematic method of finding solution to a problem.

According to P. V. Young: research may be defined as “a method of studying analyzing and conceptualizing social life in order to extent, modify, correct or verify knowledge whether that knowledge aids is construction of theory or in practice of an art”.

Young has defined social research as “a scientific undertaking which by means of logical and systematic technique, aims (1) to discover new facts or to verify and test old facts, (2) to analyze their sequences, interrelationships and causal explanations, (3) to develop new scientific tools, concepts and memories that would facilitate reliable and valid study of human behavior”.

In Random House Dictionary: research is defined as “a diligent and systematic inquiry or investigation into subject in order to discover or revise facts, theories, applications, etc.”
Webster’s International Dictionary: “Research is a careful critical inquiry or examination in seeking facts or Principles, investigation in order to a certain Something.”

According to Bogardus: “Social research is the investigation of the underlying processes operative in the lives of persons who are in associations.”

Lundberg: “Scientific Method consists of systematic observation, classification and interpretation of data. The main difference between our day to day generalizations and the conclusions usually recognized as scientific method lien in the degree of formality method ousness, verifiability, and general validity of the latter.”

C.A.Moser: Systematized investigation to gain new knowledge about social Phenomena and problems we call Social research.

Hering: Scientific research is a cumulative process; it is also adjective process especially in the social science. Understanding can be (advance) not only by gains in knowledge but also by discarding outworn as sumptions.

In the Advanced Learner’s Dictionary (Oxford): “research is defined as “a careful investigation or inquiry specially through search for new facts in any branch of knowledge”.

J.W. Best: ‘Scientific research is more systematic activity directed towards discovery and the development of organized body of knowledge.’

Clover and Balsely: Has defined research as “the process of systematically obtaining accurate answers to significant and pertinent questions by the use of the scientific method gathering and interpreting information.”

Thus every definition of research aims at adding new knowledge of human beings about the problems which face the society. Social research discovers fact about social relationship, social behavior, social interaction for understanding social problems and finding solution for social problems.
From above definitions, it is clear that research is an activity undertaken to establish the facts and principles in a scientific way and extend horizon of knowledge rather it is a method of discovering the truth in a scientific way.

1.9. Importance of the Study:

Dairy farming is a supplementary business to agriculture. To development this business and co-operative dairies net I have given some remedies to for general milk producer, small land owners, may laborers, sugarcane cutters unemployed for developing their economic growth.

Milk is a complete food hence it has a special importance in human diet. This provides a golden opportunity to rural dairy milk producers and farmers to do the supplementary business in their own village milk because of the farm general milk producers has changed their lives and economic status. At the same time urban peoples have got pure milk because of co-operative dairies in their native places.

In Beed district 82% population is living in rural area, they have very scarce opportunities of employments in their villages. They have to go somewhere ESE as sugarcane cutter in western region of Maharashtra. Because of the dairy farming, migrants have got the chances to live in their native villages ultimately this business reduces migration of peoples. Now a days this business gating immense importance in this district.

Beed district balls underrate rain fall region. Hence farmers are turning their alteration towards agri supplementary businesses. Another one reason farmers turning towards this business is that there is a net of dairy co-operative milk societies which buys his produced milk.

Although maximum numbers of farmers are doing this business, lack of complete knowledge, mismanagement, lack of facilities and lack of modern technology some of major obstacles in front of this business
Through this study, my attempt is to avoid maximum number of drawbacks and maximum number of farmers will turn towards this business. Because of this the producers will improve their economic and social status and it will help to develop are nation.

1.10. **Significance of the Study:**

India is Nation of villagers; Maximum people live in rural areas. Rural people face different problems due to backwardness. It has resulted in poverty moreover, due to underutilization of available resources. Alleviation of the rural poverty has been prime consideration of Indian planning for alleviation of the poverty of govt. India launched specific programmes and is trying to improve the quality of little of rural people rural development involves raising the social and economical status of the rural population on a sustainable basis through optimum utilizing of local resources.

Most of Indian rural population depend on agriculture. There is wide gap between rich and poor most of the population is suffering from indebtedness, lack of irrigation facilities, low Productivity, Money lenders dishonesty are causing the problems of poverty and unemployment of the rural development. Govt. of India launched various programmes during the planning in a rural development programme.

Govt. of India has adopted operative flood programme. These interludes the gross production of milk and milk contained produced, to develop hybrid animal which will prove helpful to milk producer and develop horticulture related projects, and develop horticulture related projects, these are some of the aims behind operation flood programme. This programme is implemented only thought co-operative societies. Benefits of this programme poor farmers and milk producers shall involve in this programme and should get benefits of the govt. scheme this is unknown to
maximum number of foamier and milk producers, I recommend to those formers and milk producers to avail the opportunity which on their door steps

1.11. Objectives of the Study:

1) To Study the Progress and Background of Dairy Co-operative in Maharashtra State.
2) To Study the Development of Dairy Co-operatives in Beed District.
3) To Study the Economic Status of Milk Producers in Beed District.
4) To Study The Problems of Milk Producers Under Dairy Co-Operative Societies and to Suggest the Suitable Remedies to Overcome Them.

1.12. Hypothesis of the study:

1) The Economic Position of Milk Producers is Increased Due to Co-Operative Societies.
2) There is Continuous Progress in Milk Production of Beed District.

1.13. SCOPE OF THE STUDY

1) Geographical Scope:

Beed district is selected for this research. Beed district is situated in Marathwada region of Maharashtra state. Rainfall is less compared to other district in Maharashtra, due to minimum rainfall Beed district is considered as a dry district. Most of the people of this district are migrated to other districts for work as a labor for sugar factory. But in milk production and dairy business the Beed district has better scope in Maharashtra.

The proposed research studies the primary dairy co-operative under Taluka dairy co-operative and its member in district. There are 11 Taluka dairy co-operatives therefore the proposed research studies primary dairy co-operatives under these 7 Taluka and its member for this research
sample are random selected based on sampling method from Beed district.

2) **Temporal scope:**

The period of ten years from 1999-2009 is considered for the research. This project was studied the economic position of milk producers in primary dairy co-operatives.

3) **Operational Scope:**

To select sample, probability sampling method is used. There are 11 Taluka in Beed district; out of them 7 Taluka have milk co-operative societies (Taluka level). In 7 Taluka there are 43 Zilla Parishad Circles, out of them 17% Zilla Parishad Circles are selected for study. Selected circles consist of 137 villages; out of them 5% villages are selected. In the selected villages there are 49 primary milk co-operative societies. Out of them 15% primary milk co-operative societies have been selected. In the selected primary milk co-operative societies, there are 2002 milk producers found. Out of them 10 % i.e. 200 milk producers are selected for sample selection of this study.

The necessary information about milk producers is their name, age, main occupation the information about his own land, its type, type of irrigation facility, the number of milky animals, the loan, its utilization, loan repayment, average milk production, sales, types of shelter for animals, types of fodder provided to the animals, rate of milk, benefits of being a member of primary milk co-operative society, guidance about beginning of milk production business, the income and expenses, financial situation such as saving, progress in the milk production etc.

### 1.14. LIMITATIONS OF THE STUDY:

The study has the following Limitations

1) The present study is confined to Beed district only.
2) Survey is totally based on belief of responded beneficiaries.
3) Difficulties are increased in getting objective information, as the milk producers in Beed district are found to be illiterate, uneducated.

RESEARCH METHODOLOGY

1.15. Collection of Data:

For the present study the data is collected by primary and secondary methods. During the survey questionnaire was used as a primary source for the data collection. The questionnaires are distributed to 200 milk producers.

1.16. Primary Data:

The milk producers' questionnaire includes 68 questions. The general information about name of primary dairy co-operatives, main occupation of the milk producers, types of land, irrigation facilities, number of milky livestock, taken a loan and its utilization, loan repayment, average daily milk production, how much milk is sold, rate of milk per liter, benefits of being a member of milk co-operative society, Financial situation such as income, expenses and saving, is also included in the questionnaire. The milk producer was also asked about their opinions regarding various topics such as milk production business, problems about milk production etc.

1.17. Selection of Samples:

Multistage sampling method from probability sampling selection methods is used in the present study. There are 11 talukas in Beed district, out of them 7 talukas have milk co-operative societies (Taluka level). In 7 talukas there are 43 Zilla Parishad Circles, out of them 17% Zilla Parishad Circles are selected for study. Selected circles consist of 137 villages out of them 5% villages, are selected. In the selected villages there are 49 primary milk co-operative societies. Out of them 15% primary milk co-operative societies have been selected. In the selected primary milk co-operative
societies, there are 2002 milk producers found. Out of them 10% i.e. 200 milk producers are selected for sample selection of this study.

**Table No.1.1**

**Taluka wise Z.P. Circle selection**

Selection of 17% Z.P. circles from talukas in Beed district

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Taluka</th>
<th>No. of Total Z.P. Circles</th>
<th>17% Selected Z.P. Circles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ashti</td>
<td>07</td>
<td>Kada</td>
</tr>
<tr>
<td>2</td>
<td>Patoda</td>
<td>03</td>
<td>Patoda</td>
</tr>
<tr>
<td>3</td>
<td>Kaij</td>
<td>06</td>
<td>Adus</td>
</tr>
<tr>
<td>4</td>
<td>Beed</td>
<td>09</td>
<td>Malapuri</td>
</tr>
<tr>
<td>5</td>
<td>Georai</td>
<td>08</td>
<td>Talwada</td>
</tr>
<tr>
<td>6</td>
<td>Ambajogai</td>
<td>06</td>
<td>Bardapur</td>
</tr>
<tr>
<td>7</td>
<td>Shirur</td>
<td>04</td>
<td>Shirur</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
<td></td>
<td><strong>07</strong></td>
</tr>
</tbody>
</table>

**Source:** Field Survey (2010-2011)

**Table No.1.2**

**Z.P. Circle wise villages selection**

Selection of 5% villages from selected Z.P. circles

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Selected Circles</th>
<th>Z.P.</th>
<th>No. of Total Village</th>
<th>5% Selected Villages</th>
</tr>
</thead>
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<td>Adus</td>
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<td>Bansarola</td>
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<td>Pendgaon</td>
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<td>Talwada</td>
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<td>Waghala</td>
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<td>7</td>
<td>Shirur</td>
<td>24</td>
<td></td>
<td>Gomalwada</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>137</strong></td>
<td></td>
<td></td>
<td><strong>07</strong></td>
</tr>
</tbody>
</table>

**Source:** Field Survey (2010-2011)
Table No.1.3

Selection procedure of Primary Milk Co-operative societies
Selection of 15% primary Milk Co-operative Societies from selected villages

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Selected Village</th>
<th>No. of Total Milk co-operative</th>
<th>15% Selected Primary Milk co-operative societies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kada</td>
<td>07</td>
<td>Shivshankar Primary Milk Co-operative Societies, Kada</td>
</tr>
<tr>
<td>2</td>
<td>Patoda</td>
<td>09</td>
<td>Pragati Primary Milk Co-operative Societies, Patoda</td>
</tr>
<tr>
<td>3</td>
<td>Bansarola</td>
<td>08</td>
<td>Jaykisan Primary Milk Co-operative Societies, Bansarola</td>
</tr>
<tr>
<td>4</td>
<td>Pendgaon</td>
<td>07</td>
<td>Gajanan Primary Milk Co-operative Societies, Pendgaon</td>
</tr>
<tr>
<td>5</td>
<td>Anandwadi</td>
<td>06</td>
<td>Kamdhenu Primary Milk Co-operative Societies, Anandwadi</td>
</tr>
<tr>
<td>6</td>
<td>Waghala</td>
<td>07</td>
<td>Shrikrushna Primary Milk Co-operative Societies, Waghala</td>
</tr>
<tr>
<td>7</td>
<td>Gomalwada</td>
<td>05</td>
<td>Kranti Primary Milk Co-operative Societies, Gomalwada</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>49</strong></td>
<td><strong>07</strong></td>
</tr>
</tbody>
</table>

Source: Field Survey (2010-2011)
Table No.1.4.

Selection procedure of milk producers

Selection of 10% milk producers from selected Primary Milk co-operative societies. Total 200 milk producers are selected from 2002 milk producers.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Selected Primary Milk Co-operative Societies</th>
<th>No. of Total Milk Producers</th>
<th>10% Selected Milk Producers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shivshankar Primary Milk Co-operative Societies, Kada</td>
<td>504</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>Pragati Primary Milk Co-operative Societies, Patoda</td>
<td>535</td>
<td>53</td>
</tr>
<tr>
<td>3</td>
<td>Jaykisan Primary Milk Co-operative Societies, Bansarola</td>
<td>293</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>Gajanan Primary Milk Co-operative Societies, Pendgaon</td>
<td>241</td>
<td>24</td>
</tr>
<tr>
<td>5</td>
<td>Kamdhenu Primary Milk Co-operative Societies, Anandwadi</td>
<td>215</td>
<td>21</td>
</tr>
<tr>
<td>6</td>
<td>Shrikrushna Primary Milk Co-operative Societies, Waghala</td>
<td>160</td>
<td>17</td>
</tr>
<tr>
<td>7</td>
<td>Kranti Primary Milk Co-operative Societies, Gomalwada</td>
<td>54</td>
<td>05</td>
</tr>
</tbody>
</table>

Total | 2002 | 200 |

Source: Field Survey (2010-2011)
1.18. Secondary Data:

The secondary data used for the study included various type of record available books, animal husbandry and statistical, departments, N.D.D.B. reports, Dairy farming development office, Zilla parishad annual reports, Taluka dairy co-operatives annual report.

These all official records proved to be useful to make the study realistic and meaningful reference books, periodicals, Magazines, articles, Government circulars, Internet use proved helpful for secondary data.
**Concluding Remark:**

1. India economy is agriculture-based and people living in rural India do the business in agricultural and co-agriculture for example dairy, animal husbandry, fishery, poultry etc. Main share in these is dairy business.

2. 17% of the world’s milk giving animals are in India. If we see at world level, 14% milk production is in India, Hence 88 metric ton milk taken is produced in India, Hence India stands first in the world for milk production.

3. Dairy business went from family level to industrial level because western countries brought drastic changes is dairy business. They invented techniques for separating butter and lactose from milk by doing procedure on milk. Also they invented a technique chilling milk preserving it for long time. Therefore milk was taken to far places for sale. It led to the increased demand of milk. According to the increased demand for milk in city, price for milk also increased. Hence family level dairy business changed into industrial level dairy business.

4. In the G.D.P. of India 32% share is of agriculture related business. In that 9% share is of dairy business.

5. First dairy co-operative in India was founded at Allahabad in Uttar Pradesh in 1913. After independence government took steps purposefully to promote dairy business in India and dairy co-operatives started to be founded in India.

6. In the successful implementation of dairy business on co-operative principle in India, Verges Kurian Contribution is praise worthy, He founded dairy co-operative at Anand village in kheda district of Gujarat state in 1950 and gave the milk producers the market rates
for milk according to the quality of their milk the also inspired people
to found dairy co-operatives.

7. After foundation of National Dairy Development Board in India,
Anand Pattern was implemented throughout country with the help
and guidance of Mr. Kurian. India progressed a lot in dairy business
milk production was 17.4 million tons in 1951; it was raised to 106.9
million tons in 2005-06.

8. ‘Aare’ Gawali wada was founded in Maharashtra in 1957 and regular
milk was supplied to the people of Mumbai. Maharashtra state was
made in 1960 and Maharashtra state dairy co-operative Board was
founded in 1967 by the Government of Maharashtra to encourage co-
operative field milk flood scheme was started in 1970.

9. After the milk flood scheme, dairy co-operative in the state were
structured as state co-operative dairy board, district dairy co-
operatives, Taluka dairy co-operative and primary dairy co-
operatives at village level. Hence, guaranteed market for the sale of
milk was made available to the milk producers.
References:

15. Ibid, P.54.
27. Research Methodology and Techniques, Dr.Pradiq Aaglave, Vidya Prakashan, Nagpur, 2000,P.3
29. Research Methodology, Dr.Sudhir Bodhankar and Prof.Vivek Alone, Shri Sainath Prakashan, Nagpur, 1999,P.15


32. Research Methodology, Dr. S.K. Dhage and Dr. C.P. Hase, K.S. Publication, Pune, 2011, P.35.