

**SUSTAINABLE LIVESTOCK FARMING: A MECHANISM FOR
EMPOWERING RURAL WOMEN IN PALAKKAD DISTRICT,
KERALA**

MINOR RESEARCH PROJECT

SUBMITTED TO

UNIVERSITY GRANTS COMMISSION

BY

DR. SR. LILLY P.V.

ASSOCIATE PROFESSOR

DEPARTMENT OF ECONOMICS

MERCY COLLEGE, PALAKKAD, KERALA -678006

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PREFACE

Livestock production is an integral component of farming system. It plays a crucial role in the rural economies of developing countries like India. The share of livestock product is estimated at 21% of total Agriculture sector of India. India owns the largest livestock population accounting for nearly 57% of the world Buffalo population and 16% of the cattle population. The contribution of women to national development in the current context and its potential is of greater significance. Involvement of Indian women in national progress at all levels is undisputable reality although the degree of involvement varies from time to time and region to region. The prosperity and growth of a nation depends on the status and development of its women as they not only constitute nearly half of the population. Rural women are playing a significant role in livestock management practices. They spend a lot of time in performing different activities of livestock management like fodder cutting, fodder chopping, watering and feeding of animals, animal shed cleaning, milking, making dung cakes and looking after live stock health. Rural women are intensively involved in many livestock management activities including milking, fodder chopping, feeding, collecting eggs, watering, making and storage of dung cakes, cleaning animals' sheds. Women often devote more time (16-18 hours) against men to these tasks.

In India women play key role in both livestock management and household activities besides farming activities, but their contribution often be considered as unproductive, unorganized, and undocumented. In this context, realizing the true contribution of rural women in livestock management, the present study is focused on their participation in livestock management activities. Keeping the above facts in view the present study entitled as "*Sustainable Livestock Farming: A Mechanism for Empowering Rural Women in Palakkad District, Kerala*".

The successful completion of this project was a unique experience because by visiting many places and by interacting with various persons, a better knowledge about the topic was achieved. Anyway this report will definitely help future researchers in this field.

DR. SR. LILLY P.V.
(PRINCIPAL INVESTIGATOR)

CHAPTER I
DESIGN OF THE STUDY

CHAPTER 1

1.1 INTRODUCTION

“Major attributes that contributes to women empowerment is education, social equity and status improved health, economic or financial stability and political participation. Her enlightenment will change the face of rural economy.”

- Smt. Prathibah Singh Patil

India is an agriculture based country and livestock sector is an integral component of it and livestock is generally considered a key asset for rural livelihoods. It offers advantages over other agricultural sectors and is an entry point for promoting gender balance in rural areas. In most societies, all household members have access to livestock and are involved in production as well as livestock production systems offer the potential for introducing a wide range of project activities to both genders.

In India, livestock production is largely in the hands of women. Most of the animal farming activities such as fodder , collection , feeding , watering and healthcare , management, milking and household level processing , value addition and marketing are performed by women.

Women constitute about 69 percentage of workforce engaged in livestock sector. India is the world’s largest milk producing country with a share of about 16 percentages in world’s total milk production. India, the current header in dairy world, rank first in milk production with a production level of 132.4 million tons of milk growing steadily at a compound annual growth rate of about 6.5 percent. In fact, the major share of the credit for India’s position has largest milk producing country in the world and the significant increase in the per capita availability of milk in the country has to go to the largely illiterate rural women dairy farmers. Increased consumption of livestock products, particularly in the fast growing economics of the developing world, has been an important determinant of rising prices for meat and milk. Livestock provide income, create employment opportunity and provide food and nutrition securities across different production system and along different value chains. More over vulnerable groups particularly women and the landless, frequently engage in livestock production thus highlighting the multi-faceted virtues of livestock promotion as a pathway out of poverty.

It is estimated that about 70 million rural households own livestock of one species or the other. The resource-poor, small and marginal farmers and landless laborers own majority of livestock resource. Hence sustainable development of the livestock sector would head to more inclusive development and empowerment of women. Women's typically role within a livestock production system is different from region to region and the distribution of ownership of livestock between men and women is strongly related to social cultural and economic factors. Access, control and management of such resources as small ruminants, grazing areas and feed resources empower women and head to an overall positive impact on the welfare of the household.

Women face greater constraints than men in excising natural resources, extension services, marketing opportunities and financial services as well as excising their decision-making powers. These constraints often prevent women from reaching their full potential with in the agricultural sector, including livestock and therefore compromise the achievement of overall household food security and nutrition.

In India, livestock production is largely in the hands of women. Besides, considerable involvement and contribution of women, considerable gender inequalities also exist in Indian village. Therefore, there is a need to correct gender unfairness in livestock sector. Efforts are needed to increase the capacity of women to negotiate with confidence and meet their strategic needs.

Kerala has made significant progress in livestock development. The role of women in livestock farming is significant because they are involved in most of the farm activities.

Livestock farming in Palakkad is of ancient origin. Palakkad is also ranked first in cattle population. The livestock faming is a major sector that provide large self – employment opportunities for the rural women in Palakkad.

1.2 STATEMENT OF THE PROBLEM

Traditional rural society in India is generally dominated by men at family and society level. Women are restricted in their access to and control over financial resources and are less involved in financial transactions and decision-making. Women in many parts of India don't have the same freedom of movement as men. These unequal gender relations with all their

consequences affect millions of poor rural women in India and worldwide. Providing equal opportunities for women and men is an end in itself but it is also instrumental in achieving poverty reduction and social development. By increasing women's economic participation, the aggregate income levels of poor households increase and there is a direct positive effect on children's health, nutrition and education since women are more likely to invest their extra income in basic family maintenance. Considering these reasons women empowerment became a leading paradigm for development policies.

If women are made economically more productive, it will not only reduce their dependency and enhance their status in their family but also contribute towards increasing aggregated labour productivity, increased household income and better priorities for spending. The role of women in productive activities has been increasing over the years; but the total number of enterprises run by them is insignificantly small. Share of employment in rural unorganized sector as held by women can be traced to major employment systems. These are agriculture, dairying, animal husbandry, fisheries, social and agro- forestry, khadi and village industries, handlooms, handicrafts and sericulture. Out of these employment systems, women's involvement has been found to be intensive in dairying and in animal husbandry activities. The rural women spent a considerable time with their farm animals. Rural women mostly derive their daily bucks from livestock management system. Women, as the main users of locally adapted livestock breeds, play a major role in managing animal genetic resources and thereby conserving them. Livestock are central to the livelihoods of the poor. They form an integral part of mixed farming systems, where they help raise whole-farm productivity and provide a steady stream of food and revenues for households. However, livestock's role and contribution to livelihoods in developing countries extends well beyond what is produced for the market or for direct consumption.

The present study analyse the livestock sector and livestock rearing practice among rural women of Palakkad district. Rural women play a key role in the livestock management and household activities. However, it is often argued that their contributions are undermined and their decision making power is highly limited. Even though several studies were conducted in this field, none of them concentrated on livestock rearing practice among agricultural households in Palakkad District. So this study aims to fill the gap.

1.3 IMPORTANCE OF THE STUDY

Livestock farming plays a predominant role in shaping economic destiny of rural poor, especially the rural women. Livestock farming plays a vital role, providing huge productive employment opportunities, sufficient income and to maintain a good quality of life.

Livestock play numerous imperative roles, including: as a provider of employment to the farmer and family members; as a store of wealth; as a form of insurance; contributing to gender equality by generating opportunities for women; recycling waste products and residues from cropping or agro-industries; improving the structure and fertility of soil and controlling insects and weeds. Livestock residues can also serve as an energy source for cooking, contributing to food security. Livestock also have a cultural significance – livestock ownership may form the basis for the observation of religious custom or for establishing the status of the farmer. Needless to mention, livestock is generally considered a key asset for rural livelihoods. It offers advantages over other agricultural sectors and is an entry point for promoting gender balance in rural areas.

The contribution of animals to both agricultural and overall economic development has not been adequately evaluated. Livestock farming is important in the present scenario for ensuring adequate livelihoods and has significant potential for poverty alleviation. Majority of rural women are engaged in livestock farming thereby, rural women are getting economic, social and nutritional security from livestock farming. Thus, it proves to be beneficial to the people, especially to the poor rural women. Hence the study shows the significance or valuable role of rural women in livestock management activities.

1.4 OBJECTIVES

The objectives of the study are

- To ascertain the impact of livestock production and management on the empowerment of rural women in Palakkad district.
- To examine women's potential, opportunities and constraints impeding women's entry and performance in the livestock sector to elicit focused interventions that improve and sustain livestock productivity.

- To analyse the role of governmental and non-governmental organisations to enhance female participation in the promotion of livestock farming sector.

1.5 METHODOLOGY

The methodology followed for the study on “*Sustainable Livestock Farming: A Mechanism for Empowering Rural Women in Palakkad District, Kerala*” consists of the following subheads.

1. Location
2. Selection of Sample
3. Sources of data
4. Period of the study
5. Quantitative techniques
6. Limitations

1. Location

Palakkad, the district of Kerala is a multifarious district known for its history, natural resources, standard of education, tourist destinations and also in every field of economic development. Palakkad district is situated in the South West Coast of India bounded on the North by Malappuram in the East by Coimbatore of Tamilnadu, in the South by Thrissur and in the West by Thrissur and Malappuram districts. It lies between 10°21 and 11°14 North latitude and 76°02 and 76°54 East Longitude. The total geographical area of the district is 4480 sq.k.m representing 11.53 per cent of the State's geographical area. The forest land per cent covers 136257 hectares. According to 2011 Census, Total population of Palakkad is 2,810,892. This shows an increase of 7.39 percent in 2011 compared to figures of 2001 census and constituted 8.42 percent of total Kerala Population As per census 2011, density of Palakkad District per square km is 627. Male and female were 1,360,067 and 1,450,825 respectively. Sex ratio of girls in Palakkad district per 1000 boys was recorded 1067. In 2011 census, data of Palakkad district regarding child under 0-6 age were also collected. There were total 288,366 children under age of 0-6 and among them; male and female were 146,947 and 141,419 respectively. Child Sex Ratio as per census 2011 was 962. Children's proportion in total population was around 8.42 percent. In education sector, Palakkad District is having average literacy rate of 88.49 percent in 2011 Census. Male literacy and female literacy were 92.27 and 84.99 percent respectively. In all,

there were total 2,232,190 literates in 2011 Census, compared to 1,938,818 literates of 2001 census.

Located in the heart of the state, the district adjoins Kerala to rest of the Indian States. The district has its own historical importance. Because of its location in the centre of the state the district enjoys all the developments which took place in the state. The economy of the district is an agricultural economy where almost 65% of the total population is engaged in the agricultural activities for their livelihood. Most of the population resides in the rural areas.

For the present study, purposefully Palakkad district is selected due to the reason that Palakkad ranked first in milk production and livestock population in Kerala, Palakkad also ranked first in the number of livestock farmers, out of which most of them were women.

2. Selection of Sample

For the present study, the survey was undertaken in three villages namely Elappully, Akathethara and Sreekrishnapuram grama panchayat located in Palakkad district, 70 respondents were selected as samples. Among this 25 samples were from Elappully grama panchayat , 25 from Akathethara grama panchayat and the rest 20 from Sreekrishnapuram grama panchayat. We select all these places for our study, is mainly because these areas are popular for women centered livestock farming.

3. Sources of data

The study is based on both primary and secondary data. Primary data has been collected from the random selected respondents by personal interview using interview schedule. A separate survey was conducted personally with the women livestock farmers of Elappully grama panchayat, Akathethara grama panchayat and Sreekrishnapuram grama panchayat in Palakkad based on a questionnaire prepared.

Secondary data has been collected from sources like Economic Times, Economic Survey, Agricultural Journals, Internet, Magazines, Department of Economics and Statistics, Animal Husbandry Department, Dairy Development Department and previous studies in this field.

4. Period of the study

The study was conducted during the period of June 2016 to May 2018.

5. Quantitative techniques

- a. Percentage
- b. Pie diagram
- c. Bar diagram
- d. Rank correlation

6. Limitations

This study has some limitations. Firstly, the time allotted to the study was very limited. Within this short time, information collected has some imperfections. Another obstacle is that some of the respondents were reluctant to provide correct details of personal income, extent of land holding, level of savings and so on. Another limitation was during data collection hours most of the respondents were not available due to their other activities. Another complication while doing this project was difficulty in finding samples for data, due to this only a small portion of population is covered.

1.6 REVIEW OF LITERATURE

A close review of past research is essential in a scientific investigation as it will provide a clear insight into the existing situations and thus help in formulating a sound chapter to review the theoretical and empirical information available from similar or at least related studies. Such a recapitulation will serve as a basis for relating the empirical findings of the present study with those of earlier investigations. It should be noted that only few studies pertaining directly to ascertain role of livestock farming for empowering rural women.

- ❖ **Prakash Kumar Rathod, et.al. (2011)** jointly examined the crucial role of women in agriculture, allied occupations and household activities have however been grossly underestimated and undervalued in a study -“*Participation of Rural Women in Dairy Farming in Karnataka*”. Dairy farming is major occupation of rural women in Karnataka. The study was carried out to ascertain the role and participation of rural women in dairy farming, using a pretested interview schedule by personal interview for sample size of

120 rural women in Mudhol block of Bagalkot district, Karnataka (India). The study revealed that women participation was maximum in caring of pregnant animals (91.66 %) followed by taking animals for pregnancy diagnosis (90.83 %). The study revealed that 90 per cent women involved in milking while 89.16 per cent women cared for newborn or young animals. The farm women actively involved in cleaning of animal sheds (89.16 %), feeding the animals (87%) and disposal of cow dung (86.66 %).The farm women participation was least in farm record maintenance (52.5%) and getting loans or credits from the banks (49.16 %).The study concluded that women participated mostly in non-financial activities and there is a need to educate farm women about scientific management practices for increasing livestock production.

- ❖ **Sangeeta Upadhyay and C.P. Desai (2011)** signify animal husbandry as the second largest economical activity next to agriculture in rural areas in a study *“Participation of Farm Women in Animal Husbandry in Anand District of Gujarat”*. It provides employment and economic support to rural families. Many of the important tasks in animal husbandry are performed by women besides their responsibilities as home makers and caring of animals is considered as an extension of domestic activities. The role of dairy farm women is not recognized as economic contribution and they remain as unpaid labour. This study emphasized the participation of dairy farm women in animal husbandry occupation. The study was conducted in Anand district of Gujarat. Data were collected from 120 farm women using structured interview schedule. Study highlighted that farm women took independent decisions in the aspects of fodder management and milking whereas decisions in respect of economic aspects were taken jointly with their male counterparts. The participation was observed more in the aspects related to milking, feeding, health care and management, breeding and less in general aspect of animal husbandry.
- ❖ **J. B. Kathiriya, D. M. Damasia, B. B. Kabaria (2013)** carried out a survey based study - *“Role of Rural Women in Dairy Farming of Rajkot District”* was to ascertain the role and participation of rural women in dairy farming, using a pretested interview schedule by personal interview for sample size of 240 rural women in Jasdan, Morbi and Maliya tehsils of Rajkot district, Gujarat (India). The study remarks that, farm women always handle critical jobs and are considered to be the main actors in small scale farming. It

also found that the income from dairy animals does not remain in the hands of women and neither does the decision regarding sale and purchase. Hence it suggests that there is a urgent need to develop technologies which will help the respondents carry out the activities with ease since they are relatively unpleasing, back breaking, monotonous and involve drudgery, physical exertion which ultimately affects their physical and psychological well being. Farm women have to be motivated to acquire more scientific knowledge for increasing the livestock production through various extension techniques.

- ❖ **Aklilu Nigussie, Dana Hoag and Tigist Alemu (2014)** conducted a study named *“Women’s workload and role in livestock production in pastoral and agro-pastoral communities of Ethiopia: The case of Afar”*. This study looked at three pastoral and agro pastoral communities of Afar, Ethiopia. By surveying women and men in households that were headed by women (WHH) and that were headed by men (MHH), found that women do close to 100% of the household chores, but men share more of these in MHHs. MHHs appear to have advantages from more labor. Women in these households spend half as much time fetching wood and water and more time on rearing livestock than women in WHHs. Women in WHHs are less educated, but take more advantage of technical trainings and involvement in associations. The result of the multiple regression analysis showed that male labor was the most important factor influencing output. Labor from women was found to be used less efficiently in both households, implying that the spare time gained by women in MHHs was productive but still less so than men. Perhaps the most important findings here is that households without men are more likely to be limited to a subsistence lifestyle, and that one important reason is the time it takes for simple tasks such as fetching wood and water.
- ❖ **K. Saravanan and R. Sathiyakala (2014)** argued that women contribution to agriculture is seldom recognized in spite of their active role in the agriculture as well as livestock rearing activities in developed as well as developing countries in a study *“Participation of Rural Women in Livestock Rearing: A Case Study on Krishnagiri District in TamilNadu”*. The study is to analyse the association between the socio-economic characteristics of rural farm women and the extent of their participation in livestock farming in Krishnagiri district of Tamil Nadu. A multistage random sampling technique was used to collect the data from 127 farm women from two villages namely, Paiyur and

Jegadevipalayam villages of Krishnagiri taluk in Krishnagiri district. The results of the study showed that farm women have a close association with livestock farming in the study areas. These results tend to suggest a more active role for this segment of rural society so as to achieve rural development through combining women in livestock development.

- ❖ **Mihiret Mulugeta and Tadesse Amsalu (2014)** pointed out that rural women play a key role in the livestock management and household activities in their study “*Women’s Role and their Decision Making in Livestock and Household Management*”. However, it is often argued that their contributions are undermined and their decision making power is highly limited. This study was carried out in Yilmana Densa district in Amhara Region, Ethiopia with the objectives to investigate the role of rural women in livestock and household activities, and to examine the level of rural women participation in decision making. Three villages were selected purposefully and from each village 30 women respondents were selected randomly. The majority of rural women participated ‘regularly’ in cleaning of animal sheds, preparing milk products, gathering dung, selling milk/milk products, selling egg/poultry, and egg collection. In household management, majority of rural women are ‘regularly’ engaged in food preparation, looking after all family members, preparing local beverages, cleaning the house, clean-up after meals, washing clothes, child care, fetching water, and embroidery. The study recommends that capacitating rural women in all rounded developmental aspects can affect their livelihoods which enables them actively participate in various agricultural and non-agricultural activities. Maximum attention should be given for rural women to build their capabilities in decision making. Moreover, appropriate ways and approaches to educate rural women should be given more emphasis to get equal access with rural women.
- ❖ **Adhiti Bhanotra, Vivek Wankhade, S.A. Khandey and Pranav Kumar (2015)** considered livestock as a key asset for rural livelihoods in a study named “*Role of Rural Women in Decision Making Process Regarding Livestock Management*”. Rural women play critical, diverse roles in livestock production in the rural economies of developing countries as unpaid workers. They embark on various activities of livestock management like watering and feeding of animals, cleaning activities and milking. However, their involvement as decision makers regarding various livestock activities is still dubious.

Hence the study was conducted to determine the contribution of rural women in decision-making in livestock management. A sample of 100 female respondents was selected randomly from five villages of Kathua district of Jammu and Kashmir through multistage random sampling technique. The data shows that rural women's participation was relatively high in activities like care of new born calf, care of sick animals, cleaning activities, produce and feeding of animals. However, their participation was relatively low in activities like sale of animals, breeding of animals; fodder harvesting, cultivation and maintenance of animals' sheds. Male dominance and traditional belief system were the main factors which had affected the involvement of rural women in decision making process.

- ❖ **Anika Malik, Gautam And Kamaldeep (2015)** remarked that animal keeping is an integral part of rural life and is considered a pathway for women empowerment in their study "*Participation of Rural Women in Animal Husbandry Development Programmes and Decision Making Regarding Animals in Haryana*". Rural women play a key role in livestock management. However it is often argued that their contribution are undermined, underestimated and their decision making power are highly limited. The knowledge and skill of women dairy occupation and their participation in decision making certainly affects their efficiency in work and in the development of dairy enterprise. The study was conducted in Hisar district of Haryana state to assess the participation of women in decision making regarding animals and in animal husbandry development programmes. The respondents were selected using simple lottery method and 30 women farmers were chosen from each four selected villages thus constituting a sample size of 120. It was found that their participation in different areas varied. They can give only suggestions to their spouse in decision making regarding animals' purchase and sale, insurance, loans, participation in support programmes (like trainings) and not taking decisions independently. The study recommends that, more attention should be given to rural women to build their capacities in decision making. Moreover appropriate ways and approaches should be adopted for providing equal access to women in Animal Husbandry Development Programmes.
- ❖ **Patel S.J., et al (2016)** jointly a survey study was conducted titled "*Knowledge of Farm Women Regarding Dairy Husbandry in Junagadh District of Gujarat State, India*" to

acquire the first hand information on Personal and socio-economic characteristics and Knowledge of farm women regarding dairy husbandry in Junagadh district of Gujarat state, India. A simple random sampling technique was used in the selection of dairy farm women. The total sample constitutes 200 dairy farm women, four talukas and five villages from each taluka. Total ten (10) respondents selected from each village of the district. The study reveals that majority of the farm women had medium level of knowledge regarding general aspects, feeding, breeding, management, milk and milk products and health care of milch animals in dairy farming and most of them does not know modern animal husbandry practices because of lower education, low mass media exposure and less availability of extension workers in their villages.

- ❖ **N.V. Kavithaa and N. Vimal Rajkumar (2016)** tried to explore the role of farm women in decision making process in dairy farming activities in their study titled, *“Decision Making Behaviour of Farm Women in Dairy Farming Activities In Erode District of Tamilnadu”*. A total of sixty farm families (60 rural farm men and 60 rural farm women) who were actively involved in dairy farming practices were selected for the study with the help of local leaders and Veterinary Assistant Surgeons. The data was collected through personal interview method and subjected to statistical analysis. The findings of the study revealed that rural farm women were dominated in decisions making process in non - financial activities like construction of shed, treatment of animals, vaccination and de-worming, management of new born calves, sick and pregnant animals, milking and processing of milk, utilization of dung. Also it is evident from the study that rural farm women were less dominated in decision making activities regarding economic aspects, so there is need to make them aware about financial regulation, loans, insurance of animals and marketing structure.
- ❖ **Madhura Swaminathan and Yoshifumi Usami (2016)** made an attempt to delineate the role of women workers in the animal resources sector of rural India using detailed village-level data and interviews in a study *“Women’s Role in the Livestock Economy”*. Extrapolating from data on three villages, the study found that women are regularly engaged in livestock and animal care. In one village, we found that if the total number of hours that a woman worked at tasks involving household animal resources were converted into work days, she worked for the equivalent of 104 days a year at animal

rearing. However, national data systems not only underestimate the economic contribution of women to this sector, but are also not conceptually equipped to deal with situations where women take up activities that are crucial for the survival of the household but are intertwined so closely with household work and responsibilities that they are not counted as workers either by the investigators or by the women themselves. Hence any research require large-scale survey data to identify features of women's work in animal rearing, including the extent of work participation, the hours of work, and the contribution to family incomes.

- ❖ **Akram A Khan and Sweta Gupta (2016)** jointly investigated about “*Role of Indian Livestock Sector in Rural Women Empowerment*” and found that Livestock sector plays a significant role in the socio-economic development of India. Its growth is pro-poor and inclusive. Livestock helps in generating a continuous flow of income and employment. The sector empowers women as they perform a large number of activities related to livestock production. According to the working group report on animal husbandry and dairying 12th five year plan (2012-17), animal husbandry helps in improving gender equity. More than three-fourth of the labour requirement in livestock production is met by women. The share of women employment in livestock sector is around 90% in Punjab and Haryana where dairying is a major activity. The outstanding demand for livestock products gives considerable opportunities for the rural women to escape poverty by diversifying livestock production. The study highlights the role of Indian livestock sector in empowering rural women. It further estimates the contribution of animal husbandry vis-à-vis other agricultural activities in providing casual, regular and self-employment to rural women. The study uses the data from National Sample Survey Organization. It also provides suggestions for structuring the policies that may help in capitalizing the opportunities given by livestock sector for empowering rural women.
- ❖ **S.J. Patel, et.al. (2016)** explained that India is an agriculture based country and livestock sector is an integral component of it where, livestock production is largely in the hands of women on a study named “*Role of women gender in livestock sector: A review*”. Most of the animal farming activities such as fodder collection, feeding, watering, and health care, management, milking and household-level processing, value addition and marketing are performed by women. Besides, considerable involvement and contribution of women,

considerable gender inequalities also exist in Indian villages. Therefore, there is a need to correct gender bias in livestock sector. Efforts are needed to increase the capacity of women to negotiate with confidence and meet their strategic needs.

- ❖ **Suman Sharma et.al. (2017)** jointly conducted a study - *“Association between knowledge levels of women respondents about improved cattle management practices in arid region of Rajasthan”* in the Bikaner district of Rajasthan, India to find out the association between knowledge levels of women respondents about improved cattle management practices. A list of women engaged in cattle management practices was procured from Uttari Rajasthan Sahkari Dugdh Utpadak Sangh Limited (URMUL). The respondents were selected by using proportionate random sampling procedure from 18 dairy co-operative societies of 6 selected milk procurement routes. Therefore, a total number of 120 women respondents of dairy co-operative societies were drawn for the investigation. The findings of the study revealed that significant association was found between age, caste, education, size of land holding, family type and family size with knowledge level of respondents. It also depicts that the respondents only had a medium knowledge about improved cattle management practices. So, the extension activities like training, method demonstration, educational tours etc. should be organized frequently for the members of the dairy cooperative societies.
- ❖ **P. Reeja George et.al. (2017)** an investigation was undertaken to assess the socio economic profile of rural women and explore the possible role of animal husbandry in this district. The study *“Socio Economic Profile of Rural Women and the Role of Animal Husbandry Intervention in a Suicide Affected District of Kerala”* reports about farmer suicides in the Wayanad district in the south Indian state of Kerala. The three taluks in Wayanad district were purposively selected from which a total of 103 women from self help groups functioning under the government sponsored poverty eradication programme were selected at random. Nearly one third of respondents indicated that their primary occupation was agriculture with some animal husbandry component. Availability of latrine, type of roof and walls of home, as well as domestic source of water were the three variables which were used in this study to determine the quality of life of the sample population. Nearly 15 per cent of women did not have separate latrine facilities on their homestead and nearly seven per cent lived in make shift houses. More than half of the

respondents were in the age group 25 – 35 years and their average yearly income was reported by them to be Rs 3768. Over three fourths (75.7%) of these households kept livestock along with crops. The study emphasizes the importance of exploring alternate employment and income generating activities such as animal husbandry in order to improve the socio economic conditions of these women since the family background variables have a vital role in the development of personality traits in children which could affect quality of human capital in the future generation of the district.

1.7 CHAPTERISATION

The study divided into five chapters

➤ **CHAPTER I**

First chapter consists of Introduction, Statement of the Problem, Scope of the Study, Methodology, Review of Literature, Limitation, Chapterisation.

➤ **CHAPTER II**

Second chapter shows Background of the Study

➤ **CHAPTER III**

Third chapter traces Livestock Rearing Practice among Rural Agricultural Households an Overview

➤ **CHAPTER IV**

Fourth chapter examines Primary Data Analysis

➤ **CHAPTER V**

Fifth chapter presents Summary and Conclusions

CHAPTER II

BACKGROUND OF THE STUDY

CHAPTER II

BACKGROUND OF THE STUDY

2.1 HISTORICAL BACKGROUND

Animal husbandry is a branch of agriculture concerned with the domestication of, care for and breeding of animals such as dogs, cattle, horses, sheep, goats, pigs and other like creatures. Animal husbandry began in the so-called Neolithic (new stone) revolution around 10,000 years ago but may have begun much earlier. It has been speculated that human beings used fire to cook food 1.5 million years ago but the only archaeological evidence obtained thus far sets the data of the use of fire for cooking at 12,500 years ago as indicated by the discovery of clay cooking pots in East Asia. Though domestication of animals was probably common earlier, it is certain that goats and sheep were domesticated throughout Asia by 800 BCE. Wheat was domesticated and in wide use in Mesopotamia by 7700 BCE, goats by 7000 BCE, sheep by 6700 BCE, and pigs by 6500 BCE. By the time of the settlement of the first Mesopotamian city of Eridu in 5400 BCE, animal husbandry was widely practiced and domesticated animals used in the work force as pets, and as a food source. Once people realized that animals could be tamed, the creatures become incorporated into the most basic and wide spread rituals of the culture. Worship of animals in Egypt is well known but many ancient cultures incorporated animal imagery into their religious icons and practices.

Animals-rearing has originated during the cultured transition to settled farming communities rather than hunter-gather lifestyles. Animals are ‘domesticated’ when their breeding and living conditions are controlled by humans. Over time, the collective behaviour, lifestyle and physiology of livestock have changed radically. Many modern farm animals are unsuited to life in the wild.

The mythical kamadhenu symbolizes livestock as a perennial source of wealth. Traditional wisdom has recognized the importance of livestock not only as producer of cash incomes but more importantly as provider of traction, manure, fuel and food. In small and subsistence livestock is an insurance against crop failure. A great variety of recorded production

systems both for crops and livestock have been practiced in India at some place, and at some point of time.

Livestock sector a multi-faceted role in socio-economic development of rural households. Livestock rearing has significant positive impact on equity in terms of income and employment and poverty reduction in rural areas as distribution of livestock is more egalitarian as compared to land. In India, over 70 percent of the rural households own livestock and a majority of livestock owning households are small, marginal and landless households. Small animals like sheep, goat, pigs, and poultry are largely kept by the land scarce poor households for commercial purposes due to their low initial investment and operational costs. In the recent decade, demand for various livestock based products has increased significantly due to increase in percapita income, urbanization, taste and preference and increased awareness about food nutrition. Livestock sector is likely to emerge as an engine for agricultural growth in the coming decades. It is also considered as a potential sector for export earnings.

The advocacy function of the Livestock Environment and Development [LEAD] India platform is led by a network of organizations called LAN [LEAD Advocacy Network]. The purpose of LAN is to enhance proper livestock related livelihoods by resources management and by promoting an enabling environment LAN is an inclusive process of networking to further the agenda of strengthening pro-poor livestock related livelihoods.

The objective of this network is to study various livestock issues in watershed areas and develop policy guidance's for livestock development. The work of the initiative targets the protection and enhancement of natural resources as affected by livestock production, while alleviating poverty.

The National Livestock Mission (NLM) has commenced from 2014-15. The mission is designed to cover all the activities required to ensure quantitative and qualitative improvement in livestock production systems and capacity building of all stakeholders. The mission will cover everything germane to improvement of livestock productivity and support projects and initiatives required for that purpose subjective. This mission is formulated with the objective of sustainable development of livestock sector, focusing on improving availability of quality feed and fodder.

Since India's independence, it has experienced considerable economic growth and structural change; a trend accelerated by its structural reforms which began in 1991. These changes are also reflected in trends in its livestock sector which has shown considerable growth in late 1990s. There have also been major changes in the production of the Indian livestock sector. Animal husbandry sector provides large self-employment opportunities. Presuming that one family member is employed in looking after the livestock any have 25 million people are estimated to be employed with the livestock rearing activity.

The animal husbandry is a leading sub sector of the primary sector of Palakkad districts and it plays a significant part in the rural economy. Animal husbandry provides gainful, economically profitable from self-employment particularly to women and growing children in rural families. Organic manure compost is productivity- augmenting product of animal husbandry. It is combined with the chemical fertilizers in proper proportions and applied in agriculture.

Livestock sector includes animal husbandry, dairy and fisheries sector are considerable major sector. It plays an important role in the national economy and in the socio-economic development of the country. It also plays important role in the rural economy as supplementary family incomes and generating gainful employment in the rural sector, particularly among the landless laborers, small and marginal farmers and women.

2.2 THEORETICAL BACKGROUND

Livestock are domesticated animals raised in an agricultural setting to produce commodities such as food, fiber and labor. Livestock are defined as being useful animals which implies a commercial purpose, or being reared for financial gain. However, in recent years, livestock are also raised to promote the survival of rare breeds, leading to many charities being formed around this issue.

Livestock are raised for profit or conservation of rare breeds. Raising animals [animal husbandry] is a component of modern agriculture. It has been practiced in many cultures since the transition to farming from hunter- gather lifestyles.

Livestock as a word was first used between 1650 and 1660, as a merger between the word live and stock. Older English sources, such as the King James Version of the Bible, refer to livestock in general as, “cattle” as opposed to the word “deer”, which then was used for wild animals which were not owned. The word cattle is derived from Old North French cartel, which meant all kinds of movable personal property, including livestock, which was differentiated from non-movable real estate [real property]. In later English, sometimes smaller livestock was called “small cattle”, in that sense of movable property on land, which was not automatically bought or sold with the land.

Increasing population, growth in GDP percapita and urbanization are boosting the demand for food and animal origin in developing countries. This structural break in the livestock market has been labeled the ‘Livestock Revolution’ [Delgado 1999]. It provides tremendous opportunities to poverty reduction, an estimated 42 percent of the poor work wide being dependent on livestock as part of their livelihood [Thornton 2002]. As market imperfections loom large in rural areas, however, decision makers should design and implement the appropriate policies to make the poor fully explicit gains from livestock demand.

Allan Radian Savory [born on 15 September 1935] is a Zimbabwean ecologist, farmer, soldier, environmentalist and president and cofounder of The Savory Institute. He believes that, “Only livestock can save us”.

The livestock sector is globally highly dynamic. In developing countries, it is evolving in response to rapidly increasing demand for livestock products is stagnating, while many production systems are increasing their efficiency and environmental sustainability. Historical changes in the demand for livestock products have been largely driven by human population growth, income growth and urbanization and the production response in different livestock systems has been associated with science and technology as well as increases in animal numbers. In the future, production will increasingly be affected by competition for natural resources, particularly land and water, competition between food and feed and by the need to operate in a carbon-constrained economy. Developments in breeding, nutrition and animal health will continue to contribute to increasing potential production and further efficiency and genetic gains. Livestock production is likely to be increasingly affected by carbon constraints and environmental and animal welfare legislation. Demand for livestock products in the future could

be heavily moderated by socio-economic factors such as human health concerns and changing socio-cultural values. There considerable uncertainty as to how these factors will play out in different regions of the world in the coming decades.

CHAPTER – III

***LIVESTOCK REARING PRACTICE
AMONG RURAL AGRICULTURAL
HOUSEHOLDS – AN OVERVIEW***

CHAPTER-3

LIVESTOCK REARING PRACTICE AMONG AGRICULTURAL HOUSEHOLDS – AN OVERVIEW

3.1 GLOBAL SCENARIO

Livestock can be described as all domesticated animals, especially sheep, goats, cattle and pigs, intentionally reared in an agricultural setting for food, fibre or breeding purposes. Livestock systems occupy about 30 percent of the planet's dry land surface area. According to Nouman (2014), livestock has the biggest land-use activity globally, which is expected to double by 2020 with an annual increase of 2.7 percent in meat production and 3.2 percent in milk production. Livestock production in developed countries is highly efficient due to the limited availability of resources, especially land, which are better utilized with more attention given to animal ethics, environmental impact, product traceability and consumer satisfaction. Livestock farming plays an important role in the agricultural sector for most countries.

In most parts of the world, livestock provide such food products as meat, butter, cheese, eggs, and milk. These foods contain large amounts of protein, which builds new tissue and maintains and repair old tissue in the human body. Animal food products also supply minerals and vitamins that people need for good health.

Livestock also provide such valuable by-products as fur, hair, leather, and wool. These materials are used to produce blankets, brushes, clothing, shoes, and other goods. Manufactures use the hoofs and horns of livestock to make such articles as buttons, combs, glue, and knives. Other livestock by-products are used in the preparation of livestock feed. Some of the glands and organs of certain livestock are used to make such drugs as epinephrine, insulin, and pepsin. Processed animal fat, called tallow, can be made into livestock feed, shortening, and soap. Manufactures use the feathers of ducks and geese in making bedding and insulated clothing.

TABLE: 3.1
BY PRODUCTS OF ANIMALS

<i>ANIMAL</i>	<i>COMMON USE</i>	
	<i>Food</i>	<i>By-products</i>
<i>Bees</i>	Honey	Beeswax
<i>Fish</i>	Meat	Bones (fertilizer)
<i>Rabbits</i>	Meat	Skins, manure
<i>Poultry</i>	Meat, eggs	Manure
<i>Pigs</i>	Meat	Manure
<i>Sheep</i>	Meat, milk	Skins, manure
<i>Goats</i>	Meat, milk	Skins, manure
<i>Cattle</i>	Meat, milk, blood	Skins, manure
<i>Camels</i>	Meat, milk	Skins

Source: Global livestock report, 2012

Every year, livestock deposit tons of body wastes that fertilize the soil. This organic fertilizer increases the growth and food production of many plants. Through the years, automated farm equipment has reduced the use of horses as work animals in most parts of the world. Today, people in developed nations use horses primarily for recreation and for racing and other sports.

Globally, increases in livestock productivity in the recent past have been driven mostly by animal science and technology, and scientific and technological developments in breeding, nutrition and animal health will continue to contribute to increasing potential production and further efficiency and genetic gains. Demand for livestock products in the future, particularly in developed countries, could be heavily moderated by socio-economic factors such as human health concerns and changing socio-cultural values. In the future, livestock production is likely to be increasingly characterized by differences between developed and developing countries, and between highly intensive production systems on the one hand and smallholder and agro pastoral systems on the other.

TRENDS IN LIVESTOCK PRODUCTION AND LIVESTOCK SYSTEMS EVOLUTION

(a)*The increasing demand for livestock products:* Human population in 2050 is estimated to be 9.15 billion, with a range of 7.96–10.46 billion (UNPD2008). Most of the increase is projected to take place in developing countries. East Asia will have shifted to negative

population growth by the late 2040s (FAO2010). In contrast, population in sub-Saharan Africa (SSA) will still be growing at 1.2 per cent per year. Rapid population growth could continue to be an important impediment to achieving improvements in food security in some countries, even when world population as a whole ceases growing sometime during the present century. Another important factor determining demand for food is urbanization. As of the end of 2008, more people now live in urban settings than in rural areas (UNFPA 2008), with urbanization rates varying from less than 30 per cent in South Asia to near 80 per cent in developed countries and Latin America. The next few decades will see unprecedented urban growth, particularly in Africa and Asia. Urbanization has considerable impact on patterns of food consumption in general and on demand for livestock products in particular: urbanization often stimulates improvements in infrastructure, including cold chains, and this allows perishable goods to be traded more widely. A third driver leading to increased demand for livestock products is income growth. Between 1950 and 2000, there was an annual global per capita income growth rate of 2.1 per cent. As income grows, so does expenditure on livestock products. Economic growth is expected to continue into the future, typically at rates ranging from between 1.0 and 3.1 percent. Growth in industrialized countries is projected to be slower than that in developing economies.

TABLE – 3.2
TRENDS IN MILK AND MEAT CONSUMPTION IN DEVELOPING AND DEVELOPED COUNTRIES

		annual <i>per capita</i> consumption		total consumption	
		meat (kg)	milk (kg)	meat (Mt)	milk (Mt)
developing	1980	14	34	47	114
	1990	18	38	73	152
	2002	28	44	137	222
	2015	32	55	184	323
	2030	38	67	252	452
	2050	44	78	326	585
developed	1980	73	195	86	228
	1990	80	200	100	251
	2002	78	202	102	265
	2015	83	203	112	273
	2030	89	209	121	284
	2050	94	216	126	295

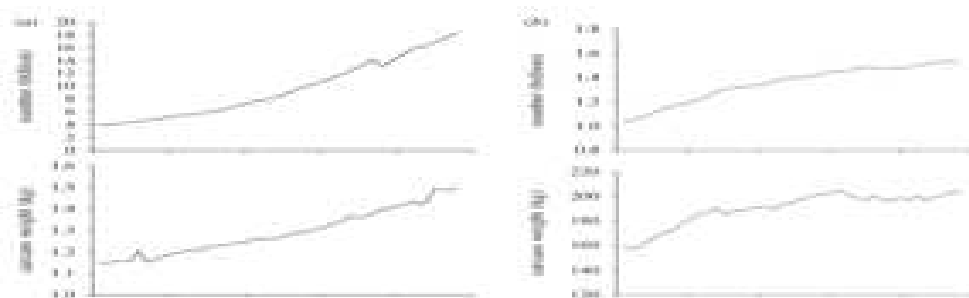
Source : FAO report 2006

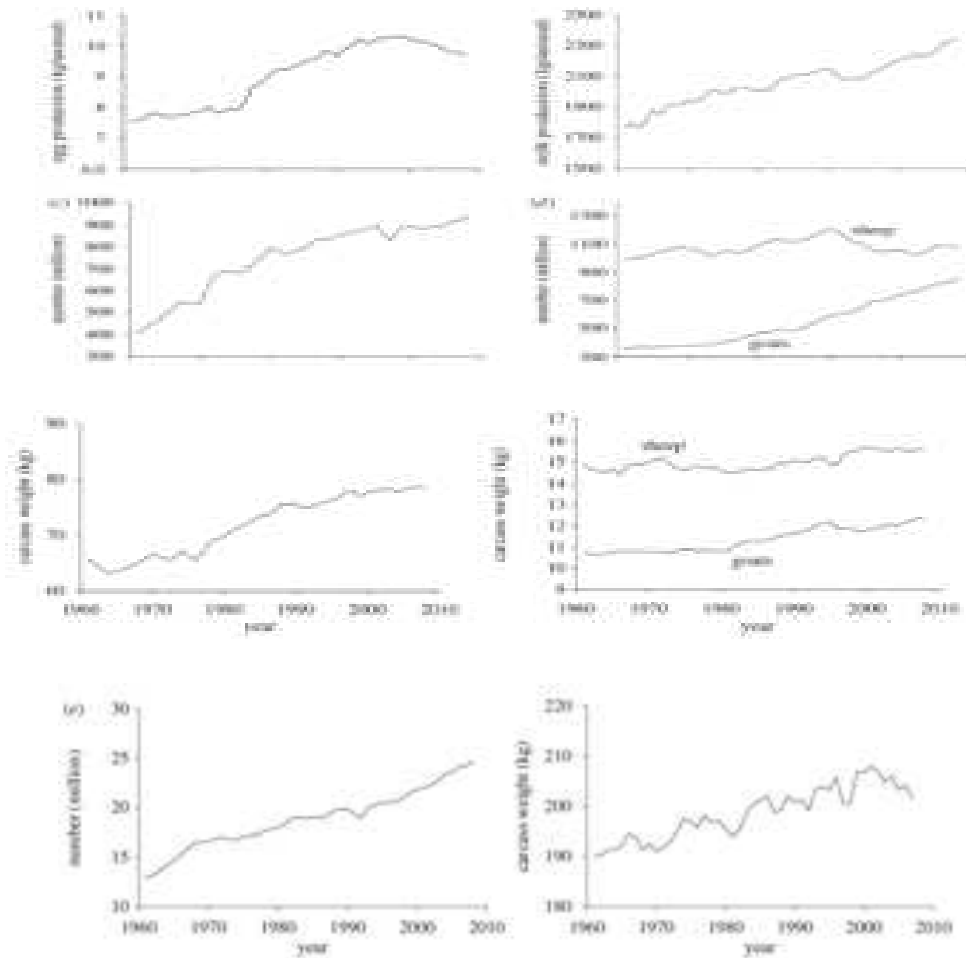
The resultant trends in meat and milk consumption figures in developing and developed countries are shown in table 3.2, together with estimates for 2015–2050 (FAO 2006). Differences in the consumption of animal products are much greater than in total food availability, particularly between regions. Food demand for livestock products will nearly double in sub-Saharan Africa and South Asia, from some 200 kcal per person per day in 2000 to around 400 kcal per person per day in 2050. On the other hand, in most OECD countries that already have high calorie intakes of animal products (1000 kcal per person per day or more), consumption levels will barely change, while levels in South America and countries of the Former Soviet Union will increase to OECD levels.

The agricultural production sector is catering increasingly to globalized diets. Retailing through supermarkets is growing at 20 per cent per annum in countries such as China, India and Vietnam, and this will continue over the next few decades as urban consumers demand more processed foods, thus increasing the role of agribusiness.

(b) The production response: Global livestock production has increased substantially since the 1960s. Beef production has more than doubled, while over the same time chicken meat production has increased by a factor of nearly 10, made up of increases in both number of animals and productivity diagram 3.a. Carcass weights increased by about 30 per cent for both chicken and beef cattle from the early 1960s to the mid-2000s, and by about 20 per cent for pigs (FAO 2010). Carcass weight increases per head for camels and sheep are much less, about 5 per cent only over this time period. Increases in milk production per animal have amounted to about 30 per cent for cows' milk, about the same as for increases in egg production per chicken over the same time period (FAO 2010).

DIAGRAM – 3.a
GLOBAL LIVESTOCK PRODUCTION





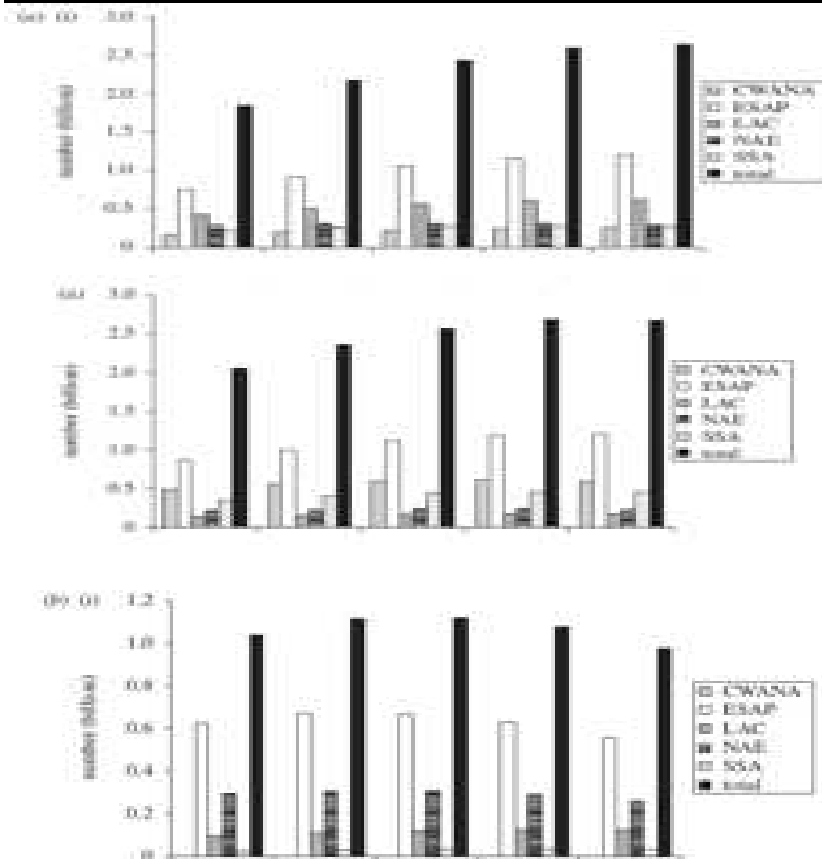
Source: FAO, 2010

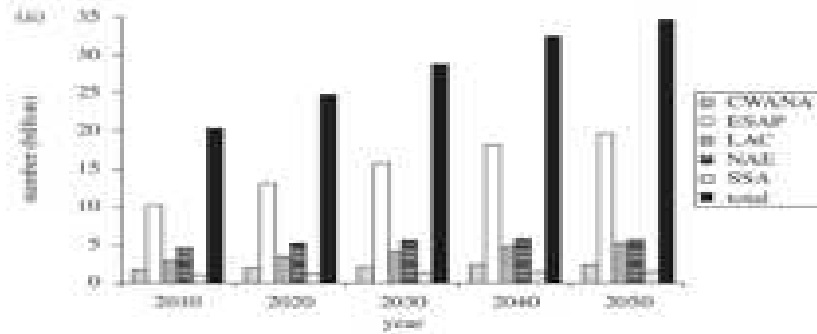
Diagram 3.a (a) Number of chickens, carcass weight and egg production per animal from 1961 to 2008, global. (b) Number of bovines (cattle and buffaloes), carcass weight and cattle milk production per animal from 1961 to 2008, global. (c) Number of pigs and carcass weight from 1961 to 2008, global. (d) Number of sheep, goats and carcass weights from 1961 to 2008, global. (e) Number of camels and carcass weight from 1961 to 2008, global.

Meeting the substantial increases in demand for food will have profound implications for livestock production systems over the coming decades. In developed countries, carcass weight growth will contribute an increasing share of livestock production growth as expansion of numbers is expected to slow; numbers may contract in some regions. Globally, however, between 2000 and 2050, the global cattle population may increase from

1.5 billion to 2.6 billion, and the global goat and sheep population from 1.7 billion to 2.7 billion. The prices of meats, milk and cereals are likely to increase in the coming decades, dramatically reversing past trends. Rapid growth in meat and milk demand may increase prices for maize and other coarse grains and meals. Bio-energy demand is projected to compete with land and water resources, and this will exacerbate competition for land from increasing demands for feed resources. Growing scarcities of water and land will require substantially increased resource use efficiencies in livestock production to avoid adverse impacts on food security and human wellbeing goals. Higher prices can benefit surplus agricultural producers, but can reduce access to food by a larger number of poor consumers, including farmers who do not produce ante surplus for the market. As a result, progress in reducing malnutrition is projected to be slow. Livestock system evolution in the coming decades is inevitably going to involve trade-offs between food security, poverty, equity, environmental sustainability and economic development.

DIAGRAM -3.b
NUMBER OF LIVESTOCK IN THE REFERENCE WORLD



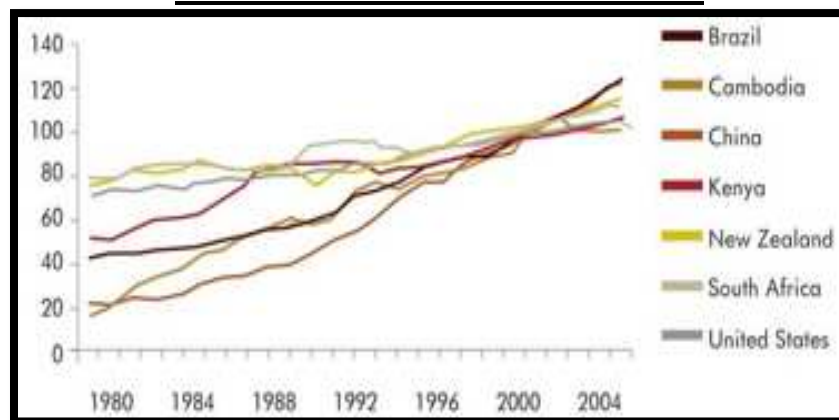


Source: Data from Rosegrant, 2009

Diagram 3.b (a) Projected number of (i) bovines and (ii) sheep and goats to 2050 in the ‘reference world’. (b) Projected number of (i) pigs and (ii) poultry to 2050 in the ‘reference world’. CWANA-Central and West Asia and North Africa; ESAP-East and South Asia and the Pacific; LAC-Latin America and the Caribbean; NAE-North America and Europe; SSA-Sub-Saharan Africa.

Globally, increases in livestock productivity in the recent past have been driven mostly by animal science and technology, and scientific and technological developments in breeding, nutrition and animal health will continue to contribute to increasing potential production and further efficiency and genetic gains. Demand for livestock products in the future, particularly in developed countries, could be heavily moderated by socio-economic factors such as human health concerns and changing socio-cultural values.

DIAGRAM 3.c
LIVESTOCK PRODUCTION INDEX



Source : World Bank, 2005

In the future, livestock production is likely to be increasingly characterized by differences between developed and developing countries, and between highly intensive production systems on the one hand and smallholder and agro pastoral systems on the other. How the various driving forces will play out in different regions of the world in the coming decades is highly uncertain, however, of the many uncertainties, two seem over-arching.

First, can future demand for livestock products be met through sustainable intensification in a carbon-constrained economy? Some indications have been given above of the increasing pressures on natural resources such as water and land; the increasing demand for livestock products will give rise to considerable competition for land between food and feed production; increasing industrialization of livestock production may lead to challenging problems of pollution of air and water; the biggest impacts of climate change are going to be seen in livestock and mixed systems in developing countries where people are already highly vulnerable; the need to adapt to climate change and to mitigate greenhouse emissions will undoubtedly add to the costs of production in different places; and the projected growth in bio-fuels may have substantial additional impacts on competition for land and on food security.

A second over-arching uncertainty is- will future livestock production have poverty alleviation benefits? The industrialization of livestock production in many parts of the world, both developed and developing, is either complete or continuing apace. The increasing demand for livestock products continues to be a key opportunity for poverty reduction and economic growth, although the evidence of the last 10 years suggests that only a few countries have taken advantage of this opportunity effectively. The increasing industrialization of livestock production may mean that smallholders continue to miss out on the undoubted opportunities that exist. There is no lack of suggestion as to what is needed to promote the development of sustainable and profitable smallholder livestock production. Significant and sustained innovation in national and global livestock systems, increasing regulation to govern contracts along food commodity chains, including acceptance and guarantee of collective rights and community control, building social protection and strengthening links to urban areas is essential. Probably all of these things are needed, headed by massive investment.

It is thought that humankind's association with domesticated animals goes back to around 10 000 BC, a history just about as long as our association with domesticated plants. What is in store for this association during the coming century is far from clear, although it is suffering

stress and upheaval on several fronts? The global livestock sector may well undergo radical change in the future, but the association is still critical to the wellbeing of millions, possibly billions, of people. In many developing countries, at this stage in history, it has no known, viable substitute.

THE ROLE OF WOMEN IN LIVESTOCK FARMING - A GLOBAL REVIEW

Within pastoralist and mixed farming systems, livestock play an important role in supporting women and in improving their financial situation and women are heavily engaged in the sector. An estimated two - thirds of poor livestock keepers, approximately 400 million people, are women (Thornton et al, 2002). They share responsibility with men and children for the care of animals, and particular species and types of activity are more associated with women than men. Women often have a prominent role in managing poultry (FAO 1998; Guèye 2000; Tung 2005) and dairy animals (Okali and Mims 1998; Tangka, Jabbar and Shapiro, 2000) and in caring for other animals that are housed and fed within the homestead. When tasks are divided, men are more likely to be involved in constructing housing and herding of grazing animals and in marketing of products if women's mobility is constrained. The influence of women is strong in the use of eggs, milk and poultry meat for home consumption and they often have control over marketing and the income from these products. Perhaps for this reason poultry and small scale dairy projects have been popular investments for development projects aiming to improve the lot of rural women. In some countries small-scale pig production is also dominated by women. Female-headed households are as successful as male -headed households in generating income from their animals, although they tend to own smaller numbers of animals, probably because of labour constraints. Ownership of livestock is particularly attractive to women in societies where access to land is restricted to men (Bravo - Baumann 2000). While the role of women in small-scale livestock production is well recognized, much less has been documented about the engagement of women in intensive production and the market chains associated with large commercial enterprises. Demand for livestock products has grown much faster than the demand for crop staples during the past 40 years, fuelled by rising incomes, particularly in Asia and Latin America, and this

trend is expected to continue. While pastoralist and small scale mixed farming systems continue to be important in meeting the needs of rural consumers, the demands of growing urban populations are increasingly supplied with meat, milk and eggs from intensive commercial systems. This has important implications for the engagement of women in the livestock sector because of the different roles, responsibilities and access to resources that are evident within different scales of production system and at different points on the production and marketing chain. The majority of the world's estimated 1.3 billion poor people live in developing countries where they depend directly or indirectly on livestock for their livelihoods (World Bank, 2008 and FAO, 2009). Globally, livestock contributes about 40 percent to the agricultural gross domestic product (GDP) and constitutes about 30 percent of the agricultural GDP in the developing world (World Bank, 2009). These estimates highlight the important contribution of livestock to sustainable agricultural development.

In settled mixed-farming systems, women and girls usually carry out most of the work related to collecting and cutting feed, bringing water and cleaning pens. If interventions are aimed at intensifying livestock production, such as by shifting from grazing to stall-feeding systems or by keeping potentially higher-yielding but also higher-demanding breeds, it is highly likely that the workload of women and girls will increase due to the fact that intensification lies in their traditional tasks (Okali and Sumberg, 1985; Wangui, 2008). In many livestock systems, women customarily care for sick and very young animals kept near the home. If only men are trained to be community animal health workers or “paravets”, women’s role in animal healthcare is undermined and their knowledge assets are under used. Estimating the share of livestock GDP in agricultural GDP gives an indication of the relative importance of the livestock sector within the agricultural economy.

The available evidence suggests that the role of women in meeting these changing demands may diminish, for two reasons. The first is that when livestock enterprises scale up, the control of decisions and income and sometimes of the entire enterprise often shifts

to men. This is not a universal phenomenon – for example, in Vietnam, many medium - sized duck-breeding enterprises are managed by women – but it is common and can be explained by the limited access that women have to land and credit. The second important factor is that all 15 smallholders face challenges when the livestock sector intensifies and concentrates and many go out of business. This is particularly evident for pig and poultry owners but not confined to those species. Given the more limited ability of women to start their own businesses, this implies that they will tend to become employees rather than self-employed. In specialized activities like production of day-old chicks, in the provision of services, and in slaughtering, processing and retail, women are visible wherever painstaking semi -skilled work is to be done, but very little information is available about the extent of their involvement compared to that of men, or their control over resources.

3.2 INDIAN SCENARIO

The Animal Husbandry and livestock sectors are critical for India’s rural economy, especially the small and marginal farmers and the landless. They not only contribute to their income and household nutrition, but are also their best insurance against any emergent need. The livestock census in India is carried out once every five years. The 19th livestock census was carried out in 2012 and encompassed all States and Union Territories covering villages, towns and wards in the country. As compared to the 18th Livestock Census, there has been an overall decline of 3.33 percent in the total livestock population in the country. The total livestock population including cattle, buffaloes, sheep, goat, pigs, horses and ponies, mules, donkeys, camels, mithun and yaks, was 512.05 million in 2012. The total poultry population, including fowls, ducks, turkeys and others, was 729.2 million. While there has been an overall decline in the total livestock population in the country, some States have recorded substantial increases in livestock numbers. These are:

TABLE – 3.3

STATES RECORDED SUBSTANTIAL INCREASE IN LIVESTOCK POPULATION

STATE	% OF INCREASE
Gujarat	15.36%

Uttar Pradesh	14.01%
Assam	10.77%
Punjab	9.57%
Bihar	8.56%
Sikkim	7.96%
Meghalaya	7.41%
Chhattisgarh	4.34%

Source: 19th livestock census of India, 2012

The total Bovin (cattle, buffaloes, mithun and yaks) population shows a decline of 1.57% as compared to the 2007 census. However, the milch animals (in – milk and dry) in cows and buffaloes have increased by 6.75%. At the same time, the numbers of female cows and buffaloes have increased by 6.52% and 7.99% respectively. The total buffaloes population has shown a growth of 3.19% and milch buffaloes by 4.95%. The exotic/crossbred milch cattle have shown a substantial increase of 34.78%. In comparison, the indigenous milch cattle has increased only marginally by 0.17%. While the Mithun population in the country has registered a growth of 12.98%, the yak population has had a negative growth rate of 7.64%. The population of horses and ponies has increased by 2.08% and that of mules by 43.34%. At the same time the camel population has decreased by 22.48%, pigs by 7.54% and donkeys by 27.22%.

Animal Husbandry sector provides large self-employment opportunities. This sector play a significant role in supplementing family incomes and generating gainful employment in the rural sector, particularly among the landless laborers, small and marginal farmers and women, besides providing cheap nutritional food to millions of people. The Animal Husbandry sector not only provides essential proteins and nutritious human diet through milk, eggs, meat and so on; but also plays an important role in utilization of non-edible agricultural by-products. Livestock also provides raw material byproducts such as hides and skins, blood, bone, fat, etc. Livestock are the best insurance against the vagaries of nature like drought, famine and other natural calamities.

Animal Husbandry, Dairying and Fisheries, is a State subject, the emphasis of the Central Government has been on supplementing efforts of the State Governments in the development of these sectors. Central Government is providing assistance to the State Governments for the control of animal diseases, scientific management and up gradation of

genetic resources, increasing availability of nutritious feed and fodder, sustainable development of processing and marketing facilities and enhancement of production and profitability of livestock and fisheries enterprises. The State Governments/Union Territories are advised in the formulation of policies and programmes in the field of animal husbandry, dairy development and fisheries. Main focus of the activities is on (a) development of requisite infrastructure in States/UTs for improving animal productivity (b) preservation and protection of livestock through provision of livestock health care (c) strengthening of central livestock farms and (d) expansion of aquaculture in fresh /brackish water and welfare of fisher folk, etc.

There are 18 Central Livestock Organizations and allied institutions for production and distribution of superior germ plasmas to the State Governments for cross-breeding and genetic up gradation of the stocks. Besides, various schemes are being administered by Central Government for development of requisite infrastructure and supplementing efforts of the State Governments in achieving accelerated growth of animal husbandry sector. Central Cattle Development Organizations include seven Central Cattle Breeding Farms, one Central Frozen Semen Production and Training Institute and four Central Herd Registration Units established in different regions of the country to produce genetically superior breeds of bull calves, good quality frozen semen and for identification of locations of superior germ plasmas of cattle and buffaloes.

India has vast resource of livestock and poultry. As per Annual Report 2014-15 Department of Animal Husbandry Dairying and Fisheries, the Gross Value Added from livestock sector at current prices was about Rs4,06,035 crore during 2013-14 which is about 21.58% of the Gross Value Added from total agriculture, forestry and fishing sector at current prices and 22.75% at constant prices (2011-12) whereas it contributed about 3.88% of total Gross Value added of the Country at current prices and about 3.92% at constant prices (2011-12). In addition, the fishery sector contributed about 0.92% to the overall Gross Value Added (GVA) and 5.58% of the agricultural GVA at current prices for the year 2013-14. The Livestock Sector expanded by 5.5% during 2013-14 against the total agriculture.

CHANGING SCENARIO OF LIVESTOCK POPULATION

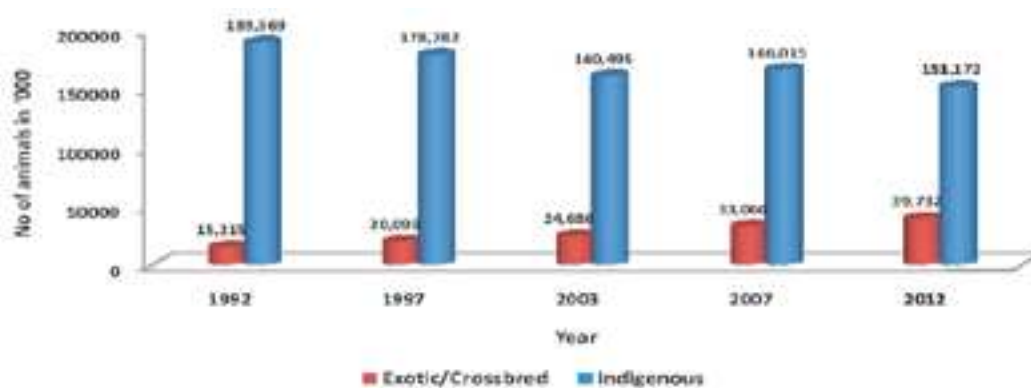
Livestock sector is an important sub-sector of Indian agriculture with significant contribution towards national economy and employment of rural populace. The country

possesses largest livestock wealth in the world and rank first in terms of cattle and buffalo population of the world's total. Buffalo and goat population has almost doubled and poultry population has increased more than threefold during the period from 1982 to 2007. India is leading producer of milk in the world. In 2009-10 the country produced 112.5 million tones of milk, 59.8 billion eggs, and 4.0 million tonnes of meat. Per capita availability of milk has also increased from 112 g/d in 1968-69 to 263 g/d in 2009-10. Although there is a good growth in the production of all the livestock products, their per capita availability is still lower than Indian Council of Medical Research [ICMR] recommendation of minimum per capita consumption.

CATTLE:

Cattle population in the country has increased steadily from 192 million in the livestock census year 1982 to 199 million in 2007 – an increase of about 3.65% in two and half decades. The decadal increases have been steady at about 1.5 per cent.

DIAGRAM – 3.d
CATTLE POPULATION IN INDIA



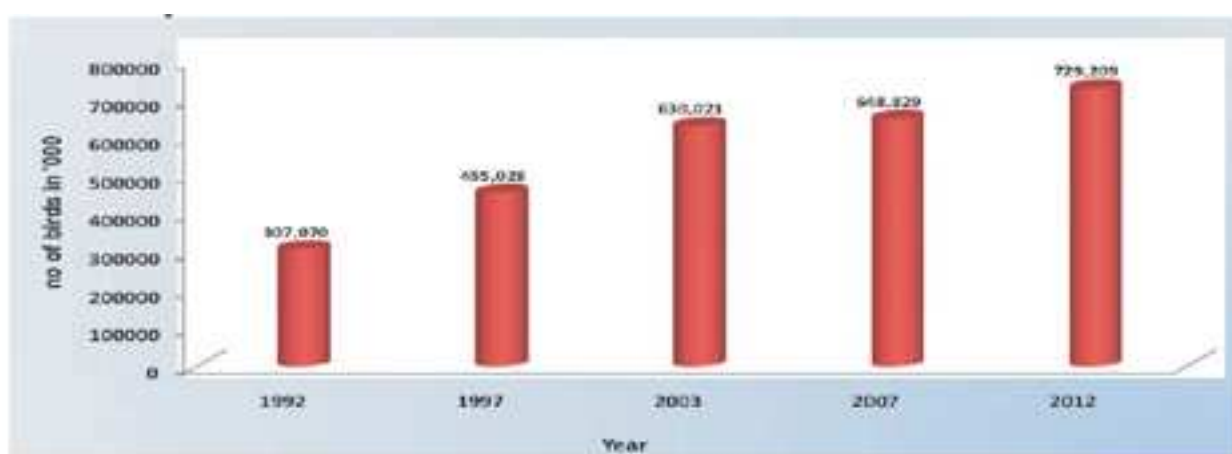
Sources: 19th livestock census in India, 2012

POULTRY:

Three categories are included in Poultry, namely, Fowls, Ducks and Turkey and others. The 19th Livestock Census reports the country's population to be 729.2 million. This is an increase of 12.39% over the 2007 census figures. The number of poultry birds including ducks increased from 208 million in 1982 to 649 million by 2007 – a threefold increase over the 25 year period. The increase in the poultry birds in the last decade 1997-2007 is a phenomenal 86%. Poultry as an important component of livestock economy of the country has significant

implications for feed resource allocation between poultry birds and other types of livestock like cattle and buffaloes. The total number of desi and improved fowls⁷ (rural and urban) are 163.84 million and 32.4 million respectively. The number of households and household enterprises rearing backyard poultry are 30,316,024 and in poultry farms⁸/hatcheries are 20,023,244. Similarly, number of non-household enterprises and institutions rearing poultry in farms and hatcheries are 2,429,256.

DIAGRAM – 3.e
TOTAL POULTRY: 1992-2012



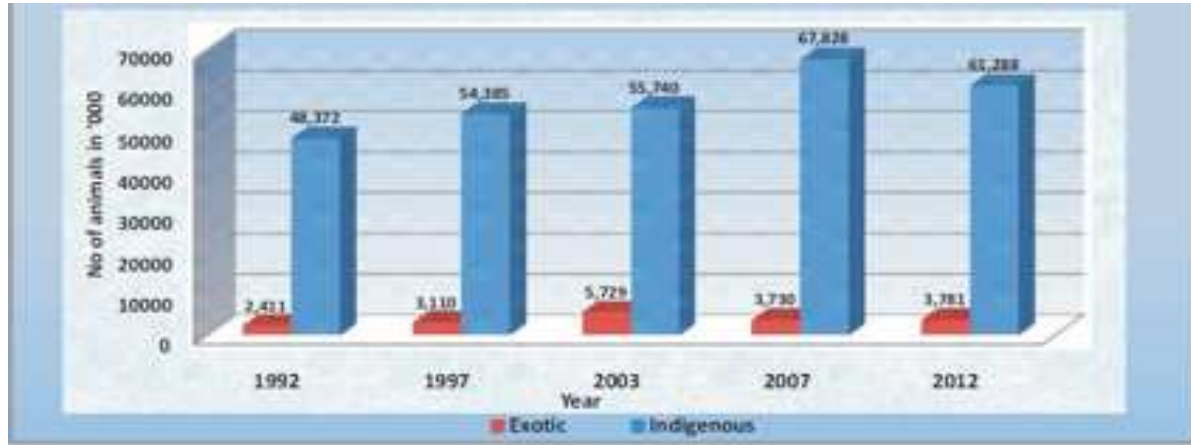
Sources: 19th livestock Census in India, 2012

SHEEP:

The 19th Livestock Census of 2012 has shown a decline in the sheep population in the country of 9.07% over the 2007 census.. The total sheep in the country are 65.06million.The population of sheep increased from 49 million in 1982 to 72 million in 2007 – an increase of 47% over 25 years. Unlike cattle and buffalo, the decadal changes in sheep population were uneven. The sheep population increased by 4.1% between 1982 1992 and by 26% between 1997-2007.

DIAGRAM – 3.f

SHEEP POPULATION: 1992-2012



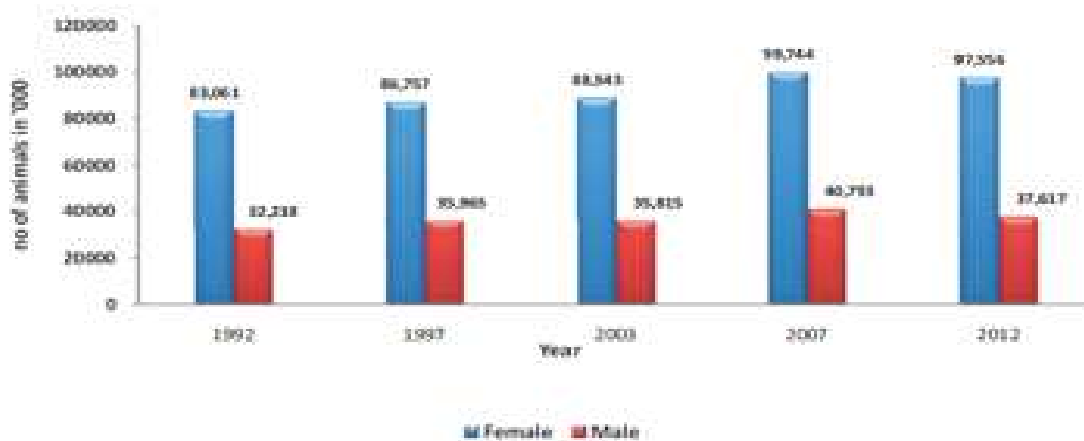
Sources: 19th livestock census in India, 2012

GOAT:

Similarly, the goat population has declined by 3.82% over the 2007 census and the total numbers recorded are 135.17 million. The sheep population constitutes 12.71% (65 million) of the total livestock population in the country. The population of goat increased from 95 million in 1982 to 140 million in 2007 – an increase of 47.37% over two and half decades. This growth in numbers has been achieved with a phenomenal growth of 29% between 1982 and 1997. However, between 1992-2007, there was a comparatively moderate increase of only 14%.

DIAGRAM – 3.g

GOAT POPULATION: 1992-2012



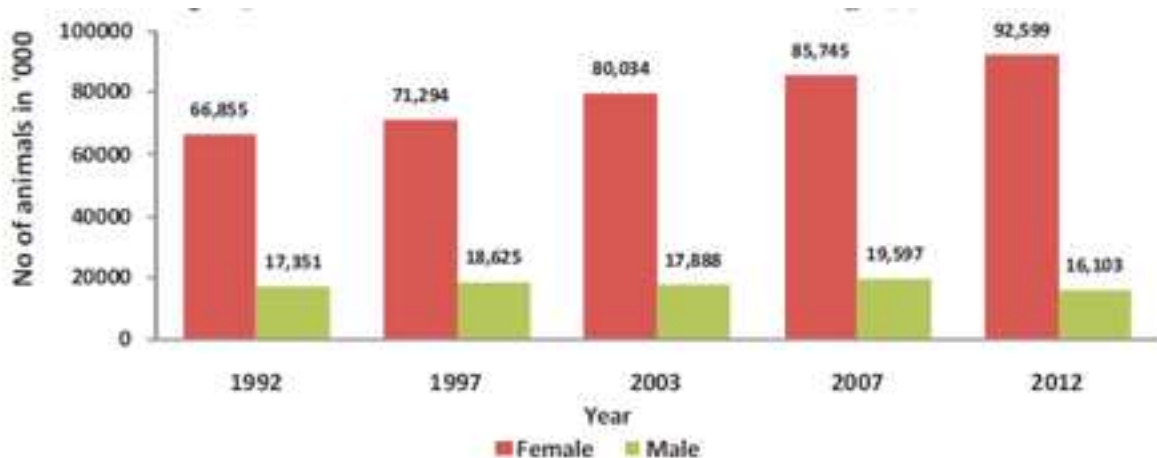
Sources: 19th livestock Census in India, 2012

BUFFALO:

The total Buffalo contributes around 21.23% of the total livestock population. The total number of Buffalo in the country as per 2012 Census is 108.7 million numbers.

DIAGRAM 3.h

BUFFALO POPULATION: 1992-2012



TREND IN THE PRODUCTION OF LIVESTOCK PRODUCTS

Livestock sector is an important sub sector of the agriculture of Indian economy and accounted for about 3.88 % of Gross value added (GVA) at current prices during 2013-14 whereas Fisheries accounted for about 0.92 % of overall GVA.

TABLE:3.4

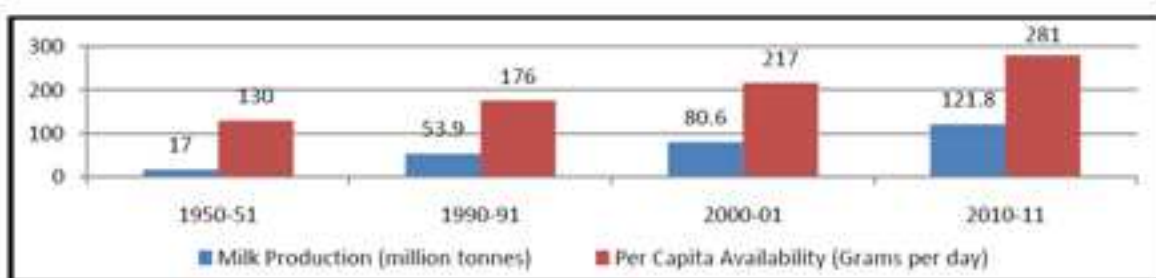
COMPOUND DECADAL GROWTH RATES OF MAJOR LIVESTOCK PRODUCTS IN ALL INDIA

YEAR	MILK	EGGS	WOOL
1950-51 to 1960-61	1.64	4.63	0.38
1960-61 to 1973-74	1.15	7.91	0.34
1973-74 to 1980-81	4.51	3.79	0.77
1980-81 to 1990-91	5.48	7.69	2.32
1990-91 to 2000-01	4.11	5.67	1.62
2000-01 to 2010-11	4.22	5.58	-1.18

Source: Livestock and Fishery Department

With about 146 million tonnes milk production during 2014-15 compared to 138 million tonnes during 2013-14, per capita availability of milk is likely to reach 320 grams per day, having crossed 300 grams during 2013-14. Uttar Pradesh with over 24 million tonnes milk production during 2014-15 topped in the production accounting for about 17% of the total. Cow milk accounted for about 45 % of total milk production during 2014-15 whereas buffalo and goat milk accounted for 51 and 4 % of total milk production respectively. India continues to be largest producer of milk in the world.

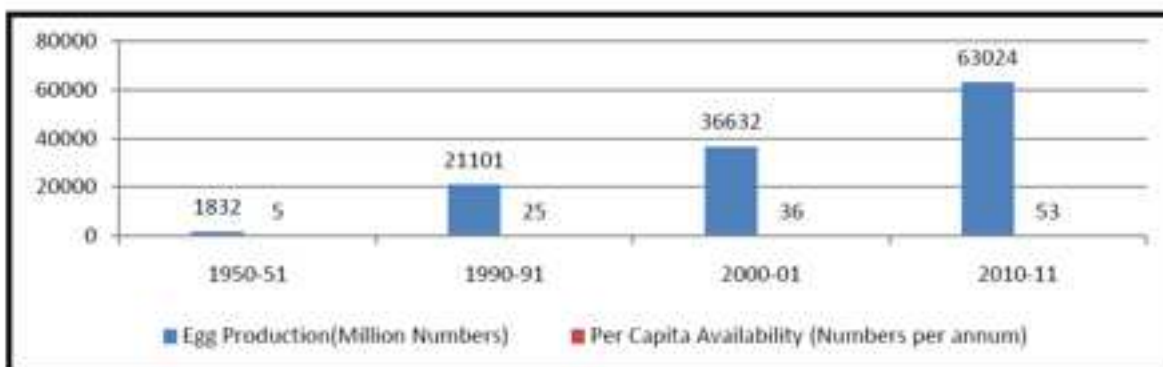
DIAGRAM – 3.i
MILK PRODUCTION IN INDIA



Sources: Livestock and Fishery Department

Eggs production during 2014-15 was estimated at about 78 billion compared to 75 billion during 2013-14. Tamil Nadu with production of about 16 billion eggs was the leading producer accounting for about one fifth (20%) of total egg production. Per capita egg availability increased from about 60 eggs per annum during 2013-14 to about 63 eggs per annum during 2014-15.

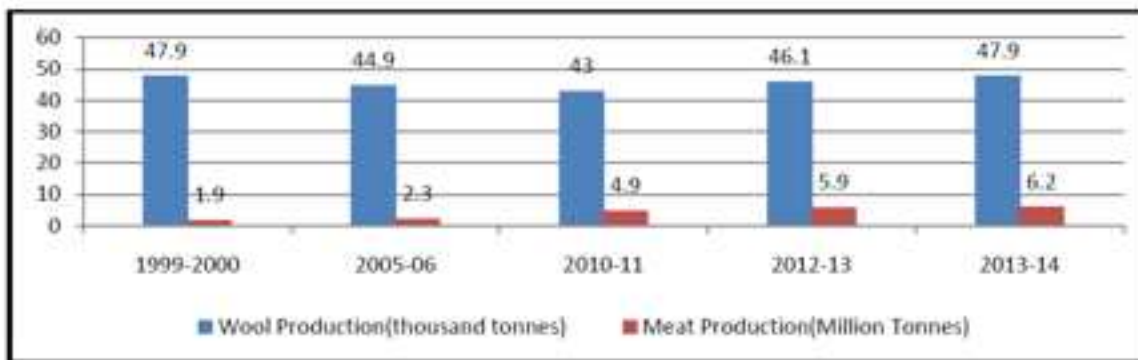
DIAGRAM – 3.j
EGG PRODUCTION IN INDIA



Source: Livestock and Fishery Department

Unlike other livestock products wool production does not indicate any systematic trend over the years whereas meat production, in consonance with other major livestock products, shows monotonically increasing trend. Wool production during 2014-15 was estimated at about 48.1 thousand tonnes with Rajasthan being the leading producer (14.5 thousand tonnes) accounting for about a third (30%) of total production. Jammu and Kashmir and Karnataka were other important wool producing states with about 17 and 18 % contribution respectively. Wool production during 2013-14 was 47.9 thousand tonnes. As per Annual Report 2014-15, Department of Animal Husbandry Dairying and Fisheries, Meat production in the beginning of Twelfth Plan (2012-13) was 5.9 million tonnes which has been further increased to 6.2 million tonnes in 2013-14, with the poultry meat production estimated to be 2.69 million metric tonnes. Uttar Pradesh was the leading producer of meat.

DIAGRAM -3.k
WOOL PRODUCTION IN INDIA



Source: Livestock and Fishery Department

International Comparison (FAOSTAT production data 2013): World Meat production during 2013 was about 310 million tones with China alone accounting for about 85 million tones. The world as a whole produced about 1284 billion eggs China being the leading producer with 496 billion eggs, followed by USA and India) and 769 million tones of milk (India with about 18 % share being the leading producer followed by USA and China). India's share in milk production has increased over the years but per capita milk availability is about the same as the world average (about 293 grams per day). India accounts for about 5 % of total egg production in the world. 10.27. India with about 189 million cattle constituted about 13% of total world cattle population only marginally lags behind Brazil which constitutes about 14% of world cattle

population. However, India has largest population of buffaloes (about 56% of world total) and second largest population, after China, in case of goats (about 14% of world total) and third largest population of sheep after China and Australia.

ROLE OF INDIAN LIVESTOCK SECTOR IN RURAL WOMEN EMPOWERMENT

Livestock sector plays a significant role in the socio-economic development of India. Its growth is pro-poor and inclusive. Livestock helps in generating a continuous flow of income and employment. The sector empowers women as they perform a large number of activities related to livestock production. According to the working group report on animal husbandry and dairying 12th five year plan (2012-17), animal husbandry helps in improving gender equity. More than three-fourth of the labour requirement in livestock production is met by women. The share of women employment in livestock sector is around 90% in Punjab and Haryana where dairying is a major activity. The outstanding demand for livestock products gives considerable opportunities for the rural women to escape poverty by diversifying livestock production. Enhancing the position of women in the power structure of the society is called women empowerment. In general sense, it refers to empower women to be self-dependent by providing them access to all the freedom of opportunity. Women make noteworthy contributions towards rural economy of all developing countries as farmer, labourers and entrepreneurs. Women play a very important role in agriculture and on average they constitute 43% of agricultural labour force in developing countries. Agriculture in general and livestock in particular are important to make women empowered by giving them employment. Out of 600 million rural poor of the world who keep livestock two third are women. Livestock are the largest non-land assets in rural asset portfolios. Livestock are the significant productive asset with high expected returns (Njuki, 2013). Livestock are the asset which can be easily owned by women and which have the potential to make contribution towards the reduction in the gender asset gap with in household (Kristjanson et al., 2010) and livestock often is the single asset for rural women which is owned and controlled by them and which serves an important source of income and cash for them during the time of need (World Bank, 2009). In rural livestock based countries two

third portion of low income livestock keepers are constituted by rural women especially the activities related to small livestock production (poultry, sheep, goats), milking and processing of milk are carried out primarily by women. The importance of livestock for women's incomes in developing countries has also been widely accentuated. Livestock sector gives a unique opportunity for women to get empowered, however due to lack of awareness of the role that rural women play in livestock sector. This viable opportunity to empower rural women may get missed. The demand for livestock based products is expanding tremendously in India because of rising income, population growth and urbanization. Moreover, India exhibits all the signs of being at the onset of its livestock sector boom which can be extremely helpful in enhancing the income of small and marginal farmers and women.

Women play a major role in the livestock production activities in India. The female share in the agricultural labour force in case of India is about 30%. Women do a bulk of livestock related activities like fodder collection, feeding, health care of animals, watering, milking and household level processing (Planning Commission, 2012). The vibrant and rising livestock sector can be a boon in making Indian rural women more empowered if policies are made judiciously in favour of women after paying heed towards their specific needs in this sector. The synoptic view of casual, regular and self-employment in animal husbandry vis-à-vis other sectors is given in the following Tables. It is evident from Table 3.4, that animal husbandry has a critical role in providing self-employment to females in rural areas. The working persons-days provided to females in rural areas as self-employed workers have increased from 20.59% in 1999-2000 to 23.35% in 2009-2010 though it declined a bit to 19.04% during 2011-2012.

TABLE 3.5

SECTORAL DISTRIBUTION OF WORKING PERSONS-DAYS PROVIDED TO RURAL PEOPLE AS SELF-EMPLOYED WORKERS IN CULTIVATION (CROP) AND OTHER AGRICULTURAL (NON-CROP) ACTIVITIES, 1999-2000, 2009-2010 AND 2011-2012 (%)

All-India	1999-2000			2009-2010			2011-2012		
Type of Operation	Male	Female	Person	Male	Female	Person	Male	Female	Person
Manual Work in Cultivation (crop production)	76.65	67.29	73.76	91.73	75.13	86.97	85.23	72.27	81.49
Manual Work in other agricultural activities(Non-Crop Activities)									
Forestry	0.55	0.99	0.66	0.16	0.27	0.15	0.14	0.12	0.14
Plantation	0.96	0.49	0.8	1.13	1.09	1.08	1.02	0.64	0.98
Animal Husbandry	8.56	20.59	12.31	6.32	23.35	11.31	4.23	19.04	8.33
Fisheries	0.55	0.12	0.4	0.64	0.13	0.46	0.58	0.25	0.56
Others	12.7	10.48	12.04	0	0	0	8.77	7.64	8.47
Total	100	100	100	100	100	100	100	100	100

Source : Annual report 2013-2014

Table 3.5 shows that animal husbandry is the main source of self-employment to females in rural areas among non-crop activities, as it contributed the largest chunk of working persons-days to females in rural areas as self-employed workers during all the three periods. Among non-crop activities, the proportion of working persons-days provided by animal husbandry to females in rural areas as self-employed workers has significantly increased from 62.97% in 1999-2000 to 93.92% in 2009-2010 (Table 3.5). The proportion of working persons-days provided by other non-crop activities (forestry, plantation and fisheries) to females in rural areas as self-employed workers is exiguous in comparison to animal husbandry.

TABLE 3.6

**SECTORAL DISTRIBUTION OF WORKING PERSONS-DAYS PROVIDED TO
RURAL PEOPLES SELF EMPLOYED WORKERS IN OTHER AGRICULTURAL
(NON-CROP) ACTIVITIES, 1999-2000, 2009-2010 AND 2011-2012 (%)**

All India	1999-2000			2009-2010			2011-2012		
Type of operation	males	females	person	males	females	person	male	females	person
Manual work in other agricultural activities (non-crop activities)									
Forestry	2.36	3.05	2.55	1.96	1.1	1.19	0.99	0.46	0.76
Plantation	4.12	1.52	3.06	13.72	4.41	8.33	6.99	2.33	5.34
Animal husbandry	36.68	62.97	46.93	76.47	93.92	86.9	28.71	68.69	45.03
Fisheries	2.36	0.38	1.53	7.84	0.55	3.57	3.96	0.93	3.05
Other	54.43	32.06	45.91	0	0	0	59.4	25.57	45.08
total	100	100	100	100	100	100	100	100	100

Source : Annual report 2013-2014

Similarly, among non-crop activities the proportion of working persons-days provided by animal husbandry to females in rural areas as casual labour and regular employee has also shown a noticeable rise from 2.75% and 1.44% during 1999-2000 to 15.38% and 20% during 2009-2010 respectively. Though, the regular and casual employment provided to them by plantation sector has remarkably surpassed than that of animal husbandry during all the three periods as regular employee and casual labour (Table 3.6 and 3.7).

TABLE 3.7

**SECTORAL DISTRIBUTION OF WORKING PERSONS-DAYS PROVIDED TO
RURAL PEOPLE AS REGULAR EMPLOYEE IN OTHER AGRICULTURAL (NON-
CROP) ACTIVITIES, 1999-2000, 2009-2010 AND 2011-2012**

All India	1999-2000			2009-2010			2011-2012		
Type of operation	males	females	person	males	females	person	male	females	person
Manual work in other agricultural activities (non-crop activities)									
Forestry	1.75	1.92	1.55	4.54	0	0	0	0	0
Plantation	24.56	39.42	28.68	63.63	80	69.56	50	50	63.63
Animal husbandry	7.01	1.44	6.2	22.72	20	21.73	18.75	18.75	13.63
Fisheries	0.87	0	0	9.09	0	8.69	6.25	6.25	4.56
Other	65.78	57.21	63.56	0	0	0	25	25	18.18
total	100	100	100	100	100	100	100	100	100

Source : Annual report 2013-2014

TABLE 3.8

**SECTORAL DISTRIBUTION OF WORKING PERSONS-DAYS PROVIDED TO
RURAL PEOPLE AS CASUAL LABOUR IN OTHER AGRICULTURAL (NON-CROP)
ACTIVITIES, 1999-2000, 2009-2010 AND 2011-2012**

All India	1999-2000			2009-2010			2011-2012		
Type of operation	males	females	person	males	females	person	male	females	person
Manual work in other agricultural activities (non-crop activities)									
Forestry	3.5	4.58	4.42	12.5	0	6.66	2.59	0.97	1.2
Plantation	14.03	17.43	15.04	50	84.61	60	14.28	11.65	13.25

Animal husbandry	7.01	2.75	6.19	18.75	15.38	20	3.89	1.94	3.61
Fisheries	2.63	0.91	1.76	18.75	0	13.33	3.89	1.94	3.61
Other	72.8	74.31	74.31	0	0	0	75.32	83.49	78.31

Source : Annual report 2013-2014

The composition of working persons-days by gender indicates that among all agricultural activities, animal husbandry is providing the largest share of self-employment to females in comparison to males in rural areas during all the three periods (Table 3.8)

TABLE 3.9

THE COMPOSITION OF WORKING PERSONS-DAYS PROVIDED BY VARIOUS AGRICULTURAL ACTIVITIES TO RURAL PEOPLE AS SELF EMPLOYED WORKERS BY GENDER, 1999-2000, 2009-2010 AND 2011-2012 (%)

All India	1999-2000			2009-2010			2011-2012		
	Male s	female s	perso n	male s	female s	perso n	male s	female s	perso n
Manual work in cultivation(crops production)	71.5	28.49	100	75.04	24.95	100	75.9	24.09	100
Manual work in other agricultural activities (non-crop activities)									
Forestry	54.92	45.07	100	59.22	40.77	100	75.08	24.91	100
Plantation	81	18.99	100	71.36	28.23	100	80.84	19.15	100
Animal husbandry	47.69	52.2	100	39.99	60	100	37.29	62.7	100

Fisheries	90.69	9.3	100	92.07	7.92	100	85.7 7	14.22	100
Other	72.74	27.25	100	0	0	0	75.4	24.59	100
total	61.11	38.88	100	71.11	28.88	100	75.4	27.59	100

Source : Annual report 2013-2014

Moreover, animal husbandry is the only agricultural activity which has increased the proportion of working persons-days provided to females and decreased the same to males as regular employee and casual labour from 1999-2000 to 2009-2010 in rural areas. While the opposite is true for all other agricultural activities, where the proportion of working persons-days provided to males has increased and the proportion of working persons-days provided to females in rural areas has decreased during the same period (Table 3.9 and Table 3.10).

TABLE 3.10
LEVEL OF INVOLVEMENT IN ANIMAL HUSBANDRY BY GENDERS

All India	1999-2000			2009-2010			2011-2012		
Type of operation	male	female	person	male	female	person	male	female	person
Manual work in cultivation (crops production)	80.27	19.27	100	81.87	18.12	100	77.43	22.56	100
Manual work in other agricultural activities (non-crop activities)									
Forestry	71.92	28.07	100	100	0	100	0	0	100
Plantation	63.63	36.36	100	71.39	28.6	100	44.55	55.44	100
Animal husbandry	93.18	6.81	100	78.09	21.9	100	92.51	7.48	100

Fisheries	100	0	100	100	0	100	100	0	100
Other	76.35	23.64	100	0	0	0	73.3	26.69	100
total	73.74	26.25	100	75.83	24.16	100	65.92	34.07	100

Source : Annual report 2013-2014

TABLE 3.11

THE COMPOSITION OF WORKING PERSONS-DAYS PROVIDED BY VARIOUS AGRICULTURAL ACTIVITIES TO RURAL PEOPLE AS CASUAL LABOUR BY GENDER, 1999-2000 AND 2009-2010 AND 2011-2012 (%)

All India	1999-2000			2009-2010			2011-2012		
	Male	female	pers on	male	female	perso n	male	female	perso n
Manual work in cultivation(crop s production)	61.9	38.3	100	66.84	33.15	100	68.44	31.52	100
Manual work in other agricultural activities (non-crop activities)									
Forestry	62.34	37.65	100	100	0	100	85.97	14.02	100
Plantation	63.53	36.46	100	66.24	33.75	100	73.75	26.24	100
Animal husbandry	84.65	15.34	100	80.18	19.81	100	82.13	17.84	100
Fisheries	86.12	13.87	100	100	0	100	82.13	17.86	100
Other	67.95	32.04	100	0	0	0	67.39	32.6	100
total	68.39	31.6	100	76.85	23.14	100	68.39	31.38	100

Source : Annual report 2013-2014

Animal husbandry provides large self-employment opportunities to rural females in India. In fact animal husbandry is becoming more and more feminized. Animal husbandry is the only agricultural activity among all agricultural activities which has increased the casual, regular and self-employment to female. Animal husbandry is again the only agricultural activity which is making women more self-employed than men. Thus, livestock enterprise is more women oriented and growth in this sector would help in promoting gender equity and empowerment of women in rural India. Development of this sector can become instrumental in empowering women by providing them large self-employment opportunities.

3.3 KERALA SCENARIO

Kerala is situated in the south west region of India. Spread over 38.863 sq km, it is bordered by Karnataka to the North and East, Tamilnadu to the East and South and Arabian sea to the West, Kerala is the twelfth largest state by population and is divided into 14 districts. The state capital is Thiruvananthapuram. The state has the highest Human Development Index (HDI) in the country as per the Human Development Report, 2011. It also has the highest literacy rate, highest literacy rate, highest expectancy and highest sex ratio among all the Indian states.

Livestock sector plays an important role in the economy of Kerala because in rural parts of Kerala it helps to overcome poverty and unemployment to a great extent. It ensures a regular flow of income to weaker section of population. The efforts of Kerala Government and other non-government organizations to enhance dairy sector through various programmes are noteworthy.

LIVESTOCK POPULATION IN KERALA

Livestock farming is one of the major agricultural activities in the country that is contributing towards achieving development goals of the National Growth and Reduction of Poverty (NSGRP). The livestock industry contribution to the Agricultural Gross Domestic product is about 13%, and contributed 3.8 % of the National Gross Domestic product in 2012 compared to 4.0% in 2009. This is mainly due to low growth rates, high mortality rates, low reproductive rates and poor quality of the final products from the industry. Modest improvement of these production coefficients coupled with adding value through processing could significantly increase output and income from the livestock industry.

In Kerala majority of livestock owning farmers are either small and marginal or even landless. In view of its suitability for combining with crop sub sector and sustainability as a household enterprise with the active involvement of women, it is emerging as a very popular supplementary avocation in the small farms. The Kerala Livestock Development Board Ltd. was established in the year 1976. The development of the livestock sector has proved to be very important, as it is the major livelihood of over a million households. Established with the sole aim of evolving a new breed of cattle suitable for the state, the KLDB has now come a long way bringing in new technology and prosperity to this sector. The several bull stations, semen banks, breeding centers for pigs, goat and cattle, progeny testing units, training centers and a number of other centers show the progress that it has made in its three decades of existing.

TABLE – 3.12
LIVESTOCK POPULATION OF KERALA

CATEGORY	YEAR (2012)
Cross bred cattle	39732
Indigenous cattle	151172
Total cattle	190904
Buffaloes	108702
Yaks	77
Mithuns	298
Total bovines	299981
Sheep	65089
Goat	135173
Pigs	10294
Horses & ponies	625
Mules	196
Donkeys	319
Camels	400
Total livestock	512097

Source: 19th Livestock census of India,

In Kerala, cross bred cattle is increased by 20.18% and indigenous cattle declined by 8.49% during period between 18th and 19th livestock census. There is a decline of 4.10% in total cattle population during 2007-2012 periods. The buffalo population shows an increasing trend of 3.19% where as goat population decreased by 3.82%. The trend in sheep population shows that the sheep production has declined heavily by 9.07%. The total livestock in Kerala has decreased from 529696 to 512057 between these two census showing a decline of -3.33 percent.

TABLE – 3.13
TREND IN THE PRODUCTION OF LIVESTOCK PRODUCTS

Livestock Produce	Unit	2008-09	2009-10	2010-11	2011-12
Milk	Lakh MT	24.51	25.87	26.43	27.16
Egg	Million Nos	1510	1633	1686	1705
Poultry Meat	MT	-	-	16153	184000
Meat Other than Poultry	MT	-	-	108398	242000

Source: Kerala State Profile

The estimated production of livestock products such as meat, milk, and eggs increased between the year 2008/2009 and 2011/2012. Total meat production increased from 16153 tones in 2010/11 to 184000 tones in 2011/2012. During the period, 2008/09 to 2011/12 milk production has increased from 24.51 Lakh MT to 27.16 Lakh MT litres respectively, while in the same period egg production increased from 1510 million to 1705 Million eggs.

The statistical analysis, both in the national level and in the Kerala State level, highlights the performance of the dairy sector in general and the various programmes implemented for the growth of the sector in particular. The statistical indicators provide the development that has taken place in dairy sector after the implementation of Five Year Plans and particularly the implementation of Operation Flood Programme in the country. While the development has been quite phenomenal at the National level, it is not up to expected levels in Kerala. It also points out other areas where proper attention and concerted efforts are required for further growth of the sector.

ROLE OF WOMEN IN LIVESTOCK SECTOR – KERALA

Cattle, buffalo, goat, pig, poultry, duck are the major live stocks reared in Kerala. In Kerala as per 2003 census nearly 94% of the livestock population is concentrated in the rural area, 80% of the livestock farmer's area marginal farmers and agricultural farmers. Women constitute 60% of the workers in this sector. As per 2003 figures, Kerala's is 1.13%, buffalo population accounts only for 0.07%, goat 1.01% and pig 0.05%. Cattle population in the state is 21.22 lakh, of which 17.35 lakh were crossbred. Of the total cattle population Palakkad district accounts for 12.4% and Wayanad for 4.89%. Higher number of buffalo population is concentrated in Malappuram district (19%), goat in Thiruvananthapuram (12%) and pig in Idukki (30%). Regarding poultry, Malappuram accounts for 13% fowls and Alappuzha accounts for 38% of ducks.

The livestock sector confers an immense contribution to the rural livelihood and food security of the masses. It provides employment to millions of livestock farmers while acting as a supplementary source of income to many agriculture farmers. This sector serves a great contribution to economic and social wellbeing of women involvement is more than 80% in this sector. Dairying is an important means of livelihood to millions of rural farmers. Increasing demand for milk and milk products in recent years intensifies dairy farming as profitable enterprise for women (Mohapatra, et al. 2012). The government of India report indicates that 85 percent of rural women are engaged in livestock production. (Viswana- than 1989). Milk production and processing of milk play a vital role in India's agricultural economy. Livestock farming has been regarded as an important socio economic instrument to supplement the income and employment to the women. Women generally contribute more labour inputs in areas of fodder cutting, watering, cleaning of animals and their sheds etc reported by Arshad, et al. (2013). Milking the animals and milk processing has also been attributed to the women folks to a greater extent. Manure collection, preparation of dung cakes maintenance of animal sheds etc are some of the exclusive activities of rural women in Kerala. Contribution of farm women in dairy production activities was studied with respect to their percentage of involvement in farming activities. Livestock Management has considerable importance in dairy farming. There are some important components like weaning of calves, keeping the animal in open or in shed, shed cleaning, collection of manure, regular and timely milking, were done by women in an

appreciable manner. Kerala accounts for 1.13 per cent of the total cattle population in the country. The total livestock population, as per the Livestock Census is 42, 93,925 as against 55, and 76,917 in the 1996 livestock census, which makes a decrease of 23.01 per cent. The main species of livestock found in the state of Kerala are cows, buffaloes, goats and pigs. Out of the total livestock, 58.01 per cent are cows, 2.60 per cent buffaloes, 37.22 percent goats and 2.05 percent pigs. Table 3.14 reveals that how much rural women are engaged in different activities in livestock farming.

TABLE 3.14
PARTICIPATION OF WOMEN IN LIVESTOCK FARMING IN KERALA

Sl.No	activities	Percentage
I	Frequency of feeding minerals	93.84
1	Fodder collection	87.69
2	Silage or hay making	46.15
3	Mixing green fodder with roughage	70.76
4	Quantity of green fodder to be fed	87.69
5	Storage of feed & fodder	66.15
II	Livestock management	
1	Washing and grooming of animal	87.69
2	Cleaning of cow dung from sheds	86.15
3	Collection of manure	89.23
4	Milking	93.84
5	Colostrums to be fed to the new born calf or not	67.69
III	Breeding	
1	Adoption of artificial insemination	7.69
2	Taking animals for artificial insemination	69.23
3	Taking animals for natural service	60
4	Pregnancy diagnosis	70.76
IV	Health care	
1	Vaccination	75.38
3	Care of new born	93.84
4	Care of pregnant animal	96.92

Source : J. Dairying, Foods and H.S.,27(3/4) : 181-185, 2008

The study revealed 93.84 percent and 92.3 percent of women were involved in the activities like milking and weaning of calves. Similar finding were reported by Rathod

(2011). Likewise more than 85% of women were involved in all livestock management activities like keeping the animal in shed or open land, washing and grooming of animals and cleaning of cow dung from sheds or preparation of cow dung cakes and collection of Manure. Similar findings were observed by Jain and Verma (1992) and Sarma (2002). Only 67.69 percent of women were engaged in colostrums feeding where they usually seek the help of men.

Women participation in breeding activities of dairy animals was found comparatively lesser with other activities. In fact they were playing behind the curtain. Most of the breeding activities are outdoor activities which require the animal to be taken outside the home to the veterinary hospital. This might be the reason of poor participation in breeding activities by the women. The study revealed that 70.76%, 69.23% and 60 % of farm women were actively engaged in taking animals for pregnancy diagnosis, artificial insemination and natural services respectively. Similar findings were also reported by Dubey (1982) and Singh (2003). Moreover the study indicates less participation of women in adoption of AI (7.69%) and treatment of animals with reproductive disorders (47.69%) Sarma (2002).

Women were actively participated in health care activities as they learnt the things by seeing and out of experience though they were not having technical knowledge. The study revealed that 96.92% and 93.84% of women were engaged in health care of pregnant animals and new born respectively. 92.3 percent of respondents looked after the treatment of sick animals was exclusively performed by farm women (Rathod et al. 2011, and Rangnekar 1992). Numbers of respondents were comparatively lesser in taking animals for vaccination or medication (75.38%). Similar findings were reported by researchers Tripathi and Bhanja (2000).92.30% of the milk processing activities were done by women (Arshad,2013).100% of the respondents agreed with the matter of consumption of milk for their own household purpose. The surplus milk was supplied to the nearby houses.

TABLE 3.15
MOTIVATIONAL FACTORS

Factors which motivate women in livestock								
Factors	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied	Weighted Average	Weighted Score	Rank
Motivational Factors								
Livestock Income	10.76%	46.15%	30.77%	9.23%	3.01%	233	3.58	2
family Support	44.62%	30.76%	13.34%	1.69%	5.01%	264	4.06	1
Developmental Schemes from funding agencies	3.07%	7.69%	16.92%	40%	32.30%	136	2.1	3

Source : Report of Kerala Animal Husbandry Department

Table 3.15 indicates that family support was the main motivational factor which propels women to take up such enterprise and followed by dairy income. But developmental schemes were not much appreciated by them.

Livestock production is one of the promising sectors of entrepreneurship development in India. Women play a significant role in dairy farming in Kerala. They spend more time in different activities of dairy farm by providing major labour inputs in the areas specially milk processing, Care of pregnant animals, collection of dung and caring of diseased animals, Cleaning of animals sheds, watering of animals, making feed concentrates and feeding of cattle's etc. The study also revealed that women entrepreneurs were satisfied with Family support and business profit. If they have received adequate training in dairy farming they can come across the hurdles what they are facing now.

3.4 PALAKKAD SCENARIO

The Palakkad district comprise of 4480 KM² of Malabar region. According to 2011 census the district population is 28.10 lakhs and density 627/sq km which is far below the state average of 859/sq km. Palakkad is bordered on the North West by Malappuram district on the South West by the Thrissur district and on the East by Coimbatore district of Tamil Nadu. The district is sub divided in to five Taluks and hundred and sixty-six revenue villages. The three tiers LSG include one district Panchayat, thirteen block Panchayats and ninety three Grama Panchayats. The climate is hot and humid, the hottest being March to June. The South West Monsoon from June to September provides the bulk of the rain. The average recorded rainfall is 2111 mm.

Agriculture is the predominant income and employment provider in Palakkad district. The vast majority of the farmers belong to the marginal group. The average land holding size, the fourth largest in the state, is 0.39-ha/ household. The most predominant farming system is mixed crop livestock farming. The district contributes major portion of rice, almost 40% of the states production, and the much-needed roughage, paddy straw, for ruminant nutrition and milk production. Like in the rest of the state, the bovine is the dominant species of livestock. Nearly two decades ago the district had the highest draught animal population in the state. The draught animal population started declining towards the later part of the last century and the cattle composition changed more in favor of cross bred dairy cattle. Milk production is extremely livelihood intensive to almost all sections of farming community, more so in the case of marginal, sub marginal and land less groups.

The livestock development and milk marketing in the district is looked after by number of institutions. The Animal Husbandry Department [AHD] is in charge of the health care and breeding services. The important institutions under the department include one district office, one District Veterinary Centre, four Veterinary Poly Clinics, fifteen Veterinary Hospitals, seventy-eight Veterinary Dispensaries, three Mobile Farm Aid Units, one Mobile Veterinary Dispensary and seventy two Intensive Cattle Development Project [ICDP] Sub centers for Artificial Insemination [AI] in cattle. The Department of Dairy Development is in charge of the livestock extension services and administration of milk cooperatives. The department has one district office, thirteen Dairy Extension Service centers, one quality control centre and one Dairy

Training Centre. The Malabar Regional Co- operative Milk Producers Union [MRCMPU] has one milk-processing dairy and two milk-chilling centers apart from two Procurement and Input services Units – Palakkad and Pattambi – and one straw based cattle feed unit. The district houses the largest cattle feed plant under Milma at Malampuzha, 8 kilometres away from Palakkad town. The Kerala Livestock Development Board responsible for the frozen semen production and genetic improvement of dairy cattle in the state has one bull station, one training centre and one fodder seed testing lab at Dhoni in Palakkad district.

The milk procurement in Palakkad district is in increasing trend and to handle the additional volume of raw milk and fat it is proposed to purchase a 60 KL milk silo, 3 KL capacity cream storage tank, 5KLPH cream pump, 2KL capacity Ghee boiler, 3 KL capacity Ghee storage tank and a 2 KLPH capacity Ghee clarifier. The total investment proposed for milk processing is Rs. 126.00 lakhs.

TABLE -3.16

LIVESTOCK POPULATION IN PALAKKAD

Sl no	Name of block	Name of panchayat	Cattle				buffalo	
			Exotic & crossbreed		indigenous		Male	Female
			Male	Female	Male	Female		
1	Alathur	Alathur	192	1762	33	1006	8	13
2		Kannambra	62	558	147	2522	0	0
3		Kavassery	117	1097	160	1609	8	1
4		Kizhakanchery	174	2056	174	1767	9	0
5		Putucode	56	546	104	1192	8	0
6		Vadakanchery	673	6634	77	1261	2	9
7		Erimayur	151	1371	87	780	12	8
8		Tharur	273	2718	83	587	2	0
9	Attapadi	Agali	363	2867	457	2016	6	44
10		Pudur	28	220	119	136	5	0
11		Sholayar	61	472	252	811	0	9
12	Chittur	Eruthempathy	40	292	29	411	14	0
13		kozhinjapara	54	454	123	854	20	25
14		Nallepully	304	2242	38	594	51	21
15		Perumatty	1024	7142	25	31	24	0
16		Vadakarapathy	36	248	20	74	51	0
17		Elapully	499	4625	97	1557	6	4
18		Polpully	169	1765	77	580	3	24
19	Kuzhalmannam	Kuzhalmannam	181	1465	36	674	72	24
20		Kannadi	79	684	28	655	72	36
21		Kottayi	39	360	71	629	361	64
22		Kuthanur	82	595	33	639	43	0
23		Mathur	41	371	36	493	21	0

24		Peringottukurussi	8	59	83	772	31	1
25		Thenkurussi	235	1800	23	471	56	2
26	Kollengode	Koduvayur	155	1177	53	781	29	0
27		Kollengode	158	1070	0	0	29	0
28		Muthalamada	145	1854	89	736	13	1
29		Puthunagaram	115	1091	0	0	3	9
30		Vadavannur	98	950	60	511	3	0
31		Pattanchery	72	440	0	9	23	5
32		Peruvembu	575	3567	447	1123	1484	2568
33		Malampuzha	Akathethara	76	727	51	567	0
34	Kodumbu		25	259	46	25	0	0
35	Malabuzha		112	1010	132	2228	58	63
36	Marutharod		31	279	45	450	0	0
37	Puthupariaram		119	1232	118	744	0	0
38	Puthussery		108	678	140	1080	83	47
39	Mannarkad	Alanallur	389	3465	31	226	71	5
40		Kanjirapuzha	240	1906	157	1107	21	0
41		kottupadam	330	3044	31	118	1	0
42		Kumaranputhur	36	346	24	24	14	1
43		Mannarkad	64	458	168	998	11	0
44		Thenkara	93	719	215	851	37	0
45		Thachampara	155	1155	115	530	39	9
46		Thachanattukara	156	1107	236	923	18	0
47		Karimba	39	502	0	0	9	0.
48	Nemmara	Ayilur	115	1422	76	750	0	0
49		Elavanchery	134	2576	37	413	25	36
50		Nelliampathy	24	328	35	546	29	0
51		Nemmara	384	3845	97	1232	0	0
52		Pallasana	127	1269	16	234	25	47
53		Melarcode	40	2738	26	437	29	5
54		Vandazhy	14	115	77	660	0	2
55	Ottapalam	Ambalapara	102	149	132	724	25	3
56		Anangandi	57	672	254	1494	29	0
57		Chalavara	16	139	98	589	0	0
58		Lakidiperur	260	2544	280	1003	32	2
59		Vaniyamkulam	72	754	151	871	25	0
60		vallapuzha	65	642	22	55	8	9
61		Nellaya	308	1929	123	1064	30	0
62		Tharikkederi	480	4022	147	584	142	0
63	Palakkad	Mannur	103	738	83	663	12	2
64		Keralasseri	24	192	159	756	16	12
65		Kongad	120	843	94	974	13	0
66		Mundur	140	1109	113	685	11	18
67		Mankara	113	817	260	705	34	0
68		parali	35	293	110	1033	3	0
69		pirayiri	3	21	94	906	10	0
70	Pattambi	Koppam	104	712	88	717	23	0
71		Kulukkalur	63	465	82	709	10	0
72		Muthuthala	93	966	141	898	10	15

73		Ongallur	54	486	193	946	0	0
74		Pattambi	55	414	121	719	0	2
75		Vilayur	71	441	62	405	2	0
76		Parathur	80	693	321	225	39	11
77		Thiruvengapura	143	1030	292	780	4	0
78	Sreekrishnapuram	Cherpullasser	193	1755	149	948		0
79		Kadambazhipuram	6	183	39	717	0	0
80		Karimpuzha	250	2328	63	66	12	0
81		Karakurussi	124	1060	0	0	2	0
82		Pookottukavu	28	308	164	600	18	0
83		Sreekrishnapuram	102	1066	109	617	5	0
84		Vellinezhi	3	57	0	0	15	0
85		Thrithala	Anakara					
86	Chalisseri							
87	Kappur							
88	Nagalasser							
89	Pattithara		764	3623	179	1012	75	2
90	Thirumittakode		479	1489	105	845	11	0
91	Thrithala		332	1269	73	678	0	0
1	Ottapalam (M)		93	572	102	636	14	0
2	Mannarkkad (M)		388	1776	61	533	2	0
3	Palakkad (M)		46	210	74	618	0	0
4	Chittoor (M)		333	1786	88	746	44	22

Source: Economics and Statistical Department, 2015

Livestock wealth is of considerable importance to the people of the districts whose main occupation is agriculture. In the Palakkad districts bullocks and the buffaloes are being used for agriculture work in the paddy fields. In rural areas drought animals were used to transportation of agricultural commodities. The bullock carts (savarivandy) are used for the journeys in rural areas of the districts. The Government Goat Farm Attappady and the Regional Poultry Farm Malampuzha are also functioning in the district for the distribution of Malabari goats and improved variety of chicks for the weaker section of the community. Considering the important role played by Animal Husbandry in the economy of the state, much attention is given to the health care of the animals and birds. To achieve this objects healthcare centers have been instituted at various levels.

WOMEN PARTICIPATION IN LIVESTOCK SECTOR IN PALAKKAD

Animal Husbandry and Dairy Development Sector is of vital importance in generating additional employment opportunities and supplementing incomes of small and marginal farmers in Palakkad, especially for women. The majority of livestock

population in the state is concentrated in villages. livestock sector is an integral component of palakkad district where, livestock production is largely in the hands of women. Most of the animal farming activities such as fodder collection, feeding, watering, and health care, management, milking and household-level processing, value addition and marketing are performed by women. Mostly peasants and agricultural labourers are engaged in cattle rearing and allied activities. Hence any development in this sector will strengthen the rural economy. About 10% of the gross domestic product is contributed by this sector. Milk, egg and meat are the principal primary products of animal husbandry in Palakkad.

Today, nearly 2,500 of the 6,000 households in almost all panchayats run dairy units in Palakkad. Milk production has risen four-fold to 16,000 liters per day. The milk cooperatives alone distributed '7.41 crore in cash to the farmers last year. The district has topped in milk production in the State producing 622.14 lakh liters in 2009-10, registering a growth rate of 13.98 per cent. The milk production in the district in 2007-08 was 498.28 lakh liters (2.66 per cent growth rate). In 2008-09 the production was 545.84 lakh liters (9.54 per cent growth rate). Besides the efforts of the 300-odd dairy cooperative societies in the district, the development of Elappully grama panchayat as the Dairy Village, the Nature-Fresh Milk Project of Kannadi gram panchayat and the Attappady Goat Farm helped the district to achieve the distinction.

TABLE 3.17
PERCENTAGE DISTRIBUTION OF TOTAL WORKERS IN PALAKKAD 2015

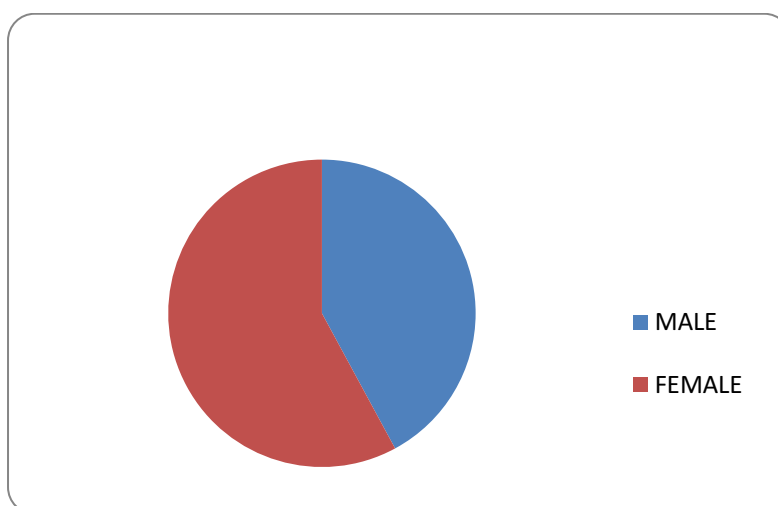
Sl.No	Occupation	Palakkad		
		Total	Male	Female
1	Agriculture	33.7	33.55	66.45
2	Livestock Labourers	27.5	42.1	57.9
3	Workers In HH Industry	3.3	3.1	25.9
4	Other workers	35.5	57.95	42.05

Source : www.arccjournal.com/indianjournals.com

At the time of 2015, 33.7 per cent of the economically active people reported themselves to be agricultural labourers. A small segment of workers (3.3 %) are engaged in household industry. and a large segment (35.5 %) of workers are working in various sectors like trade and transport, service, manufacturing, construction and mining. 27.5% people were engaged in the livestock sector. 57.9% women are the main participants in this sector. The employment generation of livestock sector is shown in the following graph.

Diagram 3.1

EMPLOYMENT GENERATION OF LIVESTOCK SECTOR BY SEX IN PALAKKAD



Source: Economics and Statistical Department, 2015

In short, the livestock farming is a major sector that provides large self-employment opportunities for the rural women in Palakkad. Thus, livestock enterprise is more women oriented and growth in this sector would help in promoting gender equity and empowerment of women in Palakkad and all over the world. Thus we can conclude that Livestock sector plays a significant role in the socio-economic development of rural women.

CHAPTER IV
PRIMARY DATA ANALYSIS

CHAPTER IV
PRIMARY DATA ANALYSIS

TABLE (4.1)
RELIGION WISE CLASSIFICATION

Religion	No. of respondents	Percentage
Hindu	40	57.14%
Christian	28	40%
Muslim	2	2.8%
Total	70	100%

Source: Sample survey, 2018

Above the table (4.1) shows that 57.14% of respondents belong to Hindu community and 40% belong to Christian community. And the remaining 2.86% belong to Muslim community.

TABLE (4.2)
MARITAL STATUS OF THE RESPONDENTS

Married status	No. of respondents	Percentage
Married	62	88.57%
Widow	8	11.43%
Unmarried	-	-
Divorced	-	-
Total	70	100%

Source: Sample survey, 2018

The table (4.2) shows that 88.57% of respondents are married and remaining 11.43% are widows. None of them belonged in the categories of unmarried and divorced.

TABLE (4.3)
NUMBER OF CHILDREN

Number of children	No. of respondents	Percentage
Only 1	12	17.15%
2-4	58	82.85%
Above 5	-	-
Total	70	100%

Source: Sample survey, 2018

This table (4.3) shows that 82.85% of respondents have 2-4 children. And 17.15% of the respondents have only one child.

TABLE (4.4)
TYPE OF FAMILY

Type of Family	No. of respondents	Percentage
Joint family	12	17.15%
Nuclear family	58	82.85%
Total	70	100%

Source: Sample survey, 2018

The above table (4.4) shows, majority of (82.85%) respondents have nuclear family. The remaining 17.15% belongs to joint family.

TABLE (4.5)
AGE WISE CLASSIFICATION

Age Group	No. of respondents	Percentage
Below 20	-	-
21-30	2	2.87%
31-50	50	71.4%
Above 50	18	25.71%
Total	70	100%

Source: Sample survey, 2018

The above table (4.5) shows that 71.42% of respondents are engaged in livestock farming they are between the age group of 31 and 50, and 25.71% are in the age group of above 50. The remaining 2.87% are belonged in the age of 21 and 30.

TABLE (4.6)
EDUCATIONAL QUALIFICATION

Education	No. of respondents	Percentage
Below 10 th	42	60%
10 th -12 th	24	34.28%
Above 12 th	4	5.72%
Total	70	100%

Source: - Sample survey, 2017

The above table (4.6) represents the educational qualification of the respondents. Among 60% of the respondents belongs to the category of below 10th level and 34.28% of the respondents belongs to the category of 10 - 12th level. Remaining 5.72% of the respondents belong to the category of above 12th. It should be noted that all respondent are literate.

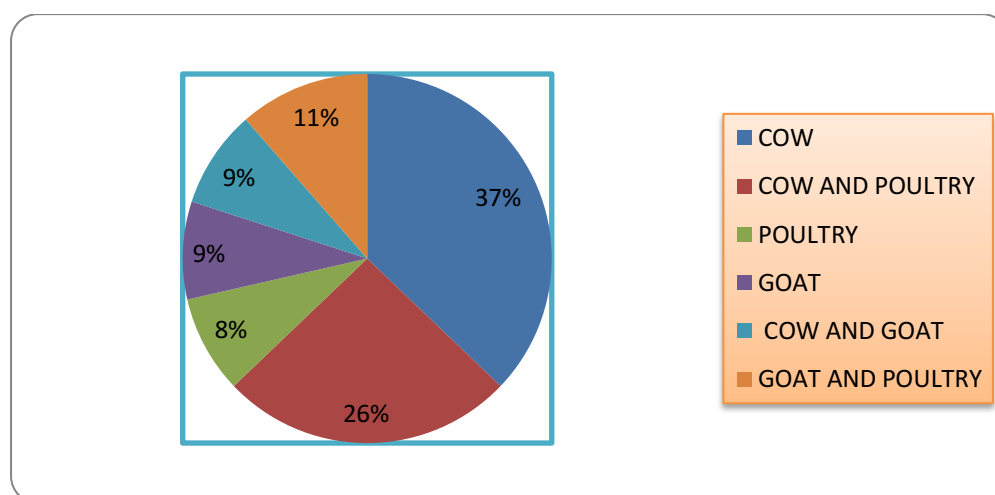
TABLE (4.7)
LIVESTOCK OWNERSHIP

Livestock owned	No. of respondents	Percentage
-----------------	--------------------	------------

Cow	26	37.14%
Cow and Poultry	18	25.71%
Poultry	6	8.57%
Goat	6	8.57%
Cow and Goat	6	8.57%
Goat and Poultry	8	11.44%
Total	70	100%

Source: Sample survey, 2018

DIAGRAM 4.a
LIVESTOCK OWNERSHIP



Source: Sample survey, 2018

The above table (4.7) depicts that 37.14% of respondent owned cow and 25.71% of women owned both cow and poultry. 11.44% of women owned goat and poultry, and the about equality of 8% of own goat, cow and goat and poultry.

TABLE (4.8)

ANNUAL EARNING FROM THE SALE OF COW'S MILK

Amount from the sale of milk (in Rs.)	No. of respondents	Percentage
Below Rs.15,000	6	12%
Rs.15,000 – Rs.1,00,000	20	40%
Above Rs.100,000	24	48%
Total	50	100%

Source: Sample survey, 2018

The above table (4.8) shows that 37.93% of the respondent earn income from the sale of milk ranging from Rs.15,000 – Rs.1,00,000 and 48.25% of them earn above Rs.1,00,000 and the remaining 13.79% of women earn below Rs.15,000.00.

TABLE (4.9)
LEVEL OF ANNUAL INCOME FROM THE SALE OF DUNG

Amount from the sale of dung (in Rs.)	No. of respondents	Percentage
Below Rs. 20,000	20	40%
Rs.20,000 - Rs.30,000	24	48%
Above Rs.30,000	6	12%
Total	50	100%

Source: Sample survey, 2018

The above table (4.9) shows that 48% of the respondents earn Rs.20, 000 - Rs.30, 000 from the annual sale of dung. 40% of them earn below Rs.20,000 and the remaining 12% of the respondent earn above Rs.30,000 from the sale of dung.

TABLE (4.10)
LEVEL OF ANNUAL INCOME FROM THE SALE OF COW

Amount from the sale of cow (in Rs.)	No. of respondents	Percentage
Rs.10,000 – Rs.20,000	8	16%
Rs.20,000 – Rs.30,000	30	60%
Above Rs.30,000	12	24%
Total	50	100%

Source: Sample survey, 2018

The above table (4.10) shows that 60% of respondent earn Rs.20, 000 - Rs.30, 000 from the sale of cow. 24% of them earn above Rs.30, 000 and the 16% of the respondent earn Rs.10, 000 – 20,000 from the annual sale of cow.

TABLE (4.11)
ANNUAL EARNINGS FROM THE SALE OF GOAT'S MILK

Amount from the sale of milk (in Rs.)	No. of respondents	Percentage
Below Rs. 5,000	8	40%
Rs.5,000 - Rs 7,000	10	50%
Above Rs.7,000	2	10%
Total	20	100%

Source: Sample survey, 2018

The above table (4.11) shows that majority of the respondents earn Rs.5, 000 – Rs.7, 000 from the sale of milk of goat and 40% earn below Rs.5, 000 and the remaining 10% earn above Rs.7, 000.

TABLE (4.12)
LEVEL OF ANNUAL INCOME FROM THE SALE OF GOAT

Amount from the sale of goat (in Rs.)	No. of respondents	Percentage
Below Rs. 20,000	4	20%
Rs.20,000 - Rs.30,000	10	50%
Above Rs. 30,000	6	30
Total	20	100%

Source: Sample survey, 2018

The table shows (4.12) that 50% of respondent earn Rs.20, 000 – Rs.30, 000 from the sale of goat. 30% earn above 30,000 and the 20% earn below Rs.20,000.

TABLE (4.13)
LEVEL OF ANNUAL INCOME FROM THE SALE OF EGG

Amount of sale of egg (in Rs.)	No. of respondents	Percentage
Rs.5,000 - Rs.10,000	18	69.23%
Above Rs.10,000	8	30.76%

Source: Sample survey, 2018

Here table (4.13), there is 32 household have poultry farming. But only 26 household are selling eggs. Among them 69.23% of the respondents earn Rs.5, 000 – 10,000 and 30.76% of the respondents earn above Rs.10, 000.

TABLE (4.14)
ANNUAL INCOME FROM THE SALE OF POULTRY

Amount from the sale of hen (in Rs.)	No. of respondents	Percentage
Rs.5,000 - Rs.10,000	18	69.23%
Above Rs.10,000	8	30.76%

Source: Sample survey, 2018

The above table (4.14) shows that 69.23% of the respondents earn Rs.5,000 –10,000. From the sale of hen and 30.76% of the respondents earn above Rs.10, 000.

TABLE (4.15)
ANNUAL EXPENDITURE INCURRED FOR CATTLE REARING

Expenditure (in Rs.)	No. of respondents	Percentage
Rs.10,000 - Rs.20,000	36	72%
Above - 20,000	14	28%
Total	50	100%

Source: Sample survey, 2018

The table (4.15) shows that 72% of the respondents incurred Rs.10, 000 – Rs.20, 000 for cattle rearing and 28% of them incurred above Rs.20, 000 annually.

TABLE (4.16)
ANNUAL EXPENDITURE INCURRED FOR GOAT REARING

Expenditure (in Rs.)	No. of respondents	Percentage
Rs.1000 - Rs.2000	14	70%
Above Rs.2000	6	30%
Total	20	100%

Source: Sample Survey, 2018

The above table (4.16) shows that majority of the respondent incurred Rs.1, 000 – Rs.2, 000 for goat farming and 30% of them incurred above Rs.2, 000 annually.

TABLE (4.17)
ANNUAL EXPENDITURE INCURRED FOR POULTRY

Expenditure (in Rs.)	No. of respondents	Percentage
Below Rs.1000	20	71.42
Above Rs.1000	12	28.57
Total	32	100

Source: Sample survey, 2018

The table (4.17) debits that 71.42% of the respondents incurred below Rs. 1,000 for poultry farming. The remaining 28.57% of them incurred above Rs. 1,000 for poultry farming.

TABLE (4.18)
HERD SIZE OF COW

Herd size	No. of respondents	Percentage
Below - 5	20	40%
5 - 10	20	40%
11 - 15	10	20%
Total	50	100%

Source: Sample survey, 2018

The above table (4.18) gives an idea regarding herd size of cow. It reveals that 40% of the respondent owned herd size of below 5 and 5 – 10, 20% owned between 11 – 15.

TABLE (4.19)
HERD SIZE OF GOAT

Herd size	No. of respondents	Percentage
Below - 5	-	-

5 - 10	14	70%
Above -10	6	30%
Total	20	100%

Source: Sample survey, 2018

The above table (4.19) shows that herd size of goat. It reveals that 70% of the respondent own herd size of between 5 – 10 and only 30% owned above 10.

TABLE (4.20)
HERD SIZE OF POULTRY

Herd size	No. of Respondents	Percentage
Below -20	6	18.76%
20 - 30	18	56.25%
Above - 30	8	24.99%
Total	32	100%

Source: Sample survey, 2018

The above table (4.20) debits that herd size of poultry. It shows that 18.76% of the respondents have herd size of below 20%.56.25% of them have herd size between 20 – 30, and 24.99% of them have herd size is above 30.

TABLE (4.21)
TYPE OF WORKERS

Type of workers	No. of respondents	Percentage
Family labours	62	88.57%
Hired labours	8	11.42%
Total	70	100%

Source: Sample survey, 2018

The table (4.21) shows that majority of 88.57% are family labour and remaining 11.42% are hired labour. It should be noted that family labour is more than hired labour.

TABLE (4.22)
SALARY OF THE HIRED LABOUR

Salary of the hired labourers	Frequency	Percentage
Below - Rs.2,000	2	25%
Rs.2,000 - Rs.4,000	4	50%
Rs.5,000 - Rs.7,000	2	25%

Source: Sample survey, 2018

The table (4.22) shows that 11.42% of the respondents are hired labour. Among them 50% are earn salary between Rs.2, 000 – Rs.4, 000. The same of the 25% have earn below Rs.2, 000 and Rs.5, 000 – Rs.7,000.

TABLE (4.23)
WORKING HOURS OF THE RESPONDENT

Working hours per day	No. of respondents	Percentage
Below – 5 hrs	2	2.85%
5 hrs – 10 hrs	36	51.42%
10 hrs - 15 hrs	32	45.7%
Total	70	100%

Source: Sample survey, 2018

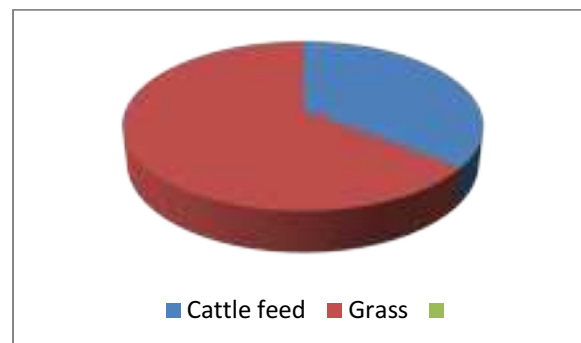
The above table (4.23) shows that 51.42% of the respondent works for 5 - 10hrs per day.45.7% of them works 11 – 15 hrs per day and the remaining 2.85% are works below 5hrs.

TABLE (4.24)
FEEDING FOR COW

	No. of respondents	Percentage
Cattle feed	20	25.64%
Candy, Confed	-	-
Grass, Bran	16	20.51%
Others	41	53.84%

Source: Sample survey, 2018

DIAGRAM 4.b
FEEDING FOR COW



Source: Sample survey, 2018

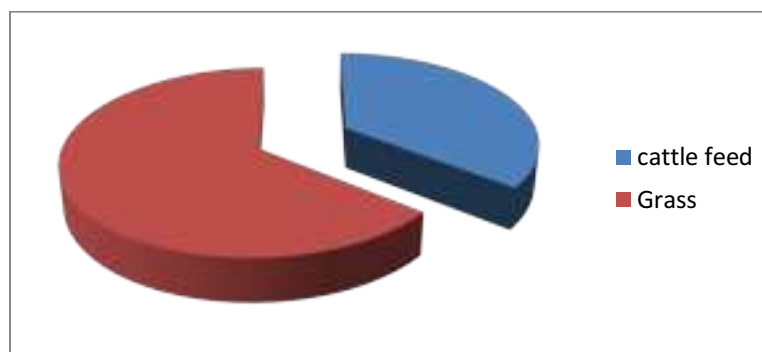
Above the table (4.24) shows that 25.64% of the respondents give cattle feeds to the cow. 20.51% of them gave grass and bran and 53.84% of them gave all the types of feeding to the cow.

TABLE (4.25)
FEEDING FOR GOAT

Type of food	No. of respondents	Percentage
Cattle feeding	10	35.71%
Grass	18	64.28%

Source: Sample survey, 2018

DIAGRAM 4.c
FEEDING FOR GOAT



The above table (4.25) shows that 35.71% of the respondent are gave cattle feeding to the goat and 64.28% of them gave grass to the goat.

TABLE (4.26)
FEEDING FOR HEN

Type of Food	No. of respondents	Percentage
Grain, Corn, Rice	14	43.75%
Others	18	56.25%

Source: Sample survey, 2018

The above table (4.25) shows that 56.25% of the respondent gave all the type of feedings to the poultry and 43.75% of them gave grain and rice to the poultry.

TABLE (4.27)
LAND FOR FODDER CULTIVATION

Land area	No. of respondents	Percentage
No cultivation	44	62.86
Below - 10 cent	12	17.14

11 cent - 50 cent	8	11.43
51 cent – 1 Acre	2	2.86
Above – 1 acre	4	5.71
Total	70	100

Source: Sample survey, 2018

The above table (4.27) shows that 17.14% of the respondents owned the land area of below 10 cent. 11.43% of them owned 11 – 50 cent. 2.86% of them owned 51 cent to 1 acre and 5.71% of respondents owned above 1 acre of land.

TABLE (4.28)
NATURE OF SHED

Nature of shed	No. of respondents	Percentage
Permanent	26	37.14%
Semi-permanent	14	20%
Hygienic	18	25.71%
Unhygienic	12	17.14%
Total	70	100%

Source: Sample survey, 2018

The above table (4.28) shows that 37.14% of the respondent has permanent shed. 20% of them have semi-permanent, 25.71% of them have hygienic and 17.14% of them has unhygienic shed.

TABLE (4.29)
AVERAGE MILK PRODUCTION OF COW

Average milk production	No. of respondents	Percentage
Below – 5 litre	6	12%
6 litre – 8 litre	20	40%
Above – 10 litre	24	48%
Total	50	100%

Source: Sample survey, 2018

The above table (4.29) represents the average milk production capacity of cow. Among 12% of cows are producing below 5 litres of milk and 40% of cows are producing 6 – 8 litres of milk. Remaining 48% of cows are producing above 10 litres of milk. Thus it should be noted that all cows are producing milk.

TABLE (4.30)
AVERAGE MILK PRODUCTION OF GOAT

Average milk production	No. of respondents	Percentage
Below - 2 litre	4	20%
3 litre - 5 litre	16	80%

Above – 5 litre	-	-
Total	20	100%

Source: Sample survey, 2018

The above table (4.30) represents the average milk production capacity of goat. Among 20% of goat are producing below 2 litres of milk per day and 80% of goats are producing 3 – 5 litres of milk per day. And none of the goats are producing above 5 litres of milk per day. Thus it should be noted that all goats are producing milk.

TABLE (4.31)
AVERAGE EGG PRODUCTION OF HEN

Average egg production	No. of respondents	Percentage
Below – 20 egg	12	37.5%
20 egg – 30 egg	18	56.25%
Above – 30 egg	2	6.25%
Total	32	100%

Source: Sample survey, 2018

The above table (4.31) shows the average egg production capacity of hen. Among 37.5% of hens are producing below 20 eggs and 56.25% of hen are producing 20 – 30 eggs. Remaining 6.25% hens are producing above 30 eggs. Thus it should be noted that all hens are producing eggs.

TABLE (4.32)
FACILITIES PROVIDED FOR LIVESTOCK

Facilities	No. of respondents	Percentage
Feeding racks	42	48.83%
Fan	-	-
A/C	-	-
Radio	-	-
Water availability	44	51.16%
All of the above	-	-

Source: Sample survey, 2018

The above table (4.32) shows that 51.16% of the respondents ensures regular water supply to the livestock and 48.83% of them give feeding racks to the livestock and none of them providing fan, a/c and radio facility to the livestock.

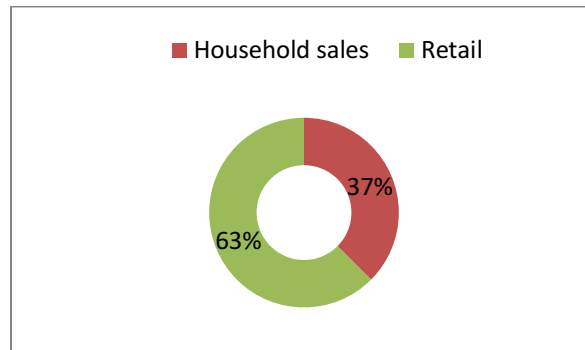
TABLE (4.33)
MARKETING STRATEGIES FOR MILK

Marketing strategy	No. of respondents	Percentage
Sale	22	33.33%

Retail	-	-
Co-operative society	44	66.66%
Others	-	-

Source: Sample survey, 2018

DIAGRAM 4.d
MARKETING STRATEGIES FOR MILK



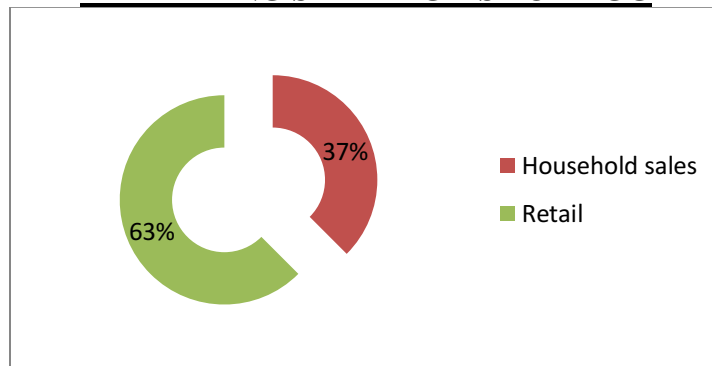
The above table (4.33) shows that 66.66% of the respondent's sale the milk to the society and 33.33% of them gave to the household. None of them will give it to the shops and for other purpose. And it is noted that all respondents are give milk only to household and society.

TABLE (4.34)
MARKETING STRATEGIES FOR EGG

Marketing strategy	No. of respondents	Percentage
Sale	12	37.5%
Retail	20	62.5%

Source: Sample survey, 2018

DIAGRAM 4.e
MARKETING STRATEGIES FOR EGG



The above table (4.34) shows that 62.5% of the respondents sell the egg to shops and 37.5% of them sell to household.

TABLE (4.35)
TRANSPORTATION FACILITIES USED FOR MARKETING

Transport	No. of respondents	Percentage
Auto	18	26%
Tempo	-	-
Jeep	18	26%
Two Wheelers	34	48%
Total	70	100%

Source: Sample survey, 2018

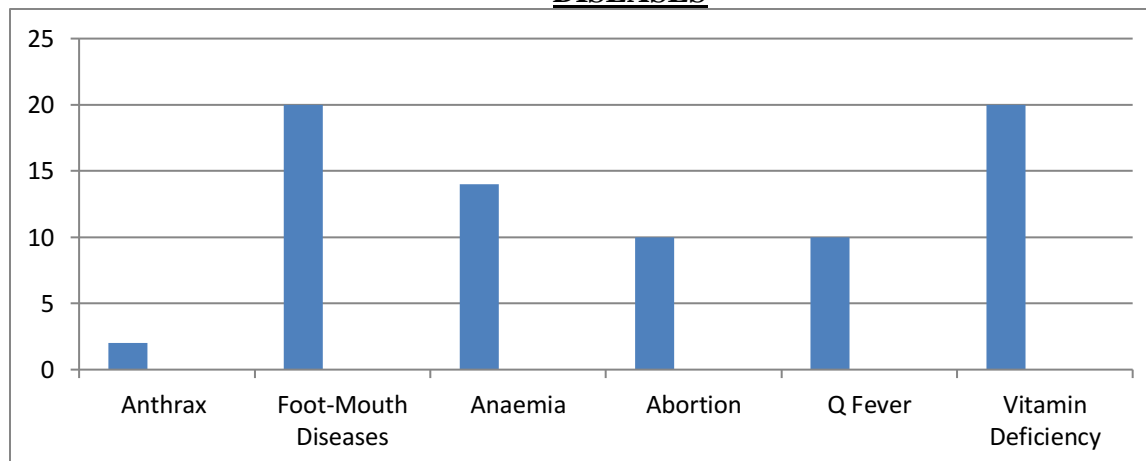
The above table (4.35) shows that 48% of respondents are using wheelers as their mode of transportation for marketing and 26% of respondent are using auto as their mode of transportation for marketing. Remaining 26% of respondents are using jeep as their transportation for marketing. None are using tempo for transportation.

TABLE (4.36)
DISEASES

Diseases	No. of respondent	Percentage
Anthrax	2	2.63%
Foot-Mouth Diseases	20	26.3%
Anaemia	14	18.42%
Abortion	10	13.15%
Q Fever	10	13.15%
Vitamin Deficiency	20	26.3%

Source: - Sample survey, 2017

DIAGRAM 4.f
DISEASES



The table (4.36) shows that 26.3% of the cow has foot- mouth diseases and vitamin deficiency. 13.15% of cows have abortion and q fever. 42% of the cows have anemia and 2.63% of the cows have anthrax diseases.

TABLE (4.37)
PRECAUTIONS TAKEN AGAINST DISEASES

Precaution	No. of respondent	Percentage
Vaccination	26	37.14%
Medicine	24	34.28%
Regular checkups	10	14.29%
All of the above	10	14.29%
Total	70	100%

Source: Sample survey, 2018

The above (4.37) table shows that 35.13% of the respondents have take vaccination for their livestock 32.43% of them use medicines, 18.91% of them get a regular checkup and 13.51% of them take all the type of precautions for their livestock.

TABLE (4.38)
SAVING SCHEME

Saving scheme	No. of respondent	Percentage
Post office saving	10	14.29%
Local chitty	24	34.29%
Daily deposits	2	2.85%
No	34	48.59%
Total	70	100%

Source: Sample survey, 2018

The above table (4.38) shows that 14.29% of the respondents have post office saving, 34.29% of the respondent have local chitty. 2.85% of them have daily deposits and 48.57% of the respondents have no saving scheme.

TABLE (4.39)
INSURANCE COVERAGE FOR THE RESPONDENT

Insurance	No. of respondent	Percentage
LIC	16	22.85%
Health insurance	12	17.14%
Med claim	18	25.71%

No	24	34.29%
Total	70	100%

Source: Sample survey, 2018

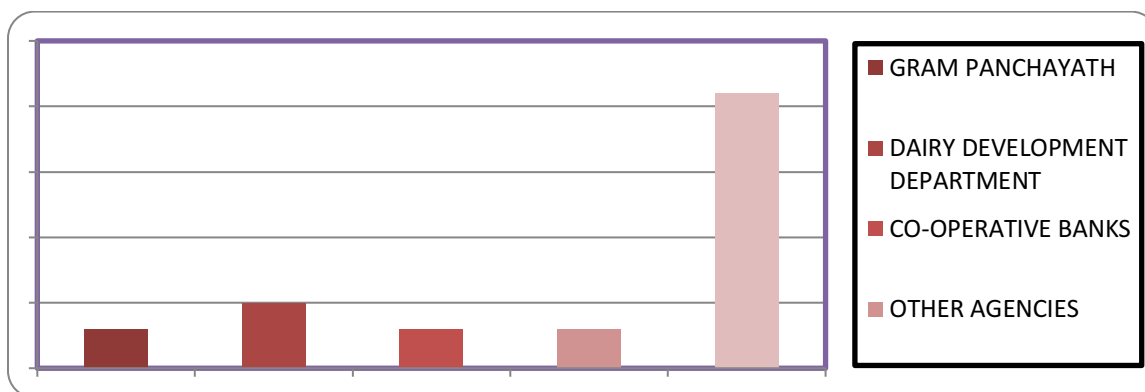
The above table (4.39) shows that 22.85% of the respondents have LIC coverage, 17.14% of them have health insurance, 25.71% of them have med claim and 34.29% of them have no insurance coverage.

TABLE (4.40)
SOURCE OF FINANCIAL ASSISTANCE

Source	No. of respondent	Percentage
Grama Panchayat	6	8.57%
Dairy Development Department	10	14.28%
Co-operative banks	6	8.57%
Other agencies	6	8.57%
No	42	60%
Total	70	100%

Source: Sample survey, 2018

DIAGRAM 4.g
SOURCE OF FINANCIAL HELP



Source: Sample survey, 2018

The above table (4.40) and diagram (4.g) shows that 8.57% of the respondents have get financial helps from the grama panchayath, co-operative banks and the other agencies. 14.28% of them get from dairy development department. 60% of them don't get any financial help.

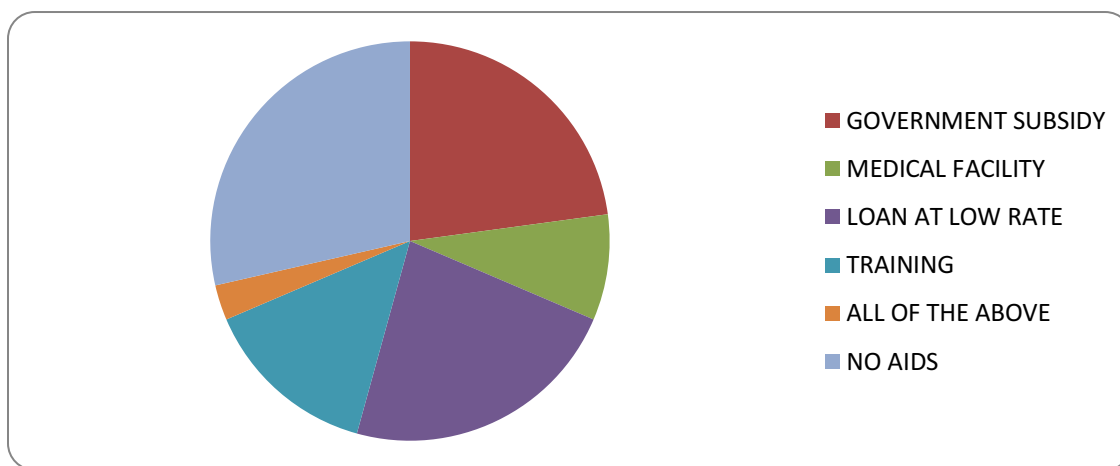
TABLE (4.41)
GOVERNMENT AIDS

Government help	No. of respondent	Percentage
Government subsidy	16	22.83%

Medical facility	6	8.57%
Loan at low rate	16	22.85%
Training	10	14.28%
All of the above	2	2.85%
No aids	20	28.57%
Total	70	100%

Source: Sample survey, 2018

DIAGRAM 4.h
GOVERNMENT AIDS



Source: Sample survey, 2018

The above table (4.41) shows that 22.83% of the respondent gets government subsidies and loan at low interest rate from government. 8.57% of them get medical facility, 14.28% of them get training, 2.85% of them get all the help and 28.57% of them doesn't get any aid from government.

TABLE (4.42)
PURPOSE FOR TAKING LOAN

Loan sanctioned	No. of respondents	Percentage
To start the farm	-	-
To buy new livestock	28	40%
Renovate and furnish the farm	2	2.85%
Electric and water facility to farm	-	-
Education of children	4	5.71%
No loan taken	36	51.42%
Total	70	100%

Source: Sample survey, 2018

The table (4.42) above shows that 40% of the respondents take the loan to buy new livestock, 2.85% of them take to renovate and furnish the farm. 5.71% of them take to educate their children. 51.42% of them take no loans. Here, it shows that no one take the loan for start the firm.

TABLE (4.43)
SOURCE OF TRAINING

Source	No. of respondents	Percentage
Gram panchayat	4	40%
Animal husbandry	6	60%

Source: Sample survey, 2018

Out of 70 samples only 10 respondents received training related to livestock rearing technique. The above table (4.43) shows that 40% of respondents get training from gram panchayat. And the remaining 60% of them get from animal husbandry. No one gets training from veterinary hospital.

TABLE (4.44)
DURATION OF TRAINING PERIOD

Training duration	No. of respondents	Percentage
None	60	85.71
One week	8	11.43
Below one month	2	2.86
Two month	0	0
Two – three month	0	0
Total	70	100%

Source: Sample survey, 2018

The above table (4.44) shows that the 11.43% of the respondent attended one week training and 2.86% of them get training for below one month and none of them get the training for 2 months and 2 -3 months duration.

TABLE (4.45)
LEVEL OF GOVERNMENT AID

Amount (in Rs.)	No. of respondents	Percentage
Rs.20,000 - Rs.30,000	2	25%
Rs.30,000 – Rs.40,000	4	50%
Rs.40,000 - Rs.50,000	2	25%

Source: Sample survey, 2018

Out of 70 samples only 8 households get aids from government. Among them 50% of the respondents received Rs.30,000 -Rs.40,000. 25% of them received Rs.20, 000 – Rs.30, 000 and the remaining 25% of them received Rs.40, 000 – Rs.50, 000.

TABLE (4.46)
GOVERNMENT INSPECTION

Inspection	No. of respondents	Percentage
Monthly	0	0
Half Yearly	0	0
Yearly	30	42.86%
No	40	57.14%
Total	70	100%

Source: Sample survey, 2018

The above table (4.46) represents government inspection for livestock farming. Among them 42.86% are having yearly government inspection for their livestock. The remaining 57.14% doesn't have any kind of government inspection on livestock farming. It should be noted that majority of livestock doesn't have any kind of government inspection.

TABLE (4.47)
CONSULTATION OF VETERINARY SURGEON

Veterinary visit	No. of respondents	Percentage
Weekly	0	0
Monthly	0	0
Yearly	0	0
Regularly	12	17.14%
When required	58	82.86%
Total	70	100%

Source: Sample survey, 2018

The above table (4.47) shows the consultation of veterinary surgeon for their livestock. 17.14% of respondent's opined that they consult veterinary surgeon on regular basis and the remaining 82.86% of respondent's opinion that they consult the veterinary surgeon when required. It should be noted that all are consulting surgeon when required for their livestock.

TABLE (4.48)
SUPPORT FROM THE FAMILY

Support	No. of respondents	Percentage
Financial assistance	26	37.14%
Psychological and physiological	44	62.86%
Informational	0	0
Others	0	0

Total	70	100%
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Source: Sample survey, 2018

The table (4.48) shows that 37.14% of the respondent get financial support from their family and 62.86% of the respondents gets psychological and physiological support from their family.

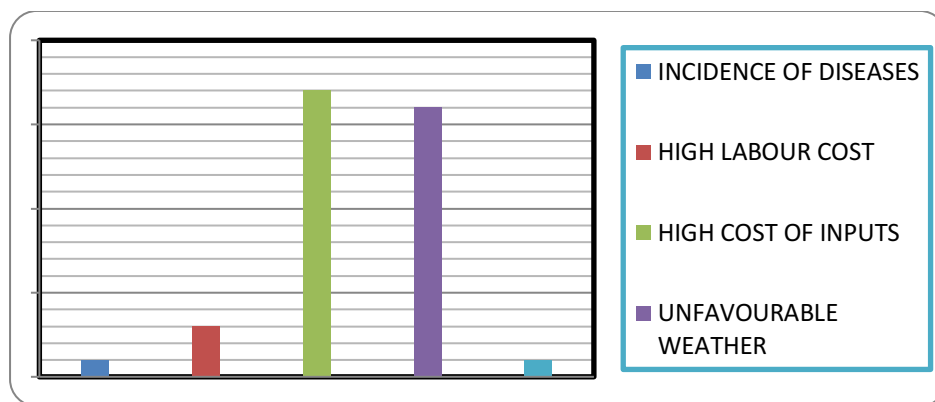
TABLE (4.49)
CONSTRAINTS FACED BY THE RESPONDENTS

Challenges	No. of respondents	Percentage
Incidence of diseases	2	2.63%
High labour cost	6	7.89%
Non-availability of labour	0	0
High cost of inputs	34	44.10%
Unfavourable weather	32	42.10%
High transportation cost	0	0
Lack of training	2	2.63%
Lack of support	0	0

Source: Sample survey, 2018

DIAGRAM (4.i)

CONSTRAINTS FACED BY THE RESPONDENTS



Source: Sample survey, 2018

The above table (4.49) shows that the problems faced by the respondents. The majority of the respondents faced high cost for inputs that is about 44.10% and unfavorable weather that is about 42.10%. The minor problem faced by the respondents are high cost of labour that is about 7.89% and 2.63% of respondents are of incidence diseases. And the remaining 2.63% of respondents faced the problem of lack of training.

It should be noted that none of the respondents faced the lack of support and non-availability of labour.

TABLE (4.50)
ATTITUDE OF THE SOCIETY TOWARDS WOMEN

Society	No. of respondents	Percentage
Bad	0	0
Good	12	17.14%
Satisfactory	30	42.86%
Excellent	28	40%
Total	70	100%

Source: Sample Survey, 2018

The above table (4.50) shows that the attitude of the society towards women. 40% of women respondents had faced excellent attitude from the society and 42.86% of women response had faced satisfactory attitude from the society. It should be noted that none of the women respondents faced unsatisfactory attitude from the society.

TABLE (4.51)
SOURCE OF CAPITAL

Starting capital	No. of respondents	Percentage
Loan	18	25.71%
Disposal of property	20	28.57%
Family share	16	22.86%
Gold loan	16	22.85%
Total	70	100%

Source: Sample Survey, 2018

The table (4.51) reveals that 28.57% of respondents source of capital are from disposal of property. And 25.71% respondent's source of capital is from loans. Remaining 45% of respondent's source of capital is from family share and gold loan.

TABLE (4.52)
SATISFACTION OF THE RESPONDENT FROM LIVESTOCK FARMING

Farming	No. of respondents	Percentage
Highly satisfied	40	57.14%
Satisfied	30	42.86%
Unsatisfied	0	0
Total	70	100%

Source: Sample survey, 2018

The above table (4.52) represents the level of satisfaction of respondents in livestock farming. Majority of the respondents are highly satisfied that is about 57.14%

and 42.86% of respondents are satisfied in livestock farming. It should be noted that none of the respondents are unsatisfied.

TABLE (4.53)
REASON FOR ENGAGE IN LIVESTOCK FARMING

Reasons	No. of respondents	Percentage
Life subsistence	14	20%
Interest	42	60%
Lack of employment opportunities	14	20%
Lack of husband's job	0	0
Other reason	0	0
Total	70	100%

Source: Sample survey, 2018

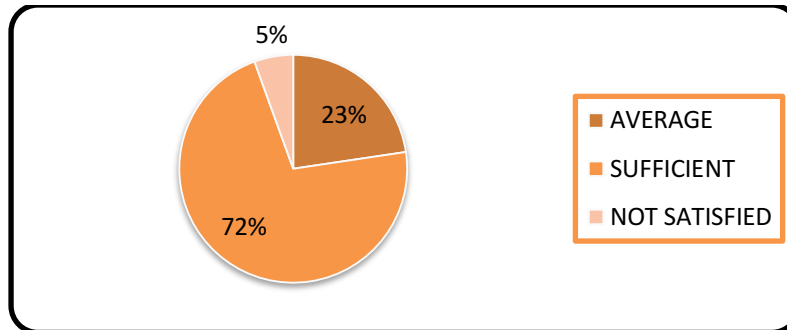
The above table (4.53) knows that the reason for women engage in livestock farming. Among 60% of respondents are interested in livestock farming and about 20% of the respondent's chosen livestock farming due to lack of employment opportunity. Remaining 20% of respondent's chosen livestock farming as their life subsistence. It should be noted that none of them chosen livestock farming as lack of husband's job and other reason.

TABLE (4.54)
INCOME FROM LIVESTOCK FARMING

Income	No. of respondents	Percentage
Average	14	20%
Sufficient	52	74.2%
Not Satisfied	4	6%
Total	70	100%

Source: Sample survey, 2018

DIAGRAM 4.j
INCOME FROM LIVESTOCK FARMING



Source: Sample survey, 2018

The table (4.54) and diagram (4.j) shows that 74.2% of the respondent gets sufficient income from livestock farming. 20% of them getting average income and 6% of them get self sufficient income from livestock farming. It should be noted that all are getting income from livestock farming.

TABLE (4.55)
BENEFITS FOR WOMEN IN LIVESTOCK FARMING

Qualities	No. of respondents	Percentage
Self confidence and sufficiency	24	16.66%
High family income	28	19.44%
Economic living standard	20	13.88%
Consumption of quality Food	4	2.77%
Leadership quality	8	5.55%
Communication skills	18	12.5%
Responsibility	42	29.16%

Source: Sample survey, 2018

The above table (4.55) shows that benefits of women in livestock farming about 16.66% of respondents increased the self confidence and sufficiency. 19.44% of respondents increased family income. 13.88% of respondents increase their economic living standards and 2.77% of respondents had satisfied with consumption of high quality food. 5.55% of respondents had gained leadership quality and 12.5% of respondents had benefited with communication skills. And remaining 29.16% of respondents have come to the quality of responsibility. It should be noted that every respondents had benefited with one or the other.

TABLE (4.56)
SATISFACTION LEVEL OF THE WOMEN LIVESTOCK FARMERS

Factors	HS	S	N	DS	HDS	WA	WR	Rank
Business profits	52	14	0	3	1	323	4.614	2
Medical facilities to cattle	56	8	6	0	0	330	4.714	1

Land for rearing cattle	15	16	23	10	6	234	3.342	10
Support from family	40	18	10	2	0	306	4.371	4
Maintenance	23	30	11	5	1	279	3.985	9
Availability of required feeds	24	31	10	5	0	284	4.057	7
Government scheme	36	27	2	5	0	304	4.342	5
Supply of dairy products	35	24	4	6	1	295	4.214	6
Development of business	38	24	7	1	0	309	4.414	3
Finance	30	23	8	7	2	282	4.028	8

Source: Sample survey, 2018.

Table (4.56) indicates, most of the respondents were highly satisfied with the medical facilities and business profit, most of the respondents highly dissatisfied for the lack of land for rearing the cattle. All the respondents agree that they are highly satisfied about the livestock operations. They enjoy large number of positives through livestock farming, there are, income economic and living standard, health, sociability, education, self respect, respect from family members, owning wealth and more consideration from husband and children.

CHAPTER – V
SUMMARY AND CONCLUSION

CHAPTER V

FINDINGS AND CONCLUSION

In the light of forgoing discussion, here we present a summary of the findings and draw a few conclusion. This study has attempted to analyses the women employment in livestock farming in Akathethara and Sreekrishnapuram panchayat.

Both primary and secondary sources have been explored for data collection. Secondary data has been collected from reliable sources like journal, books and websites. Primary data has been collected using interview schedule through personal interview method.

Thirty five households were surveyed through personal interview method. Information was collected from three panchayats that is Elappully, Akathethara and Sreekrishnapuram, using schedules pertaining to the objectives of this project. The primary data collected from the respondents it can be concluded that,

- Majority of the respondent's belongs to the Hindu religion.
- Entire respondents are married.
- Almost all respondent's belongs to the nuclear family.
- Most of the respondents are between the age group of 30-50.
- Entire respondents are literate.
- Majority of respondent's owned cow and minority of respondent's owned other livestock like poultry.
- Most of the respondent's annual earnings from the sale of milk (cow) are above Rs 100000 and some others earned below Rs 15000.
- Almost all the respondent's level of annual income from the sale of cow dung is between Rs 20000- 30000 and some others earned annual income below Rs 20000.
- Majority of respondent's earned annual income from the sale of cow are between the Rs 20000-30000.

- Majority of the respondent's annual earnings from the sale of milk (goat) are between Rs 5000-7000.
- Most of the respondent's annual sale of goats is between Rs 20000-30000.
- Majority of the respondent's earnings from the annual sale of egg are between Rs 5000-10000.
- Most of the respondent's earnings from the annual sale of poultry are between Rs 5000-10000.
- Entire respondent's annual expenditure incurred from the cow rearing is between Rs 10000-20000.
- Total respondent's annual expenditure incurred for the goat rearing is between the Rs 1000-2000.
- Most of the respondent's annual expenditure incurred for the lottery rearing is below the Rs 1000.
- Most of the respondent's herd size of cow is below 5.
- Almost all the respondent's herd size of goats is between 5-10.
- Majority of the respondent's herd size of poultry are between 20-30.
- Majority of the respondents are family labour and some others are hired labour.
- Most of the respondent's salary earned from the livestock is between Rs 2000-4000.
- Most of the respondent's engaged in livestock farming are between 5-10 working hours and some others engaged in the working hours of 11-15.
- Majority of the respondent's have below 10 cent land fodder cultivation.
- Most of the respondent's have permanent shed (37.14%). On the other hand some others has unhygienic shed (17.14%).
- Most of the respondents use the waste from livestock (cow, goat, poultry) for self use.
- Entire respondents are not engaged in the byproducts.
- Most of the respondents provide facility for their livestock such as feeding racks, fan etc.

- Ultimate respondents stated that milk production will be low in the summer season.
- Most of the respondents stated that average milk production of cow is above 10 liters.
- Majority of the respondents stated that average milk production of goat between 3-5 liters.
- Almost all the respondents stated average egg production that hen are between 20-30.
- Most of the respondents choose society as a marketing strategy for milk.
- Majority of the respondents used their own vehicles like bike, jeep, auto as their transportation facilities used for marketing.
- Majority of the respondents stated that Q-fever is the major disease faced by the cattle like hen, goat etc.
- Most of the respondents are pointed that precautions for cattle taken by respondents are vaccination, medicine, regular checkup etc.
- Most of the respondents have no saving scheme and some respondent's are engaged in saving scheme like local chitty, post office saving etc.
- Most of them pointed that Mediclaim, health insurance, LIC are the insurance coverage of the respondents.
- Entire stated that they are not getting financial aid from any sources of Government.
- Most of the respondents are not taking loan.
- Majority of the respondents training period is one week.
- Most of the respondents stated that the government inspections for cattle are yearly.
- Almost all the respondents pointed that consultation of vat nary surgeon was regularly or has required.
- Entire respondents stated that they had family support has financially and psychologically.

- Constrains faced by the respondent's are unfavorable weather and cost of input and high labour cost.
- According to the respondents, attitude of the society towards them are excellent, satisfactory, good etc.
- From the view point of the respondent's capital is obtained from the source like gold loan, family share, disposal of property, loan etc.
- Most of the respondents are not able to repay their loans (often) due to certain constrains.
- Ultimate respondents argued that they are highly satisfied from the livestock farming.
- Majority the respondents engaged in livestock farming has their self interest, live subsistence, lack of employment opportunity etc.
- Entire respondents stated that they are getting sufficient income from the livestock farming.
- From the view point of the respondents' percentage of women employees interested in the livestock farming was 26-50%.
- Entire respondent's had benefited from the livestock farming with one or another.

CONCLUSION

To sum up, livestock farming is now emerging as an important sector in the economy to provide stable income for majority of the households. Thus it will help to reduce the level of poverty in the rural economy. Through livestock farming most of the women attain self – sufficiency and confidence. Now a day, livestock sector is considered as one of the main employment generating sector in the economy.

But at the same time, women do not usually gain access training in modern livestock management, and which is available to men. Instead, they must acquaint

knowledge from men or continue with traditional practices; both of which lower their efficiency and reduce returns to investment in livestock sector.

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APPENDIX

1. Personal Details :

a) Name :

b) House Name :

c) House Number :

d) Religion :

Hindu

Muslim

Christian

Others

e) Marital Status :

Married

Unmarried

Widow

Divorced

f) Number of Children :

Male

Female

g) Occupation of Husband :

h) Type of Family : Joint / Nuclear

2. Family Details :

Name	Relationship	Age	Annual Income	Educational Qualification

3. Type of Livestock Owned :

Cow

Buffalo

Poultry

Goat

Sheep

Others

4. Family Income From Livestock :

5.

Category	Monthly	Annually
a) Cow- -Sale of Milk -Sale of Dung -Sale of Cow		
b) Buffalo- -Sale of Milk -Sale of Dung -Sale of Buffalo		
c) Poultry- -Sale of Egg -Sale of Meat - Sale of Waste -Sale of poultry		
d) Goat- -Sale of Milk -Sale of Dung -Sale of Goat		

6. Expenditure Incurred :

Category	Weekly	Monthly	Annually
Cow			
Buffalo			
Poultry			
Goat			

Sheep			
-------	--	--	--

7. Herd Size :

Upto,

5 Animals

6-10 Animals

11-15 Animals

16 & Above

8. Type of Workers : Family Labour/Hired Labour

9. Salary of the Employees :

Below 2000

2000-4000

5000-7000

10. Number of Workers Engaged :

Only One

2-5

6-10

11 & Above

11. Age Group of Workers :

Below 20

20-30

31-50

Above 50

12. Working Hours Per Day :

Below 5 Hours

5-10 Hours

11-15 Hours

Morethan 15

13. Details of Feeding Per Day Per Animal :

Animal	Type of Food	Quantity	Value
Cow			

Buffalo			
poultry			
Goat			
Sheep			
Calves			

14. Total Land Area for Fodder Cultivation :

Below 10 Cent	<input type="checkbox"/>	11-50 Cent	<input type="checkbox"/>
51 Cent - 1 Acre	<input type="checkbox"/>	Above 1 Acre	<input type="checkbox"/>
Nil	<input type="checkbox"/>		

15. Nature of Shed :

Permanent	<input type="checkbox"/>	Semi Permanent	<input type="checkbox"/>
Hygienic	<input type="checkbox"/>	Unhygienic	<input type="checkbox"/>

16. Waste Management :

Animal	Qty of Waste Obtained	Qty Used by Farming	Qty Used for Sale	Self Use	Gas Plant
Cow					
Buffalo					
poultry					
Goat					
Sheep					
Calves					

17. Products :

a) Cow/Buffalo/Goat/Sheep

i. Average Milk Production Per Day,

Below 5 Litres 6-18 Litres
Above 19 Litres

ii. In Which Season Milk Production is Low,
Summer Rainy
Winter Other

iii. What are the Byproducts Produced :
Gee Curd
Butter Bakery
Peda All of the Above
No Product

b) Poultry

i. Number of Chicken
Upto 100 101-200
201-500 Above 500

ii. Average Daily Production of Egg
Below 20 20 -30
Above 30

18. What are the Facilities Provided for Livestock :

Feeding Racks Fan A/C
Radio Water Adequacy All the Above

19. Marketing Strategy :

House Hold Shops
Societies Others

20. Transportation Facilities :

Auto Tempo
 Jeep Others

21. Major Diseases Faced by Livestock :

Diseases	Animal					
	Cow	Buffalo	Poultry	Goat	Sheep	Calves
Blue Tong						
Fatty Liver						
Anthrax						
Black Leg						
Foot-Mouth Diseases						
Aneamia						
Abortion						
Q Fever						
Rickets						
Pecking & Cannibalism						
Vitamin Adeficiency						

22. Precautions Taken Against the Diseases :

Vaccination Medicines
 Regular Checkup Others

23. Have You Joined in Any Savings Schemes :

- a) Post Office Savings :
- b) Local Chitty :
- c) Daily Deposits :
- d) Others :

24. Are You Insured : Yes / No

Which Scheme,

LIC

Health Insurance

Mediclaim

Others

25. Financial Help :

Source of Financial Aid,

- a) Grama Panchayath :
- b) Dairy Development Department :
- c) Co-operative Banks :
- d) Animal Husbandry Department :
- e) Kerala Livestock Development Board :
- f) Other Agencies :

26. What Kind of Help You are Getting From the Government ?

Subsidies

Loan at Low Interest Rate

Medical Facility

Trainig

All the Above

27. For Which the Loan is Sanctioned :

To Start the Farm

To Buy New Livestock

Renovate & Furnish the Farm House

Electric & Water Facility for Farm

Education of Children Others

28. How Many Livestocks Received From Government / panchayath:

Catagory	Number of Animals	
	Government	Grama Panchayath
Cow		
Buffalo		
Chicken		
Goat		
Sheep		
Calves		

29. Where did you get training?

Gram panchayat Animal husbandry department

Veterinary Hospital

30. Details of training :

One Week Below 1 Month
2 Month 2-3 Month

31. How Much Amount Received as Government Aid for Livestock :

Below Rs. 20000 Rs. 20000 – Rs. 30000
Rs. 30000– Rs. 40000 Rs. 40000- Rs. 50000

32. In Which Interval the Government Inspection is Going on :

Weekly Monthly
Half Yearly Yearly

33. When Does the Veterinary Surgeon Visit the Farm for Check-Up:

Weekly	<input type="checkbox"/>	Monthly	<input type="checkbox"/>
Yearly	<input type="checkbox"/>	When Required	<input type="checkbox"/>

34. Which Kind of Support You are Getting From Your Family :

Financial	<input type="checkbox"/>	Mental & Physical	<input type="checkbox"/>
Informational	<input type="checkbox"/>	Other	<input type="checkbox"/>

35. Constrains of Challenges Faced :

- a) Incidence of Diseases :
- b) High Labour Cost :
- c) Non – Availability of Labours :
- d) High Cost of Inputs :
- e) Unfavourable Weather :
- f) High Transportation Cost :
- g) Lack of Training :
- h) Lack of Sufficient Water Supply :
- i) Protest From Neighbours :
- j) Lack of Support :
- k) Lack of government Protection :

36. Attitude of Society Towards Women Entrepreneur :

Bad	<input type="checkbox"/>	Satisfactory	<input type="checkbox"/>
Good	<input type="checkbox"/>	Excellent	<input type="checkbox"/>

37. How Did You Find the Starting Capital :

Loan	<input type="checkbox"/>	Disposal of Property	<input type="checkbox"/>
Family Share	<input type="checkbox"/>	Gold Loan	<input type="checkbox"/>

38. Did You Face Any Problem for Refunding the Loan :

Few	<input type="checkbox"/>	Often	<input type="checkbox"/>
Always	<input type="checkbox"/>	Never	<input type="checkbox"/>

39. Are You Satisfied With This Farming :

Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>
Somewhat Unsatisfied	<input type="checkbox"/>	Unsatisfied	<input type="checkbox"/>

40. Why Did You Come to This Field :

Life Subsistence	<input type="checkbox"/>	Interest	<input type="checkbox"/>
Lack of Other Employment Opportunity			<input type="checkbox"/>
Other Reason	<input type="checkbox"/>		

41. Are You Getting Sufficient Income for Your Family :

Average	<input type="checkbox"/>	Sufficient	<input type="checkbox"/>
Not Sufficient	<input type="checkbox"/>		

42. What is the Percentage of Women Employees Interested in This Field :

Below 10 %	<input type="checkbox"/>	11 – 25 %	<input type="checkbox"/>
26 – 50 %	<input type="checkbox"/>	51 & Above	<input type="checkbox"/>

43. Through Livestock Farming What are the Positives You Enjoy:

- a) Self Sufficiency & Self Confidence
- b) High Family Income
- c) Economic / Living Standard
- d) Consumption of Quality Food
- e) Leadership Quality
- f) Communication Skill
- g) Responsibility