ANIMAL HUSBANDRY AS A SOURCE OF SELF-EMPLOYMENT FOR FARMERS IN KAKAVERI PANCHAYAT, NAMAKKAL DISTRICT

BY

LAUREN JESHU F

(21PSW011)

Thesis submitted to

Avinashilingam Institute for Home Science and Higher Education for Women,

Coimbatore-641043

In Partial Fulfilment of the Requirements for the Degree of Master of Social Work

Department of Home Science Extension Education

May 2023

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Signature of Guide

Signature of Head of the Department

Signature of External Examiner

CERTIFICATE

CERTIFICATE

This is to certify that the dissertation entitled on **"Animal Husbandry as a source of Self-Employment for Farmers in Kakaveri Panchayat, Namakkal District"** is submitted to Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore 641043 in partial fulfilment of the requirements for the award of the degree of **Master of Social Work** is a record of original research work done by **Lauren Jeshu F (21PSW011),** during the period of the study in the Department of Home Science Extension Education, Avinashilingam Institute for Home Science and Higher Education for Women-Coimbatore-641043, under my supervision and guidance, has not formed the basis for the award of any Degree/Diploma/Associateship/Fellowship or similar title of other University

Signature of the Guide

Signature of Head of the Department

DECLARATION

DECLARATION

I Lauren Jeshu F hereby declare that the thesis, entitled on "**Animal Husbandry as a source of Self-Employment for Farmers in Kakaveri Panchayat Namakkal District** "is submitted to the Avinashilingam Institute for Home Science and Higher Education for Women- Coimbatore-641043, in partial fulfilment of the requirements for the award of the **Master of Social Work** is a record of original and independent research work done by me during last six month, under the supervision and guidance of **Dr. (Mrs) S. Rajalakshmi,** and it has not formed the basis for the award of any Degree/Diploma/Associateship/Fellowship or other similar title to any candidate in any University.

F. Lauren.

SIGNATURE OF THE CANDIDATE

F.LAUREN JESHU

21PSW011

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CHAPTER-1

INTRODUCTION

The love for all living creatures is the most noble attribute of a man.

Charles Darwin

Animal husbandry refers to livestock rising and selective breeding. It is the management and care of animals in which the genetic qualities and behavior of animals are further developed for profit. A large number of farmers depend upon animal husbandry for their livelihood. Animals provide us with a variety of food products which have high nutritional values. Therefore, they require a lot of care and attention. Animals are bred commercially in order to meet the high demand for food.

Animal husbandry as a science as well as an art of including scientific feeding, breeding, housing; health care of common domestic animals aiming for maximum returns. The term animal husbandry includes the domestic animals such as cattle, buffalo, sheep, goat, poultry etc. The word Husbandry comes from the management of domestic affair but at present it also used in management of farming such as Animal Husbandry farming and Crop Husbandry.

Agriculture is the main occupation of the people residing in India. Agricultural and other allied activities contribute the most to the GDP (Gross Domestic Product) of the country. Agriculture accounts for 14% of total GDP and 49 percent of India's total population is directly dependent on agriculture. Agriculture and other allied activities provide food to the people of the country and make this country self-sufficient. It also provides fodder for domestic animals and raw materials for agro-based industries Agriculture and other allied activities mainly include animal husbandry such as poultry, dairy, pisciculture (fishery), apiculture (producing honey), and sericulture (producing raw silk from caterpillars). These activities also include conservation of water and soil, horticulture (cultivation of flowers), agro and social forestry.

Animal Husbandry is an integral part of Agriculture and next to Agriculture is the 18111 major sector of employment. According to Livestock Census-2007, about 22.27 lakh families (Households) are engaged in livestock rearing along with agriculture, out of these about 10.00

lakh families are drawing household income from animal husbandry sector as major occupation. To boost up the milk production, fodder production and generation of more & more employments in the dairy sector, it is proposed to establish dairies with 3, 5 & 20 plus milch animals.

Goat, buffalo, and cow dairy products are excellent sources of protein. Since they give us milk, these creatures are referred to as milch animals. Hens, ducks, geese, and other poultry are another group of animals that produces nutrient-rich food. They provide us eggs, which are yet another excellent source of protein. Meat-producing animals include chicken, duck, oxen, goats, pigs, and more. We also have additional marine species that are sources of nutrients in addition to these domestic animals. The nutrients in the seafood we eat are extremely rich. Numerous nutrients, including fat, proteins, vitamins, and minerals, are found in them.

The department of animal husbandry specifically oversees the management, breeding, and care of animals. Animal husbandry is a significant industry. The farm or area where the animals are raised, cared for, and protected is specifically designed for them. Poultry, dairy farms, apiculture (bee agriculture), aquaculture, etc. are all examples of animal husbandry.

In rural areas, livestock is a significant source of revenue and employment. They not only help with agricultural productivity but also add to household income. Animal husbandry is a significant source of income for many farmers in India. Animals, particularly bullocks, are the main source of power for both farmers and dairies in addition to providing milk, meat, eggs, wool, their castings (dung), and hides. Animal husbandry thus contributes significantly to the rural economy. The gross value of output from this sector was 8,123 billion Rupees in year 2015-16.

Livestock sector in Tamil Nadu is the single major source of supplementary income for the farming community. Various veterinary institutions spread over the State provide veterinary health services and play a major role in increasing the production potentialities of the livestock and poultry. There is an increase in cross bred population and decrease of unproductive animals with the implementation of cross breeding programmes.

Livestock is an important source of income and employment in rural areas. They contribute to household income besides assisting crop production. This sector provides full time occupation in some cases at the location itself with better utilization of human resources. It provides balanced nutrition in the form of milk, egg and meat besides farm power. Animal Husbandry plays a major role in providing employment especially self employment with high participation of women. Livestock products also play a main role in export earnings. Dairy products producing animals like cows, sheep, and goats are the major sources of milk and milk products including butter, cheese, yogurt, cottage cheese, etc.

Many animals including chicken, goat, duck, pigs, and buffaloes are used for their meat because of their highly nutritious value. Livestock is used to control the growth of weeds on agricultural land as the dry shrubs that are prone to fire are eaten up by various animals. This reduces the risk and harm that can be faced with unprecedented situations. So, it is important for land management.

Wool and leather are the fiber by-products from animals like sheep and camels. When these animals are reared in a vast number, the products can be obtained largely too. The importance of animal husbandry also lies in the fact that the excreta, bones, and blood of animals can be used as manure or fertilizers via composting. These can be spread on fields to enhance crop yield. Animals are helpful for ploughing fields, military functions, and transporting goods from one place to another.

In Tamil Nadu according to the 1994 Livestock Census the total cattle and buffalo population was 12.02 million, of which 4.22 million were male, 7.80 million were female. Population projection for 2002 places the number of adult female cattle at 4.2 millions, of which 1.12 million will be cross breeds and she buffaloes at 2.14 millions. So the total adult female cattle and buffalo population will be 6.34 millions. The priority of the farming community in Tamil Nadu in breeding of cattle has clearly shifted from production of draught animals to milch animals. Over 70% of the farming community own milch animals and participate in the production endeavor.

Agriculture and other allied sectors contribute 26.8 percent of GDP (Gross Domestic Product). It employs a large portion of the population, especially since it contributes significantly to rural employment. Some crops, such as cotton, jute, etc., are used as the raw materials for various agro-industries. Different agriculture and allied industries also provide employment to a large section of society and contribute immensely towards the country's growth. With time, as consumer spending increases, the growth also increases.

The milk production is steadily rising mainly due to increase in per animal production. The contribution from cross bred cows to total milk production has increased from 6.05 LMT, during 1990-91 to 19.04 LMT, during 2001-2002. Tamil Nadu is one of the frontline dairy farming States in the country.

The estimated milk production, which was 33.75 LMT, during 1990-91, has increased to 49.90 LMT during 2001-2002. Likewise the estimate of egg production, which was 2,551 million numbers during 1990-91, has increased to 4,223 million numbers during 2001-2002. The per capita availability of milk per day increased from 166 Gms, during 1990-91 to 219 Gms, during 2001- 2002. During the same period, the per capita availability of eggs per annum has gone up from 46 numbers to 68 numbers; however, the ICMR recommendation is 183 numbers of eggs per annum. With the implementation of cross breeding programme and disease containment, the recommended level of 220 gms, of milk per day by ICMR will be reached shortly.

Animal husbandry, agriculture and allied activities have been the core livelihood for majority of the rural people since time immemorial. It provides productive employment, especially self employment and the most valuable supplementary income to a vast majority of rural households, majority of who are small and marginal farmers and landless laborers. Livestock provide increased economic stability to the poor masses. They act as cash buffer in case of small stock and as captive reserve in case of larger stock.

Livestock provide quality animal protein to human population in the form of milk, eggs, meat and value added products. They provide draught power for agricultural operations, organic

manure for agriculture and raw materials During 2006-07, the gross value of output of livestock in the State is Rs.965.43 cores. The contribution of livestock sector to the Gross State Domestic Product is 3% and that to the agriculture and allied activities is 28%. The dairy and poultry sectors contributed significantly to this growth.

Dairy Farming is a class of agriculture where long-term production of milk takes place that leads to sales after its processing. Various products like curd, yogurt, cheese, butter, and cream can be obtained through the management of dairy animals like sheep, goats, buffaloes, and cows. These dairy farming animals are called milch animals. Healthy animals are opted for dairy farming and are inspected regularly for their overall well-being, physically as well as mentally. Animals are milked by machines or by hands and preserved well to make it industrially applicable that can then be used commercially.

During 2005-06, the estimated milk and egg production in the State was 54.74 lakhs MT and 6,223 millions respectively. Likewise, the per capita availability of milk/day and eggs/annum was 234 gms and 97 nos. respectively. The State contributes 5% of milk and 14% of egg production and stands 8th in milk production and 2nd in egg production in the country. Animal husbandry is one sector which has high potential for growth. The potential of the sector needs to be exploited as this can play a key role in providing sustainable employment in their location itself and arrest migration of people to urban areas.

As animal husbandry is an activity which can easily be taken up by rural communities as skill and resource requirements are minimal, inputs are locally available and marketing does not pose a major problem, it can act as an engine in poverty alleviation programmes by making asset less poor into income generating asset owing population.

Animal Husbandry will go a long way not only augmenting food security, human security, empowerment of women and rural youths, but will also help in triggering and invigorating the rural economy ultimately contributing significantly to the comprehensive socio-economic transformation of the State. Cattle are domesticated ungulates, a member of the subfamily Bovinae of the family Bovidae. They are raised as livestock for meat (called beef and

veal), dairy products (milk), and leather and as draught animals (pulling carts, ploughing etc). Livestock plays an important role in Indian economy.

About 20.5 million people depend upon livestock for their livelihood. Livestock contributed 16% to the income of small farm households as against an average of 14% for all rural households. Livestock provides livelihood to two-third of rural community. It also provides employment to about 8.8 % of the population in India. India has vast livestock resources. Livestock sector contributes 4.11% GDP and 25.6% of total Agriculture GDP.

The livestock provides food items such as Milk, Meat and Eggs for human consumption. India is number one milk producer in the world. It is producing about 176.34 million tones of milk in a year (2017-18). Similarly it is producing about 95.22 billions of eggs, 7.70 million tones of meat in a year. The value of output of livestock sector at current prices was Rs 9, 17,910 crores at current prices during 2016-17 which is about 31.25% of the value of output from agricultural and allied sector. At constant prices the value of output from livestock was about 31.11% of the value of the output from total agriculture and alliedsector. During the financial year 201718, the total fish production in India is estimated at 12.61 Million Metric ton.The livestock also contributes to the production of wool, hair, hides, and pelts. Leather is the most important product which has a very high export potential. India is producing about 41.5 million Kg of wool per annum during 2017-18.

Bullocks are the back bone of Indian agriculture. Despite lot of advancements in the use of mechanical power in Indian agricultural operations, the Indian farmer especially in rural areas still depend upon bullocks for various agricultural operations. The bullocks are saving a lot on fuel which is a necessary input for using mechanical power like tractors, combine harvesters etc. Pack animals like camels, horses, donkeys, ponies, mules etc are being extensively used to transport goods in different parts of the country in addition to bullocks. In situations like hilly terrains mules and ponies serve as the only alternative to transport goods. Similarly, the army has to depend upon these animals to transport various items in high areas of high altitude.

Dung and other animal wastes serve as very good farm yard manure and the value of it is worth several crores of rupees. In addition it is also used as fuel (bio gas, dung cakes), and for

construction as poor man's cement (dung).Livestock are considered as 'moving banks' because of their potentiality to dispose off during emergencies. They serve as capital and in cases of landless agricultural labourers many time it is the only capital resource they possess. Livestock serve as an asset and in case of emergencies they serve as guarantee for availing loans from the local sources such as money lenders in the villages.

Livestock offer security to the owners and also add to their self esteem especially when they own prized animals such as pedigreed bulls, and high yielding cows/ buffaloes etc.People also use the animals like cocks, rams, bulls etc for competition and sports. Despite ban on these animal competitions the cock fights, ram fights and bull fights (jalli kattu) are quite common during festive seasons.

The livestock plays an important role in the economy of farmers. The farmers in India maintain mixed farming system i.e. a combination of crop and livestock where the output of one enterprise becomes the input of another enterprise thereby realize the resource efficiency. The livestock serve the farmers in different ways. Livestock is a source of subsidiary income for many families in India especially the resource poor who maintain few heads of animals. Cows and buffaloes if in milk will provide regular income to the livestock farmers through sale of milk.

Animals like sheep and goat serve as sources of income during emergencies to meet exigencies like marriages, treatment of sick persons, children education, repair of houses etc. The animals also serve as moving banks and assets which provide economic security to the owners. Employment: A large number of people in India being less literate and unskilled depend upon agriculture for their livelihoods. But agriculture being seasonal in nature could provide employment for a maximum of 180 days in a year. The landless and less land people depend upon livestock for utilizing their labor during lean agricultural season.

Good husbandry practices at farm level form an essential component of the production of quality and safe food. It encompasses all the measures adopted at the farm, from procuring and rearing healthy animals, their welfare, to final slaughter or milking. Farm management is done in such a way as to keep animals in a healthy condition, provide adequate and contamination-free

feed and water and optimum living conditions. Animals are raised on the basis of risk analysis and control of these risks is exercised for safe food production.

Animal rearing is important for humans as they attain a wide range of food products having high nutrient values. They meet the commercial requirements of high demand for food such as dairy needs from cows, goats, and buffaloes. They are called milch animals as they provide us milk which is full of protein and other vitamins and minerals.

The importance of animal husbandry further extends to another set of animals that are important to humans for eggs and meat such as hens, ducks, goose, goat, fish, etc. They are also bred for meat which is rich in protein, iron, fats, vitamin B_{12} and Zinc. All the nutrients are essential to enhance metabolic rate, promote fullness, and reduce hunger. Marine animals like fish are also believed to keep a person happier and healthier as these have Omega-3 fatty acids, DHA, and vitamin D.

Animal husbandry takes care of the management and breeding of animals and is a large scale business. A farm or a specific region is built for providing shelter, food, and undertaking culturing processes. It also involves apiculture i.e. bee agriculture and aquaculture i.e. marine animals culturing.

The Rashtriya Gokul Mission (RGM) is being implemented on December 2014 for development and conservation of indigenous bovine breeds. The scheme is important in enhancing milk production and productivity of bovines to meet growing demand of milk and making dairying more remunerative to the rural farmers of the country. The RGM will result in enhanced productivity and benefit of the programme, percolating to all cattle and buffaloes of India especially with small and marginal farmers. This programme will also benefit women in particular since over 70% of the work involved in livestock farming is undertaken by women.

The National Livestock Mission (NLM) scheme is being implemented in the country 2014. The scheme has been realigned during 2021-22. The salient features of realigned National Livestock Mission (NLM) scheme are employment generation, entrepreneurship development;

increase in per animal productivity and thus targeting increased production of meat, goat milk, egg and wool. The focus of the scheme is on entrepreneurship development and breed improvement in poultry, sheep, goat and piggery including feed and fodder development

Dairy Processing & Infrastructure Development Fund implemented on 2017-2018. Milk unions, multi-state milk cooperatives, state dairy federations, milk producer companies and NDDB subsidiaries can avail loan under this scheme after meeting eligibility criteria. Under this scheme, eligible milk organizations will be provided financial assistance in the form of a loan at 6.5% interest for building an efficient milk procurement system and other dairy processing infrastructure.

Dairy Processing & Infrastructure Development Fund has been set up with a corpus of Rs. 8,004 crore with National Bank for Agriculture and Rural Development (NABARD). The CCEA in its meeting dated 12.09.2017 has approved the scheme which has the objective to provide subsidized loan @6.5% to capital stressed milk cooperatives for primarily replacing their decades old chilling and processing plants and addition of value added product plants.

Animal Husbandry provides steady source of income and regular availability of food, throughout the year unlike seasonal income from agriculture. The livestock are also useful for their contribution for draught purpose. The processing of livestock by products provides additional income to the farmers.

Objectives of the study: are to

- Study the socio- economic characteristics of the farmers.
- Collect the information on types of agriculture and agricultural allied activities.
- Identify the types of existing animal husbandry practices adopted by farmers.
- Examine the income gain through animal husbandry.
- Analyze the benefits of animal husbandry farming among farmers.
- Assess the challenges faced by farmers in the field of animal husbandry

Scope:

The purpose of the current study is to determine the status of farmers, existing types of animal husbandry practices adopted by farmers, factors that affect farm animal susceptibility to diseases as well as whether the farmers contribute correct care of the domestic animal.

This study also aims know whether animal husbandry is offering offer direct and indirect jobs to many people and provide a proper living.

Limitations:

- The interview schedule was a time- consuming process because of the limited literacy among the farmers in kakaveri panchayat.
- As the farmers are busy with their agriculture works, it was difficult for investigator to meet them.
- No proper road facility so it was difficult to travel to the study area.

CHAPTER-2

REVIEW OF LITERATURE

Review of literature will facilitate comprehensive knowledge on the concepts used in earlier studies and helpful to adopt, modify and formulate an improved conceptual framework in the present study and to draw meaningful conclusion. The review of literature pertaining to the study entitled, "Animal Husbandry as a Source of Self-Employment for Farmers in Namakkal District, Tamil Nadu" is reviewed under the following headings:

A. Concept of Animal Husbandry and Dairy farming by Farmers

B. Government Schemes on Animal Husbandry

C. Related Studies about Animal Husbandry

A. Concept of Animal Husbandry and Dairy Farming by Farmers

Britannica,(2022) Livestock, farm animals, in Western countries the category encompasses primarily cattle, sheep, pigs, goats, horses, donkeys, buffalo, oxen, llamas, or camels, may predominate in the agriculture of other areas. Cattle make up the largest livestock group worldwide. Among those prominent in beef production are Hereford, Shorthorn, and Angus. The chief dairy cattle breeds are Holstein-Friesian, BrownSwiss, Ayrshire, Jersey,and Guernsey. Cattle feed primarily on pasture by grazing, but in modern farming their diet is ordinarily supplemented with prepared animal feeds. Cattle are sometimes used as draft animals, particularly in small-scale farming and in less developed regions.

Sarkar, (2020) Livestock sector can play an important role in poverty and alleviation income enhancement through self employment for the farmers and risk

reduction for poor rural households. As per 2011 census data, around 4.4 percent of main workers are in agriculture and allied sectors are engaged in plantation, livestock, forestry and allied activities.

GC Banerjee (2018), stated that Animal husbandry as a science as well as an art of including scientific feeding, breeding, housing; health care of common domestic animals aiming for maximum returns. The term animal husbandry includes the domestic animals such as cattle, buffalo, sheep, goat, poultry etc. The word Husbandry comes from the management of domestic affair but at present it also used in management of farming such as Animal Husbandry farming and Crop Husbandry.

Webb (2016) indicated that animal husbandry is the science of looking after and breeding animals specifically those that are used in agriculture, to provide products for research purposes or as domestic pets. Agriculture has been practiced for thousands of years, and involved, at an early stage, the keeping of animals for meat, milk and clothing. Animal husbandry covers a wide range of activities, including care and grooming, livestock farming, accommodation and hygiene.

Khan, N. (2016) In post-harvest operations related with agro and social forestry, fisheries and dairy management various studies conducted by researchers and development administration on women in Agriculture in various countries pointedly focus that women contribute for more to agricultural products than has generally been recognized.

Wadhwani, K. N. (2016), Mankind has been utilizing different animal species from the dawn of civilization for a variety of purposes such as production of milk, meat, wool, egg and leather, and the sector is livestock. Livestock sector plays a crucial role in rural economy and livelihood. As per report of the working group on animal husbandry and dairying- 11th five year plan: 2007-12, the livestock sector employs eight percent of the countries labor force, including many small and marginal farmers, women and landless agricultural workers.

Britanica (2015) Agriculture and allied activities means raising of crops including food and non-food crops, fodder or grass; fruits and vegetables, flowers, any other horticultural crops and plantation; animal husbandry and dairy; livestock and livestock products, poultry farming, stock breeding; fishery; sericulture, growing of bamboo, agro forestry, agro-processing and other related activities by farmers and farmer groups.

Singh (2010) Community-wise women participation has been on higher side in the tribal's and scheduled castes. In general 60- 70% of labor is provided by women in the agriculture and other allied activities. The economy of our country is predominantly agriculture in character and a large percent of total labor force in the country is engaged in agriculture. Even in present age when the country is undergoing the process of industrialization and urbanization more than 75% of country's population live in the villages.

Khan. N (2010) Livestock husbandry is an important economic asset in India. During the year 2006-2007, it contributed 5.36% to national gross domestic product and 31.70% to agricultural gross domestic product the growth of agricultural number has been increased during the year 1991-2002 to 2006-2007. The sector of agricultural economy is a potential source of employment generation and income for rural poor landless and farmers. Livestock holders dominantly belongings to backward caste; marginal and small holdings

Ali, J. (2007) Livestock sector plays an important 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 majority of livestock owning households are small, marginal and landless households. Small animals like sheep, goats, pigs and

poultry are largely kept by the land scarce poor households for commercial purposes due to their low initial investment and operational costs.

Sharma (2004) In India livestock is integral part of the agricultural production and plays an important role in national economy as well as in socio economic development of millions of rural households. Livestock is an important source of animal protein for farm families through its consumption of milk; egg and meat. Livestock are also used for draught power in agriculture; transport and their dung is used to help enrich soil fertility.

Table- I

Livestock Population in India (millions)

Year	Cattle	Buffalo	Sheep	Goat	Pig	Poultry
1982	192.5	69.8	48.8	95.3	10.0	207.7
1992	204.6	84.2	50.8	115.3	13.0	307.1
1997	198.9	89.9	57.5	122.7	13.3	347.6
2003	185.2	97.9	61.5	124.4	13.6	489.0

Source: Livestock Census, Ministry of Agriculture, Government of India (2003)

Pandey. U.K (1995), viewed that Animal Husbandry in India is closely connected with agriculture and plays a role in rural economy. Though it provides employment potential, animal husbandry sector provides not only milk, egg, meat, wool, dung and draught power but also stabilizes the farm income.

a. Management of Dairy farming by Farmers

Webb,B.H.(2021) Dairying also called Dairying farming branch, of agriculture that encompasses the breeding, raising, and utilization of dairy animals, primarily cows, for the production of milk and the various dairy products processed from it. Milk for human consumption is produced primarily by the cow and the water buffalo. Milk is produced by the cow from her blood, and a large amount of food is necessary for

maintenance of a high producing cow. The products of digestion and absorption enter the blood and are carried to the udder. There the raw materials are collected and changed into milk components.

Singh .P (2021) Dairy farming has been a continuous source of income to the farmers which help them in their socio-economic development. Dairy farming is most common and profitable livestock business. Milk is the single commodity which fetches more money than that by selling a cereal crop individually.

Yoganandan, G. (2019) Livestock sector plays a significant role in the Indian economy, particularly for the welfare of the rural population of India. It has become a crucial element in improving the life standard of rural people by means of providing income, employment, asset value and maintaining health status of people. Among livestock sector, dairy sector is the most important industry affecting economy of rural India. Tamilnadu is the state dominated by dairy produced mainly due to rich agricultural farmers. Dairy production has been significant over the past few years. In India, Entrepreneurship has received large prominence. Dairy industry is one such industry in which there may be a large earning potential for rural farmers. Indian government has emphasized banks to work on financial inclusion very significantly as the rural economic system has endured to enhance due to dairy business.

Sivaram.M (2017) Animal husbandry and dairying plays a vital role in the rural economy of India. Tamil Nadu is one of the states with a good potential for milk production and the private dairies are producing good and healthy competition. Dairy cooperatives and private dairies are playing major role to improve the milk production in different regions of India.

Patel. A (2016) India has the largest cattle population of 191 million in the world, (livestock census, 2012). Around 80-90 million farm families are gainfully occupied in dairying and dairying related activities. India is one of the largest consumers of milk and milk products in the world. The dairy industry size is estimated at Rs. 430 billion.

Samal . L (2014) Dairy production in India which has been great increase over the post- independence period has grown. Dairy production is the major sustenance factors for the rural economy of India. Dairy farming is a major contributing factor to the livelihood resource to the farmers such as income from milk and dairy products.

Table- II

The Number of Dairy Farms Worldwide (2018)

Country Groups	No. of cattle and buffalo farms	% of cattle and buffalo farms keeping dairy animals	No. of. Dairy Farms
East Asia and the pacific	50.5	5.7%	2.9
Europe and central Asia	18.5	87.7%	16.2
High- Income	3.8	25.9%	1.0
Latin America and the Caribbean	7.8	37.2%	2.9
Middle east and North Africa	4.5	67.7%	3.0
South Asia	89.0	81.5%	72.6
Sub-Saharan Africa	16.7	77.9%	13.0
World	190.7		111.6

Source: Mele A., K. Reincke, T. Hemme, O. Mikecz, U. Pica-Ciamarra and E. Reyes (2018) The Number of Dairy Farms Worldwide. IFCN and FAO, 2018.

Sharma, P. (2014) the importance of dairying in our country hardly needs emphasizing. The vast resources (more than 50 percent of the world's buffalos and 20 per cent of its cattle) of livestock in the country play an important role in the national

economy as well as in the socio-economic development of millions of rural households. Dairy enterprise could play a more constructive role in promoting rural welfare and reducing poverty by generating employment at farm level is increasingly being recognized.

Table-III

Milk production in Million Tons (2000-2014)

Year	Milk Output in Tons
2000	78.3
2005	91.0
2006	102.6
2007	107.9
2008	112.2
2010	116.4
2011	121.8
2012	127.9
2013	133.0
2014	140.0

Source: Department of Animal Husbandry,
Ministry of Agriculture in India (2014)

Kumar S.S (2012) the cattle and buffaloes population are the highest in India. Milk is the second largest agricultural commodity produced in India. The biological value of milk protein includes the traditional habit of milk in daily dietary have been one of the most important factors that had saved millions of children in India from developing malnutrition syndromes.

Sengottiyan.A (2010) India is currently the largest producer of milk in the world overwhelmingly with the output of millions of small farm holders. India hast vast resources of livestock and plays an important role in the national economy and also in the

socio- economic development of millions of rural households. Milk and milk products demand is expected to grow rapidly due to the population growth and urbanization and increase in income levels and changes in food habits and is likely to reach 181 million tons in 2011-2012.

Table-IV

Production and per capita availability of Milk in India

Year	Production of Milk (million tons)	Per Capita availability of Milk
2000-2001	80.6	220
2001-2002	84.4	225
2002-2003	86.2	230
2003-2004	88.1	231
2004-2005	92.5	233
2005-2006	97.1	241
2006-2007	100.9	246
2007-2008	104.8	252
2008-2009	108.46	271

Source: Department of Animal Husbandry, Dairying& Fisheries, Ministry of Agriculture in India (2009)

Sharma, P. (2014) the importance of dairying in our country hardly needs emphasizing. The vast resources (more than 50 percent of the world's buffalos and 20 per cent of its cattle) of livestock in the country play an important role in the national economy as well as in the socio-economic development of millions of rural households. Dairy enterprise could play a more constructive role in promoting rural welfare and reducing poverty by generating employment at farm level is increasingly being recognized.

b. Challenges faced by farmers in Dairy Farming

Sneha Santra (2018), viewed that India has a unique pattern of production, processing, and marketing or consumption of milk, compare to any large milk producing country. Though India is the world's largest milk producer and consumer of dairy products it has some challenges such as,

- Shortage of Feed
- Not available of proper breeding system
- Not available of health care service
- Less Hygiene Conditions
- Low marketing and pricing

S.K. Kansal .et. al (2020) expressed that due to modernization of agriculture and sub-division of land holdings, bullock power in Indian agriculture losing its importance. There are only few breeds like Haryana, kankeraj while the rest are draft breeds maintained by farmers for producing bullocks.

Ravdeep Singh .et. al (2020) stated that Livestock feed resources are inadequate in quality and quantity. The land under permanent pastures and grasslands is about 36 percent of the geographical area and fodder cultivation is limited to 4.86 percent of the cultivable land. Production of quality seeds for fodder varieties is a prime need for the production of livestock.

Mullan. S (2020) indicated that India has the largest population of dairy cattle in world, but it has some welfare problems such as all cows were tired to their housing on a rope, that attached to halter that pierced the nasal spectrum and farms did not provide cattle with unlimited access to water, and access to food also was limited.

According to Department of Animal Husbandry and Dairying (2018) Lack of access to markets acts as a disincentive to farmers to adopt improved technologies and quality inputs. Milk production during the year 2017-2018 and 2018-2019 was 176.3 million tons and 187.74 million tons respectively showing growth of 6.48 percent. Around 50 percent of the marketable surplus is still handled by the unorganized sector.

Pattanaik, A. K. (2014) stated that India has traditionally been recognized as a low-cost milk producer due to the inexpensive feeding and maintenance costs associated with indigenous cow breeds. The Ministry of Agriculture has identified a 12th five-year plan approach for animal husbandry and dairy sector to achieve the overall desired growth of 6% per annum. Despite these goals, the Indian dairy sector is toiling hard to overcome challenges like low productivity of dairy animals, lack of effective quality and hygienic control systems, and creating a network of cold chain facilities from the producer to the consumer level.

Douphrate, et.al (2013) indicated that Dairy production is unique as an agricultural commodity because milk is produced daily for 365 days per year. Dairy production is essential for economic development and sustainable communities inn= rural area. The required capital investment and availability og local market and labor are continued challenges.

Khushpreet Singh et.al (2004) stated that productivity of farm animals is one of the major challenges. The frequent diseases like foot and mouth diseases, black quarter continue to affect the livestock health and lowers productivity. Technologies for disease control and cure are known, but it's not delivered properly in the rural areas and to the farmers.

B. Government Schemes on Animal Husbandry:

Table-V

Government Schemes on Animal Husbandry

Government Schemes on Animal Husbandry	Year	Aims and objectives
Rashtriya Gokul Mission	December 2014	To enhance productivity of bovines and increasing milk production in a sustainable manner using

		advance technologies. To propagate use of high genetic merit bulls for breeding purposes.
Animal Husbandry Infrastructure Development (AHIDF)	June 24, 2020	To help increasing of milk and meat processing capacity and product diversification thereby providing greater access for unorganized rural milk and meat producers to organized milk and meat market. To make available increased price realization for the producer.
National Livestock Mission (NLM)	2014	Employment generation through entrepreneurship development in small ruminant, poultry, piggery and Fodder sector. Increase of per animal productivity through breed improvement.
Dairy Processing and Infrastructure Development Fund	2017-2018	The main aim: is to boost dairy sector. To modernize the milk processing plants and machinery and to create additional infrastructure

		for processing more milk.
Livestock Health & Disease Control scheme	February 2013	To implement Critical Animal disease control programme. To provide veterinary services at the farmers' doorstep through Mobile Veterinary Units (MVUs).
Animal Husbandry Statistics	1919	To provide veterinary health care and diagnostic facilities. To provide quality breeding services to enhance productivity
National Animal Disease Control Programme (NADCP)	September, 2019	The overall aim of the National Animal Disease Control Programme is to control by 2025 with vaccination and its eventual eradication by 2030.

Source: Department of Animal Husbandry and Dairy, 2018

C. Related Studies on Animal Husbandry:

Ministry of Agriculture and farmers welfare (2020) Smt. Lakshmi is a small scale farmer with five acres of land. Before 2016 she was earning a sum of Rs.24000/- annually as net income from amla trees cultivated in three acres of land which was not sufficient for raising her family. Due to low income she was unable to give good education to her children. She was desperately looking for new opportunities to start a new enterprise in order to boost her annual income for better living standards.

She underwent a training programme on "Dairy Farming" conducted by Krishi Vigyan Kendra (KVK), Dindigul, Gandhigram Rural Institute, Gandhigram where she learned about various aspects of dairy farming including selection of dairy animals, housing, feeding, breeding and scientific management of dairy cows. As a result of capacity building training by KVK, Dindigul, she established a small dairy unit in her farm with 2 crossbred milch animals in the year 2017 as an additional enterprise and showed persistent growth in milk production by adopting the scientific dairy farming practices, she had learnt from the training which led to increase in her monthly income.

After meeting out all the expenses, she is now earning an annual net income of Rs. 3,60,000/- from dairying. She established an integrated farming systems model in her farm and purchased five more cows. Her farm became a model for other dairy entrepreneurs to adopt similar technologies and motivated other farmers to attend similar trainings conducted by ICAR – KVK, Dindigul in dairy farming. She got best dairy farmer award from VUTRC, Dindigul.

Department of Agriculture and Animal Husbandry (2019) Smt. Brindadevi is a graduate and involved in agriculture and allied farming activities since 2010. The annual income of her family was around Rs. 2 lakhs which did not meet the family expenses and children's education. She came to know that the slatted floor goat rearing is a beneficial enterprise. Goat rearing is one of the important aspects in dry land farming

system. In rural areas open grazing is a common practice for rearing of goat flocks. Due to the reduction in open grazing there is a need to search another alternate option i.e. stall feeding or slatted floor goat rearing method. Krishi Vigyan Kendra (KVK), Myrada conducted training programme on slatted floor goat rearing during 2012.

She attended the training programme and came to know about slatted floor shed construction, breed selection, goat breed up gradation, green fodder production, concentrated feed production, disease management and market linkage. She started slatted floor goat rearing shed with 10 local goats and gradually replaced with Tellicherry goat breed. In the beginning she sold out the kids and male goats for breeding and slaughter purposes in their block and later she expanded her marketing linkages to nearby blocks of Erode district. Goats are being sold as live weight for Rs. 250/kg for male and Rs. 300/kg for female at the farm gate. At present she is maintaining around 60 adult goats & 45 kids and 30 HF cross dairy cows in the farm. She is getting an annual income of Rs. 4,37,500 from the sale of 50 goats (9 months age) at an average weight of 30-40 Kg. KVK identified this goat farm as a model slatted floor goat rearing unit for KVK technical programmes.

Apart from Goat farming she started Mini dairy farming with 20 HF dairy cows and regularly selling milk in nearby areas. She established Mini Concentrate Feed preparation unit at farm level to reduce feed cost. 46 slatted goat units were established in Erode district with the technical support from KVK and this unit is an play as inspiration to other farmers to initiate slatted floor Goat farming. Apart from Goat farming this successful woman entrepreneur became a government teacher in the year 2015. She continues to monitor the unit with the support of her husband and family members. Received award from ASPEE Foundation, Mumbai for “Best Woman Entrepreneur” for the year 2016 – 2017. y The success story of woman farmer published in Daily Thanthi Sunday special edition.

Department of Animal Husbandry (2018) Smt. Khushi Lepcha is a labourious and progressive farmer. Her village in Lingthem-Lingdem GPU is basically a milk producing area where farmers have been practicing dairy farming as income generating

profession or occupation. She is a member of Self Help Group. In dairy farming green fodder supply often becomes a problem. There is in need of alternate or additional sources of green fodder. Accordingly, the plot of Mrs. Khushi Lepcha was identified as demonstration site. A group of villagers were trained on the subject matter. Adoption of innovative technology, practices and achievements: The demonstration was conducted on a simple pond of 14'x14'x2' dimension. Azolla pond was provided by Food Security and Agriculture Development Department and the Azolla seed was provided by Animal Husbandry, Livestock, Fisheries & Veterinary Services Department.

Training and technology demonstration was provided by ATMA, North Sikkim district. Harvesting of Azolla was done in 15-25th day of starting and fed to cows. The villagers noticed marked improvement in milk yield, quality and overall health condition of animals. Azolla proved to be palatable to cows from eating behaviour as compared to other fodder. Another positive aspect is that the rate of biomass production is rapid to ensure a steady and sustainable production at doorstep. From 14'x14'x2' size pond production was 600 kg which was sold at Rs.20/kg. It earned Rs.12,000/-. The total cost involved Rs.3,000/- Thus a profit of Rs.9,000/- was earned. The participant farmers involved in the training and demonstration realized the benefit of Azolla cultivation as livestock feed. There has been a horizontal spread of the technique. The farmers are happy to be benefitted with the Azolla farming technique and up gradation of their skill.

Ministry of Agriculture and farmers welfare(2017) Smt. Abboju Jyothi is a traditional farmer, about 10 years ago she started a Dairy farm on two acres with one buffalo and climbed the success ladder. She bought a buffalo by barrowing a loan of rupees fifty thousand (50000/-) from Mahila Sangam. The buffalo yielded about 6 liters of milk per day. Later, she bought two buffaloes and seven cows. Then the shed was constructed by EGC. There is a sorghum fodder field around the farm for harvesting fodder. Mostly she uses the fodder from her own cultivated farm but occasionally she purchases it from other farmers.

Besides dairy farm, she started fisheries and poultry farm and wastage from these farms are used for gober gas. For monitoring the farm she employed one labour with a

salary of Rs.35,000/- per year. Now she owns a well established farm with 3 buffalos, 7 cows with a well constructed shed along with fisheries and poultry farm. She is earning about Rs.6,00,000/ year with only Rs.2,50,000/ expenditure. She has been certified from the All India Radio as best progressive farmer and certificate from the NSDC. Mrs. Abboju Jyothi has successfully cleared the assessment for the role of Dairy farmer/Enterpreneur (QP No. AGR/Q4101) conforming to national skill qualifications framework Level-4 Issued by Dr. R.S. Prasanna Kumar, Institution name KVK, Mamnoor, Warangal. She has also received Delhi DD Kisan Award. This farmer who took up dairy farming and gave away a promising career is a role Model for upcoming farmers

Ahmad, N. (2020) conducted the study on "Perceived effectiveness of animal health services offered by different service providers in Namakkal District of Tamil Nadu" to assess the perceived effectiveness of health services offered by different dairy service providers in Namakkal district of Tamil Nadu during the period 2012-13 with respect to their regularity, timeliness, quality and cost. A total of 120 respondents who were availing the health services from different dairy service delivery systems were selected using proportionate random sampling and data were collected and analyzed.

Most of the respondents predominantly availed the curative (99.17%) and preventive (95.00%) services from the private veterinarians; and medicines from the pharmacies (98.33%) than other dairy service providers. It was perceived by the dairy farmers that the curative services, preventive services and supply of medicines by private veterinarians were effective in terms of regularity and quality. Dairy farmers perceived that animal husbandry department provided cost effective curative services, preventive services and medicines because most of the services were provided at free of cost. Further, they perceived that the timely curative and preventive services were provided by animal husbandry department, whereas pharmacies delivered medicines in time as they operate within the vicinity of the dairy farmers. Overall, the health services offered by the animal husbandry department were perceived to be most effective than other dairy service providers. Hence, dairy co-operatives and private integrators need to make enormous efforts to improve the health service delivery to reach the farmers.

Bharathivasu, S. (2020) in an article "womens contribution in agriculture and allied activities" that globally women constitute half of the world's population and produce half of the agricultural products according to a UN report. This indicates the contribution of women in the economic prosperity of the nations, whose lifeblood is agriculture, through their participation in agriculture as cultivators, agricultural laborers and casual helpers. In spite of this, women suffer from womb to tomb in the male dominated society. Their labor plays a key role in the survival of millions of families. The problem of poverty cannot be tackled without providing opportunities of productive employment to rural women. Women are important economic agents in India, particularly in the context of poverty. Women's income in the poverty groups is critical for household survival.

Three quarter of women all over to world live in rural areas and work in agricultural sector and a wide range of related activities. In addition, a large number of women in rural areas, like their men folk depend on daily wages earned in agricultural operations. Rural women are the major contributors in agriculture and its allied fields. Her work ranges from crop production, livestock production to cottage industry. Women's labor power is considered inferior because of employers' predetermined notion of women's primary role as homemakers. As a result of discrimination against female labor, women are concentrated in the secondary sector of labor market. Their work is low paid, low status, casual, and lacks potential upward mobility. The majority of women in the urban sector work in low paying jobs. Therefore, women are involved in allied activities with low paid wages.

Sivaram, M. (2020) conducted study on "constraints faced by the dairy farmers in production and marketing of milk in northern dry zone" rain-fed farming continues to be critical for meeting the livelihood needs of a vast majority of resource-poor farmers in the chronically drought- prone areas of the country. The recent years have been experiencing recurring droughts and ill distributed precipitation adversely affecting agricultural production, income and employment. At present, 68 per cent of the total geographical area of the country is prone to drought in varying degrees and about 33 per

cent of it is chronically drought prone (rainfall is less than 650 mm). Hardly, 29 per cent of the total cropped area in drought-prone districts is irrigated as against the all India average of 41 per cent. The livestock sector holds a great promise in providing income and employment particularly in drought prone areas. It is interesting to note that the growth in livestock income has always been higher than the growth in crop income, even during the heydays of Green Revolution when the policy emphasis was largely on crop production. Livestock provides livelihood to two-third of rural community.

It assumes greater relevance in providing 'drought proofing' and ensuring income and employment for sustainable rural livelihood. The study concluded that, the important constraints faced by the dairy farmers in Northern Dry Zone of Karnataka were, high feed cost (93.75%), non-availability of quality feed round the year (91.66%). Therefore government must initiate adequate steps to increase area under fodder crops and to resolve constraints faced by dairy farmers through development of veterinary facilities as majority farmers expressed that susceptibility of crossbred animals to disease, lack of artificial insemination and veterinary facilities near to village. Whereas in case of marketing of the milk, distant location of milk collection center, low price of milk, inadequate availability of regular market were the major constraints.

Prabhu, M. (2019) viewed an article "An outlook on growth of dairy sector and its contribution to Indian economy" Dairy development is one of the important activities in livestock sector. The total milk production in the country was at 17 million tons in the year 1950-51 and since then the production of milk continues to rise over the period. The per capita availability of milk in the year 2000-01 was 217 grams per day from against 128 grams per day in the year 1980-81. Further there is a substantially increasing trend has been observed in the per capita availability of milk from 2000-01 to 2016-17. The reasons for the increase in the milk production was mainly due to operation flood which connected rural production centers with urban consumption centers followed by the liberalization policy which paved the way for the entry of private sectors in the dairy industry.

Dairy sector has been recognized by the government as one of the growth engines of the Indian economy. Growing human population, increasing urbanization, rising

domestic incomes and changing lifestyles in the country have led to increasing demand for livestock products. To improve the milk production and productivity of dairy animals, Central and State Government took initiatives through implementation of various dairy development programmes over the years. Provision of necessary infra structural facilities would provide the necessary impetus for the dairy farmers to pursue value addition and dairy processing activities and thereby increase their income by several times. Hence serious efforts should be taken by the government to create these facilities gradually so as to capture the momentum.

Parashari, A. K. (2019) in an article Livestock production, marketing and future prospects in India" that livestock husbandry has always been the backbone of rural economy in India. It provides the income, employment, nutrition and manures for the poor under privileged farming community of rural India. Intensification and scaling up of livestock size is increasing and traditional form of production system with limited capital and labors tends to move up for achieving economic viability or profitability and avoiding land and water stress or crisis generated through extra demand for food crops, fodder and feed crops. The present study tries to analyze the mechanism of livestock production system, marketing structure and future implications of current socio-political decisions in India.

India is the largest producer of milk with a record of 176.30 million tons during 2017-18 which grew up from 56.60 million tones in1991-92.marketing of livestock ant their products as meat and milk has been still traditional and controlled by unorganized sectors like village traders, itinerant traders, producer sellers and some commission agents. Rural markets and farm gates in villages are mostly transaction place for live animal trades. The sector presents huge potentials of growth as the population base of the country is expanding and creating huge demand and employment opportunities but government need to established the proper marketing channels, regulatory bodies and standard pricing system.

CHAPTER-3

METHODOLOGY

Methodology is the systematic and theoretical analysis of the methods applied to a field of study. The methodology adopted for the present study entitled on, "Animal Husbandry as a source of self employment for Farmers" discussed under following heading:

A. Selection of Area
B. Selection of Sample and Size
C. Methods and tools of data collection
D. Collection of Data
E. Obtaining Ethical Clearance
F. Analysis and interpretation of Data

A. Selection of Area:

The area chosen for the present study research is Rasipuram town which is situated at Rasipuram. Kakkaveri is a Village in Rasipuram Block in Namakkal District of Tamil Nadu State, India. It is located 27 KM towards North from District head quarters Namakkal, 3 KM from Rasipuram. Sub Villages in Kakkaveri are,Poosaripalayam, J.J Colony, Velampalayam, Appanaickenpatty, Vengayapalayam

According to Census 2011 information the location code or village code of Kakkaveri village is 634517. Kakkaveri village is located in Rasipuram taluka of Namakkal district in Tamil Nadu, India. It is situated 3km away from sub-district headquarter Rasipuram (tehsildar office) and 36km away from district headquarter Namakkal. As per 2009 stats, Kakkaveri village is also a gram panchayat. The total geographical area of village is 889.99 hectares. Kakkaveri has a total population of 6,643 peoples, out of which male population is 3,530 while female population is 3,113. Literacy rate of kakkaveri village is 71.96% out of which 78.75% males and 64.25% females are literate. There are about 1,539 houses in kakkaveri village. Pincode of kakkaveri village locality is 637408.

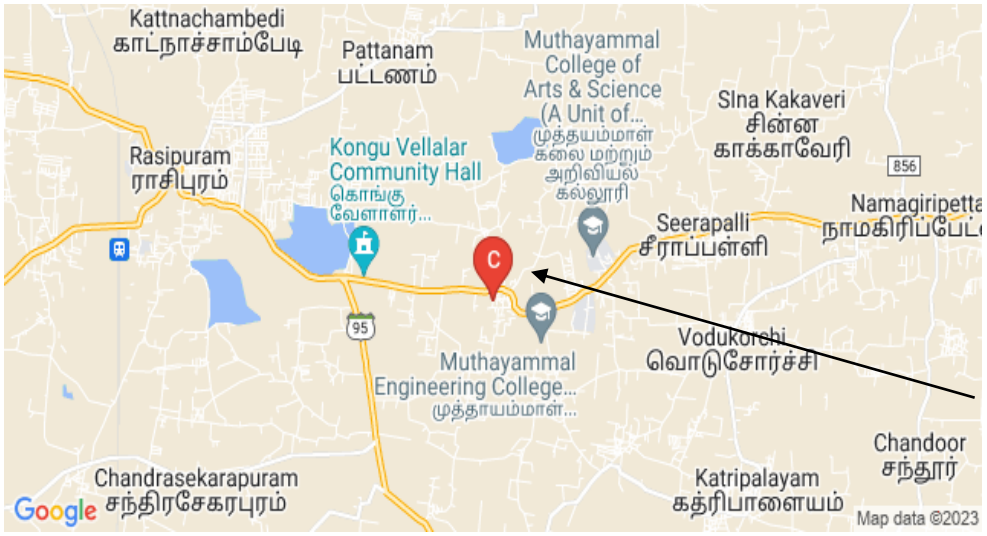

Fig-1 : Kakaveri Gram Panchayat

B. Selection of Sample and Size:

A sample is a finite part of a statistical population whose properties are studied to gain information about the whole. When dealing with the people it can be defined as as set of respondents (people) selected from a larger population for the purpose of a survey. (Webster, 1985). The sample of 75 farmers is selected from the area of Kakavaeri village and sub- village of Kakaveri in Rasipuram block, Namakkal district were selected for the present study.

Table-VI

Selection of Sample and Size

Villages	Sample Size
Kakaveri	14
Poosaripalayam	7
J.J. Colony	2
Velampalayam	14
Appanaickenpatty	20
Vengayapalayam	18
Total	75

Purposive sampling refers to a group of non-probability sampling techniques in which units are selected because they have characteristics that you need in your sample. In other words, units are selected "on purpose" in purposive sampling. Also called judgmental sampling; this sampling method relies on the researcher's judgment when identifying and selecting the individuals, cases, or events that can provide the best information to achieve the study's objectives.

C. Methods and Tools of Data Collection:

A survey method is defined as a brief interview or discussion with an individual about a specific. The term survey is unfortunately a little vague, so need to explain it better. The term survey often uses means to collect information (Cacery and Girija 2002). It is then process of investigating the experiences of a group of persons. To fulfill the primary objectives of the study, it is essential to use a suitable methods and tools to elicit information from the respondents. In these present study two methods has been used.(i.e., interview schedule and case study method).

An **interview** is a survey research method where the researcher facilitates some sort of conversation with the research participant to gather useful information about the research subject. This conversation can happen physically as a face-to-face interview or virtually as a telephone interview or via video and audio-conferencing platforms. During an interview, the researcher has the opportunity to connect personally with the research subject and establish some sort of relationship. This connection allows the interviewer (researcher) to gain more insight into the information provided by the research participant in the course of the conversation.

A **case study** is the most popular methods of research. It is a detail and in depth investigation of the target person to enquire the causes of fundamental principle and it mainly consists of a areal life context. 10 case studies have been done by the researcher. She has selected 5 villages from Kakaveri Gram Panchayat. She interviewed 10 dairy farmers who are doing very well in their field.

Preparation of interview Schedule: An interview schedule was prepared and used to collect the required data for the present study. The interview schedule consists of questions such as, socio-economic profile of farmers, family back ground of farmers, agricultural allied activities of farmers, details towards animal husbandry, benefits through animal husbandry, Loan details and Schemes for Animal Husbandry. (enclosed in appendix-I)

D. Collection of Data:

Systematic conversation between an investigation and information initiated for obtaining information relevant to specific study. Krishna Swami (2020). The primary data source has been applied for the study. Researcher collected primary data from Kakaveri village and sub- village of kakaveri situated at Rasipuram block in Namakkal District. 75 farmers have been selected for the present study. (1.03.2023-12.03.2023)

Rapport Establishment: The researcher personally contacted all the respondents (farmers) in order to obtain permission for data collection. A good rapport was built with the respondents (farmers) before collection of data. The respondents were briefed about the study and were requested to cooperate with the researcher in order to gain an in-depth knowledge through the study with the help of structured questions that has been prepared by the researcher. (enclosed in plate-1)

E. Obtaining Ethical Clearance:

The application form explaining the design and the protocols used in the research study was subjected to the Institutional Human Ethics Committee of Avinashilingam Institute for Home Science and Higher Education for Women. (enclosed in appendix-II)

F. Analysis and interpretation of data:

After collection of data, it is essential to organize the information in a systematic manner in order to obtain the desired result. The data collected were consolidated, tabulated and interpretated and presented in the chapter IV.

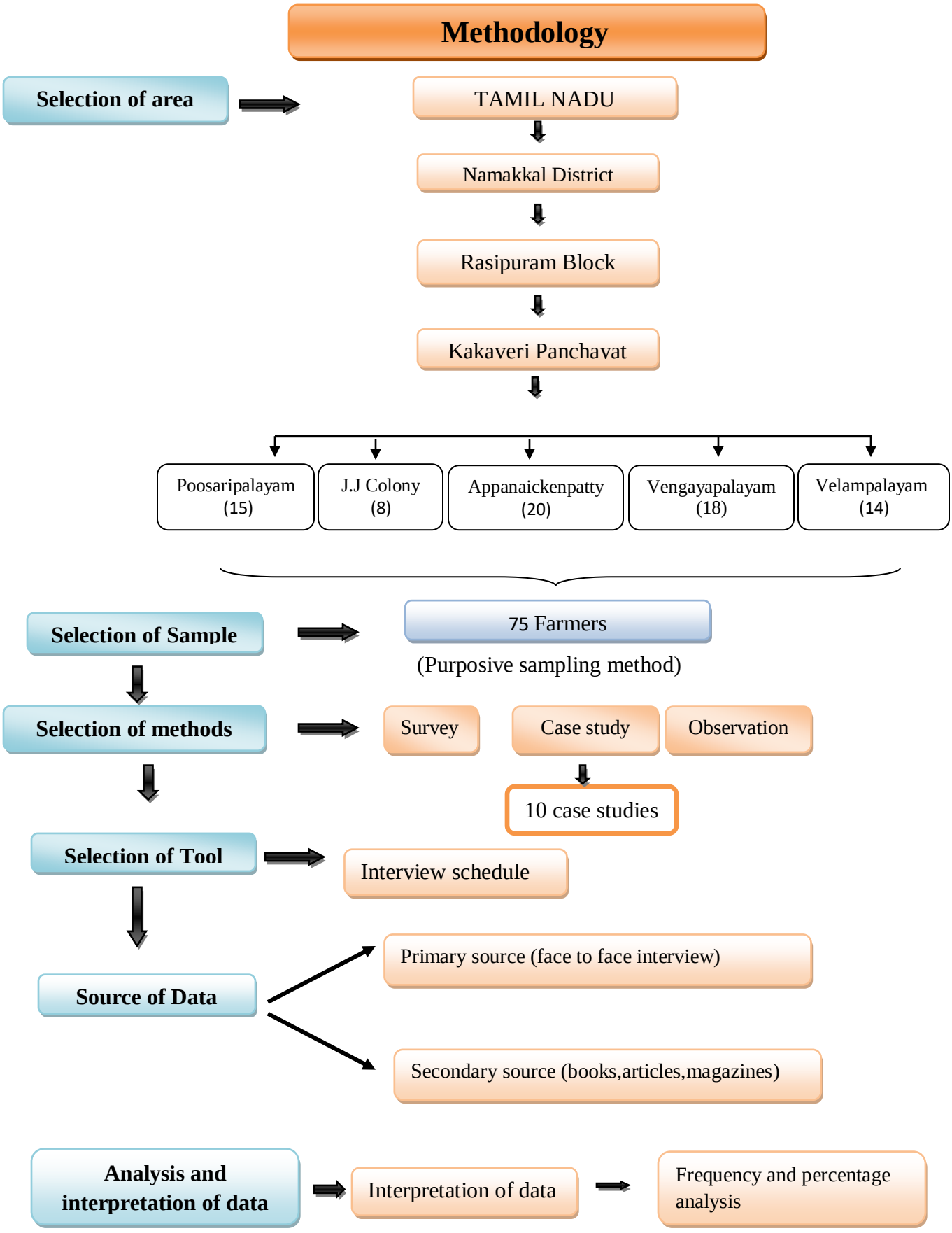
Methodology
Selection of area
TAMIL NADU
Namakkal District
Rasipuram Block
Kakaveri Panchavat
Poosaripalayam (15)
J.J Colony (8)
Appanaickenpatty (20)
Vengayapalayam (18)
Velampalayam (14)
Selection of Sample
75 Farmers
(Purposive sampling method)
Selection of methods
Survey
Case study
Observation
10 case studies
Selection of Tool
Interview schedule
Source of Data
Primary source (face to face interview)
Secondary source (books,articles,magazines)
Analysis and interpretation of data
Interpretation of data
Frequency and percentage analysis

Plate 1: Researcher conducting interview with the farmers

CHAPTER-4

RESULT AND DISCUSSION

The results and discussion pertaining to the study entitled on, **"Animal Husbandry as a Source of Self-employment for Farmers"** presented in the following headings:

A. General Information about the Farmers

i. Socio- Economic Characteristics of the Farmers
ii. Family Background of the Farmers
iii. Savings, Loan and Insurance details about the Farmers

B. Information on types of Agriculture and Agricultural Allied Activities

i. Agricultural activities Practiced by the Farmers
ii. Agricultural Allied activities Practiced by the Farmers

C. Existing Animal Husbandry Practices adopted by the Farmers

i. Livestock Practices adopted by the Farmers
ii. Health Management on Livestock's
iii. Knowledge on the schemes available for Animal Husbandry
iv. Self-Employment through Animal Husbandry
v. Generating income via Diary Farming

D. Benefits and Challenges of the Farmers in Animal Husbandry

i. Benefits of Animal Husbandry expressed by the Farmers
ii. Challenges faced by the Farmers in Animal Husbandry

A. General Information about the Farmers:

i. Socio- Economic Characteristics of the Farmers

ii. Family Background of the Farmers

iii. Savings, Loan and Insurance details about the Farmers.

A) i. Socio- Economic Characteristics of the Farmers

The age, educational qualification, caste, religion, marital status is discussed under Table-VII

TABLE-VII

SOCIO-ECONOMIC CHARACTERISTICS OF THE FARMERS

Sl No.	Socio Economic Characteristics		N=75	
			F	%
1	Age (years)	18-35 (young)	1	1
		36-45 (Middle)	18	24
		Above 45(old)	56	75
2	Gender	Male	46	61
		Female	29	39
3	Caste	General	30	40
		OBC	40	53
		SC	5	7
4	Religion	Hindu	68	91
		Christian	7	9
5	Educational qualification	Primary school(1^{st} to 5^{th})	17	23
		Middle School (6^{th} to 8^{th})	33	44
		High school (9^{th}& 10^{th})	23	31
		Higher secondary school (11^{th}& 12^{th})	2	3
6	Marital status	Married	72	96
		Widowed	3	4
7	Occupation	Farming	23	31
		Dairy Farming	52	69

8	If Agriculture, then	Fully engaged in Agriculture	75	100
9	Types of House	Katcha	3	4
		Mixed	59	79
		Pucca	13	17
10	Size of Land	Small Farmers (0- 2 acres)	74	99
		Medium Farmers (2-4 acres)	1	1
11	Annual Income (in Rs) Dairy farming	Less than 50,000	1	1
		50,000- 1 lakh	73	97
12	Years of Experience in Diary Farming	5-10	28	37
		10-15	47	63

The data has shown the socio-economic characteristics of the farmers. The age of the farmers denotes that majority seventy five percent of the farmers belong to above 45- years' age group and minimum one percent of the farmers belong to (18-35) year's age group. Therefore it shows that old age group i.e. above 45 years farmers are involved in animal husbandry because of their experience and interest whereas young age groups of the farmers are not interested in Animal Husbandry.

About the genders of the farmers, sixty one percent of the farmers were male and thirty nine percent of them were female. It shows that more number of male farmerswas involved in farming work than female. The female farmers were less involved due to management of both farming as well as household work.

The data shown that caste of the farmers, fifty three percent of the farmers belong to OBC and minimum seven percent of the farmers belong to scheduled caste.

The data of educational qualifications of the farmers denotes that forty four percent of the farmers completed middle school and minimum three percent of the farmers completed High secondary school. Therefore, it shows that most of the farmers were not willing to study due to lack of school, as they have to travel far for education. Also, most of them were involved in agricultural work at early stage to earn money.

The marital status of farmers expressed that majority ninety six of the farmers were married and four percent of the farmers were widowed.

The occupations of the farmers, sixty nine percent of the farmers were involved in dairy farming and minimum thirty one percent of the farmers were involved in agricultural work. Thus, it shows that they are most of the farmers occupation is dairy farming because they are interested in generating income through allied activities

The types of house of the farmers reveals that majority seventy nine percent of the farmers lived in mixed house, minimum four percent lived in katcha house. It shows that mixed houses belongs to middle class family with moderate income, whereas katcha houses belongs to low income level.

Based on the size of the land ,majority ninety nine percent of the farmers are small farmers consist of land around 0-2 acres, minimum one percent are medium farmers consist of 2-4 acres of land. Therefore most of the farmers are doing agricultural activity in small level rather than medium level.

The annual income of farmers in dairy farming explains that majority ninety seven percent of the farmers (in Rs) are earning 50,000-1lakh yearly and minimum one percent are earning less than 50,000 yearly. Thus most of the farmers are above poverty line and can able to manage their family needs and business purpose whereas one percent belong to poverty line with very less income.

The years of experience of farmers in dairy farming, sixty three percent of the farmers have10-15 years' experience and minimum thirty seven percent of the farmers have 5years experience. Therefore,it shows that most of the farmers have more experiences as they are interested and farming is their family occupation.

A) ii. Family Background of the Farmers

The family background details of the farmer is given under Table-VIII

TABLE- VIII

FAMILY BACKGROUND OF THE FARMERS

Sl. No	Family Background	Categories	N= 75	
			F	%
1	Relation to farmer	Husband	24	32
		Wife	47	63
2	Nature of Family	Nuclear Family	5	7
		Joint Family	70	93
3	Nature of Occupation	Farming as a sole profession	52	69
		Farming + Business	1	1
		Farming + agricultural laborers	1	1
		Dairy	21	28
4	No. of. Family members	4(small family)	17	23
		5(nuclear family)	51	9
		6 & above (extended family)	7	68
5	Head of the Family	Father	65	87
		Grandfather	6	8
		Grandmother	4	5
6.	No. of. Family members engaged in Animal Husbandry	2	65	87
		3	10	13
7	Annual Income (Rs) of the family Dairy farming	Less than 50,000	1	1
		50,000-1lakh	73	94
		Above 1 lakh	1	1

The data indicates the family background details of the farmers. Relation to the farmers depicts that sixty three percent of the farmers are farmer's wife and minimum thirty percent of

the farmers are farmers' husband (male). It shows that most of the farmers' relations are husband and wife, so they are helping each other in farm work.

The nature of family of the farmers shows that majority ninety three percent of the farmers are living in joint family and minimum seven percent of the farmers are living in nuclear family.

The Occupation of the farmers' families, the data explains that sixty nine percent of the farmers' family members' occupation is farming and minimum one percent of the farmers occupation family members is farming as well as agricultural laborer. Therefore, it explains that most of the farmers are involved in agriculture and work in their own agricultural land as they are unable to pay money to the laborers.

The data depicts about the number of farmers family members that sixty eight percent of the farmers live in joint family and minimum nine percent of the farmers are extended family.

The head of the farmer's family expressed that majority eighty seven percent of the farmer's father is the head of the family and minimum five percent of the farmer's grandmother is the head of the family. Therefore, it shows that they follow patriarchy, as men are ruled in the family.

The farmers family members engaged in animal husbandry it depicts that majority eighty seven percent of the farmer's family engagement in animal husbandry were two members and minimum thirteen percent of the farmer's family engagement in animal husbandry were 3-members. Therefore, it shows that mostly husband and wife are engaged in animal husbandry

The annual income of farmers in dairy farming explains that majority ninety seven percent of the farmers (in Rs) are earning 50,000-1 lakhs yearly and minimum one percentof the farmers are earning less than 50,000 yearly. Thus, most of the farmers are above poverty line and can able to manage their family needs and business purpose whereas one percent belong to poverty line with very less income.

A) iii. Details on Savings, Loan and Insurance of the Farmers

The Details on Savings, Loan and Insurance of the Farmers are expressed in table-IX

TABLE – IX

SAVINGS, LOAN AND INSURANCE OF THE FARMERS

Savings		**N=75**	
		F	**%**
Access to savings in Dairy farm	Yes	43	57
	No	32	43
If yes, source of saving	Rural bank	30	44
	Private bank	12	16
	SHG bank	33	40
Purpose of savings	Purchase the animals	29	39
	Buy fodder for animals	36	48
	Education	10	13
Loan			
Loan taken to purchase Livestock	Yes	75	100
If yes, indicate the purpose?	Purchase animal feed	32	43
	Purchase farming equipment's	25	33
	Children Education	18	24
Source of loan	Government bank	75	100
Amount (Rs) of loan received from the bank	Below 50,000	1	1
	50,000 – one lakh	73	98
	Above one lakh	1	1
Repayment of the loan	Yes	75	100
Amount of savings in	Profit	56	75

Dairy farming	Loss	19	25
Insurance			
Availability of insurance coverage	Yes	69	92
	No	6	8
If yes, state the type of insurance	Livestock insurance	52	69
	Rural insurance	46	61
	Animal mortality insurance	69	92
Year of livestock insurance implemented	Less than 5 years	45	60
	6-10 years	20	27
	More than 10 years	4	5
Animals Covered	Cattle	75	100
	Buffalo Goat	75 75	100 100
Benefits of subsidy restricted to number of animals for each household	5 animals	69	92
	3 animals	6	8
Reason of livestock insurance	Protection of animals during emergency like fire, smoke, explosion	69	92
	Animal mortality coverage	52	69
	Protection of animals and other farming equipment	46	61
	Protected from livestock liability	69	92

The inference drawn from data explains about the Savings details about the farmers where it depicts about the access to savings in Dairy farming that fifty seven percent of the

farmers do savings and forty four percent of the farmers source of savings is in Rural Bank and sixteen percent of the farmers source of savings is in Private Bank.

Thus, it shows that most of the farmers do savings for future use and also rural bank is near to their village and the interest is low whereas private bank attracts the people through extra advertisement. The data also shows that minimum forty three percent of the farmers don't do savings as it shows that farmers are not able to save because the expenditure cost is high in dairy. The data depicts the purpose of saving shows that forty eighty percent of the farmers saved to buy fodder for animals and minimum thirteen percent of the farmers saved for education purpose. Therefore, most of the farmers saved money for buying fodder due to unavailability of fodder while others saved for their higher education.

Regarding the loan information for farmers, the data explains that cent percent of the farmers took a loan to buy livestock, forty three percent of the farmers took a loan to buy animal feed, and minimum twenty four percent of the farmers took a loan for the education of their children. The data depicts that, cent percent of farmers have received loans from government banks. Therefore, it shows that interest rate in government banks will be quite low. According to conclusions taken from the data, farmers regularly repay their loans.

The data shows that savings for farmers in dairy farming, majority seventy five percent of farmers makes a profit, and minimum twenty five percent of farmers they do not. Thus, it shows that most of the farmers are able to balance the requirements of their businesses and families; some are unable to do so because of the significant costs associated with dairy production.

In terms of insurance availability, majority ninety two percent of farmers has insurance for their livestock and minimum eight percent of farmers have no protection at all. It demonstrates that the majority of farmers have emergency insurance coverage while some might not know about it. About the types of insurance covered majority ninety two percent of farmers types of insurance is animal mortality insurance and minimum sixty one percent of farmers' types of insurance is Rural insurance.

The inference data drawn from animals covered for insurance shows that cent percent of cattle, buffalo, and goats are being covered for animal insurance. The data about the benefits of subsidy restricted to number of animals for each household explains that ninety two percent of

the farmers responded for 5 animals. The data for the need for livestock insurance expressed that majority ninety two percent of farmers are covered for the protection of their animals during emergencies like fire, smoke, and explosions, protected from livestock liability and minimum sixty one percent of farmers are covered for protection of their animals and other farming activities.

B. Information on types of Agriculture and Agricultural allied Activities

i. Agricultural activities Practiced by the Farmers

ii. Agricultural Allied activities Practiced by the Farmers.

B) i. Agricultural activities Practiced by the Farmers

The Agricultural activities Practiced by the Farmers is given under table-X

TABLE- X

AGRICULTURAL ACTIVITIES PRACTICED BY FARMERS

Agricultural activities	N=75			
	Yes		No	
	F	%	F	%
Ploughing	5	7	70	93
Sowing	4	5	71	95
Manuring	7	9	68	91
Irrigation	10	13	65	87
Weeding	4	5	71	95
Sowing	7	9	68	91
Harvesting	6	8	69	92
Winnowing	5	7	70	93
Storage	8	11	67	89

*Multiresponse

The data indicates Agricultural activities practiced by the farmers explained that majority ninety three percent of the farmers are not involved in ploughing, ninety five percent of the farmers not involved in sowing, ninety one percent of the farmers not involved in manuring,

eighty seven percent of the farmers not involved in irrigation, ninety five percent of the farmers not involved in weeding, ninety one percent of the farmers not involved in sowing, ninety two percent of the farmers not involved in harvesting, ninety three percent of the farmers not involved in winnowing and eighty nine percent of the farmers not involved in keeping grains in storage.

B) ii. Agricultural allied activities

Agricultural allied activities is given under table-XI

TABLE-XI

TYPES OF ALLIED ACTIVITIES PRACTICED BY FARMERS

Agricultural allied activities	Yes		No	
	F	%	F	%
Horticulture	20	27	55	73
Animal Husbandry	75	100	-	-
Poultry	21	28	54	72
Dairy	75	100	-	-
Fishery	2	3	73	97
Floriculture	4	5	71	95

*Multiresponse

The data demonstrates that farmers engage in agricultural allied activities, depicts that cent percent of the farmers involved in animal husbandry and dairy farming, followed by twenty eight percent of the farmers involved in poultry, followed by twenty seven percent of the farmers involved in horticulture, five percent of the farmers engage in floriculture and minimum two percent of the farmers engaged in fishery.

As a result, it is clear that farmers are mostly engaged in animal husbandry and dairy farming because profit is more through selling milk as compared to the other agricultural allied activities.

C. Existing Animal Husbandry Practices adopted by the Farmers

i. Livestock Practices adopted by the Farmers
ii. Health Management on Livestock's
iii. Knowledge on the schemes available for Animal Husbandry
iv. Self-Employment through Animal Husbandry
v. Generating income via Diary Farming

C) i. Livestock Practices adopted by Farmers

Livestock Practices adopted by Farmers is given under the table-XII

TABLE-XII

LIVESTOCK PRACTICES ADOPTED BY FARMERS

PRACTICES		**N=75**	
Land		**F**	**%**
Availability of Land	Yes	75	100
Ownership of Land	Owned	73	97
	Leased	2	3
Animal Shed Pattern		**F**	**%**
Type of Animal house	Kutcha	10	13
	Pucca	2	3
	Tree Shade	31	41
	Roof Slope	32	43
Type of animal shed Roof	bamboo	27	36
	Hut	36	48
	Thatch	12	16
Type of Animal Shed floor	Concrete	39	52
	Brick	7	9
	Earth	29	39
Person In charge of Animal Shed maintenance	Women	16	21
	Both men and women	59	79

Livestock		**F**	**%**
Livestock owned	Yes	75	100
Total no. of. livestock owned by farmer	Less than 5	11	15
	5-10	48	64
	10-15	12	16
	More than 15	4	5
Total no. of. livestock reared by farmer	Cattle Hybrid (female)	49	65
	Cattle Hybrid (Male)	5	7
	Buffalo Local (female)	23	31
	Bullock Local (male)	6	8
	Goat Local (female)	44	59
	Goat Local (Male)	28	37
Maintenance of Livestock		**F**	**%**
Person In charge of taking care of livestock	Both men and women	75	100
Washing of livestock	yes	75	100
If yes, place of washing	Outside the farm	23	31
	Nearby ponds	52	69
Collection of cow dung	Both men and women	75	100
Purchase of Livestock			**N=75**
		N	**%**
Amount spend for purchase of livestock	15,000-25,000	42	56
	more than 25,000	33	44
Amount spend in fodder and medicine	1000	69	92
	More than 1000	6	8
Place of Purchase of the animals	Nearby Farms	9	12
	From another Village	47	63
	Nearby Market	19	25
Number of years farmer involved in livestock rearing	10 years	62	83
	More than 10 years	13	17

Distance travelled by farmer for rearing livestock	Less than 2 kms	73	94
	2-4 kms	2	3
Livestock feeding practices		**N**	**%**
Types of fodder for animals	Green	60	80
	Dry Fodder	8	11
	Paddy Straw	7	9
Collecting fodder for animals	Women	46	61
	Both men and women	29	39
Person in charge for serving livestock	Women	56	75
	Both men and women	19	25
Feeding time to Livestock	Thrice a day	75	100

The data depicts Livestock Practices adopted by the farmers, land details where the farmers responded that cent percent of them have land and majority ninety-seven percent of farmers possess their own land and minimum three percent of the farmers have land for leasing.

Regarding the type of animal shed pattern forty three percent of the farmers responded about the type of animal shed has roof slope and minimum three percent of the farmers responded about the type of animal shed was pucca.

The type of animal shed roof depicts that forty eight percent of the farmers responded that they had hut and minimum sixteen percent of the farmers responded that they had thatch. The data about the type of animal shed floor explains that fifty two percent of the farmers responded that the animal shed floor is concrete and minimum nine percent of the farmers responded that the animal shed floor is brick. About the person in charge of Animal Shed maintenance majority seventy nine percent of the farmers are both men and women and minimum twenty one percent of the farmers are women. Thus, it indicates that there is more involvement for both men and women for animal shed pattern because both men and women divided the works to make it easy and fast.

The data explains about the livestock's details that cent percent of the farmers have their own livestock, followed by sixty four percent of the farmers has around 5-10 no. of livestocks and sixty five percent of the farmers have Cattle Hybrid (female).

The maintenance of Livestock's, it shows that cent percent of both men and women farmers were in charge of taking care of livestock. The inference drawn from data shows cent percent of the farmers washed their livestock's and sixty nine percent of the farmers washed the livestock's in nearby ponds. The Collections of cow dung shows that cent percent of both men and women farmers collect cow dung.

The data indicates about the purchase of livestock, fifty six percent of farmers spent Medium, and minimum forty four percent of the farmers spent high for purchase of livestock. Therefore, it shows that most of the farmers don't have enough money for purchase of livestock whereas some farmers spent high to enlarge their own business.

The data explains about the place of purchase of the animals, sixty three percent of the farmers purchased livestock from another village, majority eighty three percent of the farmers engaged for 10 years in livestock rearing and majority ninety four percent of the farmers travelled for less than 2 kms for rearing livestock and minimum three percent of the farmer travel up to 4 kms. It shows that most of the farmers travel less as availability of grasses near to their house, while others travel far as unavailability of grasses near to their house.

The data depicts the feeding practices of livestock shows that majority eighty percent of farmers use to gives green grass types of fodder for animals and minimum nine percent gives paddy straw. Therefore, it indicates green grass easily available for farmers, whereas for others green grass is not available for the farmers. The inference drawn from data about the collecting fodder for animals explains that sixty one percent of women farmers collect fodder and cent percent of the farmers feeds thrice a day to the livestocks.

C) ii. Health Management on Livestock's adopted by farmers

The Health Management on Livestock's adopted by farmers is given under table-XIII

TABLE – XIII

HEALTH MANAGEMENT FOR LIVESTOCK

Animal Health Services		**N= 75**	
		N	**%**
Animal health checkup interval	Regularly	73	97
	When needed	2	3
Checkup budget of the animals	Free	2	3
	Cost	73	97
Identification of sick animal	Lethargy movement	33	44
	Uncoordinated movements	19	25
	Unprovoked aggression	23	31
Sign of Sick Animal	Decrease in or loss of appetite or water intake.	43	57
	Decrease in energy or activity level	69	92
	Vomiting or diarrhoea	50	67
	Blood in the urine or stool	3	4
	Bloating of the abdomen	13	17
	Straining or inability to urinate or defecate.	5	7
	Increased shedding or bald patches.	8	11
Taking care of the sick animals	Immediate	74	99
	Wait for two days	1	1
Ways to Prevent Sick Animal	Veterinarian treatment	70	93
	Sell in Market	5	7
Available of veterinary services	Yes	24	32
	No	51	68

If yes, place of veterinarian	Near the village	23	31
	Far away	52	69

*Multiresponse

The data demonstrates the Health Management for livestock shows that majority ninety seven percent of the farmers do regular animals health checkup and minimum three percent of the farmers usually checkup animals when needed.

It shows that most of the farmers are checking regularly so that to improve their business while others are checking, when the animals are not well they are taking care. Checkup budget of the animals depicts that majority ninety seven percent of the farmers spent money for checkup animals while three percent of the farmers checkup free of cost.

The data explains the identification of sick animal that forty four percent of farmers are identified through Lethargy movement and minimum twenty five percent of farmer are identified through Uncoordinated movements. Therefore, it indicates that farmers are identified through their animal behavior and others identified through eating habits of animals are changed.

The taking care of the sick animals, majority ninety nine percent of the farmers immediately response to sick animals and minimum one percent of farmers must wait at least two days after sick. According to the data, most farmers treat sick animals right away because they bring in money for the family.

However, other farmers choose to wait two days because some animals can be cured. The data shows that ways to prevent the sick animals, majority ninety three percent of farmer treat sick animals with veterinarian care and minimum seven percent of farmers sell their livestock in the market. It shows that most of the farmers receive veterinary care while some sell their produce in markets because they are unable to pay the veterinarian's fees.

C) iii. Knowledge on the schemes available for Animal Husbandry

Knowledge on the schemes available for Animal Husbandry are expressed by Farmer in table XIV

TABLE- XIV

KNOWLEDGE ON SCHEMES AVAILABLE FOR ANIMAL HUSBANDRY

Name of the Schemes for Animal Husbandry	N=75			
	Aware		Not Aware	
	F	%	F	%
National livestock Mission	71	95	4	5
Rashtriya Gokul Mission	56	75	19	25
National Animal Disease Control Program	14	19	61	81
Livestock Health and disease control program	10	13	65	87
Animal Husbandry infrastructure development fund	26	35	49	65
Dairy infrastructure Development Fund	12	16	63	84

The data indicates the schemes for Animal Husbandry, majority ninety five percent of the farmer are aware of National Livestock Mission (NLM) and minimum five percent of the farmers are not aware about national livestock mission. Therefore, it shows that the National Livestock Mission is to create jobs, foster entrepreneurship, increase animal productivity, and target increased production of meat, goat milk, eggs, and wool. However, some people are unaware of government programmes because they have less interaction with others.

C) iv. Self-Employment through Animal Husbandry

Self-Employment through Animal Husbandry is given under table XV

TABLE-XV

SELF-EMPLOYMENT THROUGH ANIMAL HUSBANDRY

SI.NO	Reason	N=75			
		Agree		Disagree	
		N	%	N	%
1	Independent Job	75	100	-	-
2	No opportunity for employment	71	95	4	5
3	Due to lack of education	69	92	6	8
4	Traditional occupation of the family	71	95	4	5
5	Need not to answer anyone	68	98	7	9
6	Low Stress to farmers	42	56	33	44
7	Less risk	21	28	54	72
8	Work at any Time	42	56	33	44
9	Provide profit from dairy products	55	73	20	27
10	Helps to start own dairy and allied services	61	81	14	19

**Multiresponse*

Based on the data about the reason of Self- Employment through Animal Husbandry explains that cent percent of the farmers agree that independent job is the reason of self-employment through animal husbandry and minimum twenty eight percent of the farmers agree that less risk is the reason of self- employment through animal husbandry. Seventy two percent of the farmers disagree that less risk is the reason of animal husbandry and minimum five percent of the farmers disagree that no opportunity for employment and traditional occupation of the family is the reason of self- employment through animal husbandry. Thus it shows that raising animals gives both farmers and non-farmers opportunities, and for some farmers, it is a reliable source of income.

C) v. Generating income via Dairy Farming

Generating income via Dairy Farming is given under table XVI

TABLE – XVI

GENERATING INCOME VIA DAIRY FARMING

Dairy Farming		**N = 75**	
		N	**%**
Years of Establishment of Dairy Farming	Less than 5 years	20	26
	6-10 years	26	35
	More than 10 years	35	48
knowledge in Dairy Farming	Yes	75	100
If yes, from where?	own	28	37
	general	47	64
Reason for own Dairy farm	Encouraged by parents and relatives	34	45
	Self-motivated	19	25
	Family Occupation	22	29
Reason for Dairy farming	Not educated	34	45
	Unable to get job	41	55
No. of. hours involved in Dairy farming	Full day	61	82
	Not a fixed work time	13	18
Reason for choosing dairy farming as self-employment	To be independent	75	100
Income generated via Dairy Farming		**N**	**%**
Per month income (Rs) in selling of milk	25,000	22	28
	30,000	50	68
	15,000	3	4
Per day expenditure (Rs)	500	2	3
	550	5	7

	600	33	45
	650	20	27
	700	15	18
Total production of milk (liters) per day	20	2	3
	25	19	26
	30	40	54
	35	12	16
	40	1	1
Factor influencing to sell the animal	Immediate financial need	75	100
Milk Production			
Person Involved in Milching	Both men and women	75	100
Number of times Milching in a day	2 times	72	97
	3 times	2	3
Cleaning milking utensils before milching	Yes	75	100
Milk yield by livestock during High season in liter	30	3	4
	25	13	17
	20	39	52
	15	20	27
Milk yield by livestock during Low season in liter	20	3	4
	15	11	15
	10	61	81
Do you plan to increase the amount of milk you produce?	Yes	75	100
If yes, how do you plan to increase your milk production?	Increase the number of dairy cows	37	50
	Improve the grade	26	35

	of animals		
	Produce more feed	11	15
Place of selling the Milk	Milk society	72	97
	Distribution to every house	2	3

***Multiresponse*

The inference drawn from data generating income via Diary Farming states that forty eight percent of the farmers establishment year of Dairy Farming is more than 10 years and minimum twenty six percent of the farmers have been operating in dairy business for less than five years. Therefore, it depicts that dairy farming is the primary occupation for most of the farmers and some of the farmers also engaged in other activities outside of the farm.

The data shows that cent percent of the farmers have complete knowledge of dairy and sixty four percent of the farmers have general knowledge in dairy farming. Regarding the motivation for starting a dairy farm, forty five percent of farmers were encouraged by parents' relatives, and minimum twenty five percent of the farmers were self-motivated. It shows that some people struggle to find employment; others are driven by their own interests.

The no. of hours involved in Dairy farming majority eighty two percent of the farmers' involvement in Dairy farming is full day. Reason for choosing dairy farming as self-employment expressed that cent percent of the farmers' reason is to be independent.

Regarding the income generated via Dairy farming sixty-eight percent of the farmers' monthly income is Rs. 30,000 through selling milk and minimum four percent of the farmers monthly income is Rs. 15,000. Thus, it can be seen that the most of the farmers earn Rs. 30,000 per month through proper maintenance of their dairy enterprises while others earn less since they need to spend more on animal feed.

According to the Data about the daily expenditure in dairy farming indicates that forty five percent of farmers spent Rs.600 per day on dairy farming and minimum three percent of farmers spent Rs.500 per day on dairy farming. This demonstrates that while some farmers spend a lot on animal feed while others have access to it on their own property.

The inference drawn from data shows that fifty four percent of farmers produce 30 liters of milk per day and minimum one percent of the farmers produce 40 liters of milk per day.As a result, it becomes clear that normal cattle produce 30 liters of milk while hybrid cattle produce 40 liters. The data explains that factor influencing to sell the animal was cent percent of the farmers decision to sell an animal is immediate financial need.

The data shows that everyone engaging in milching is a farmer; men and women are cent percent, equally represented in milching. According to the data, about Milk yield by livestock during High season (in liter) fifty two percent of farmers yield 20 liters of milk and minimum four percent of farmers yield 30 liters of milk, followed by Milk yield by livestock during Low season (in liter) majority eighty one percent of farmers yield 10 litres of milk and minimum four percent of farmers yield 20 liters of milk. Therefore, it is evident that more milk is produced by cattle during the summer than during the winter.

D. Benefits and Challenges of the received by the Farmers in Animal Husbandry

i. Benefits of Animal Husbandry expressed by the Farmers

ii. Challenges faced by the Farmers in Animal Husbandry

D) i. Benefits of Animal Husbandry

Benefits of Animal Husbandry expressed by Farmers under table XVII

TABLE – XVII

BENEFITS OF ANIMAL HUSBANDRY

Sl. No	Benefits of Animal Husbandry	N=75									
		SA		A		N		D		SD	
		F	%	F	%	F	%	F	%	F	%
1	Helps to improve standard of living	-	-	55	73	20	27	-	-	-	-
2	Generates employment opportunities and serve as a source of income	20	27	5	7	40	53	10	13	-	-
3	Income leads to manage the family needs	15	20	20	27	25	33	15	20	-	-

4	Helps to provides extra income	10	13	45	60	-	-	13	17	7	9
5	Helps in developing high yielding breeds as it includes the practice of cross-breeding	-	-	41	55	23	31	11	15	-	-
6	Helps to increase food production such as milk, eggs, meat etc.	55	73	20	27	-	-	-	-	-	-
7	Helpful to be used animals as a Transportation	-	-	20	27	46	61	-	-	9	12
8	Livestock dung can be used for fuel	-	-	30	40	20	27	12		13	17
9	Helps in the production of manure or compost to enhance Agricultural Produce.	75	100	-	-	-	-	-	-	-	-
10	Livestock dung can be sell in the market	-	-	32	43	23	31	20	27	-	-

*Multiresponse

The data stated the benefits of animal husbandry stated that seventy-three of the farmers agrees that animal husbandry helps to improve standard of living, followed by fifty three percent of the farmers responded neutral on generates employment opportunities and serve as a source of income, thirty three percent of the farmers expressed neutral about income leads to manage the family needs, sixty percent of the farmers agree on helps to provides extra income, fifty five percent of the farmers agrees that animal husbandry helps in developing high yielding breeds as it includes the practice of cross-breeding, seventy three percent of the farmers strongly agree that animal husbandry helps to increase food production such as milk, eggs, meat etc., sixty one percent of the farmers is neutral about animal husbandry is helpful to be used as a transportation, cent percent of the farmers strongly agree about animal husbandry helps in the production of manure or compost to enhance Agricultural Produce and forty three percent of the farmers agrees that livestock dung can be sell in the market.

D) ii. Challenges faced by the Farmers in Animal Husbandry

Challenges faced by the Farmers in Animal Husbandry is given under table XVIII

TABLE – XVIII

CHALLENGES FACED BY FARMERS IN ANAIMAL HUSBANDRY

Challenges faced by farmers	N=75			
	Yes		No	
	F	%	F	%
Lack of quality of breed	28	37	47	63
Lack of financial support	50	66	25	34
Lack of natural pasture	37	49	38	51
Lack of quality of fodder	54	72	21	28
Low quality of milk	31	41	44	59
Low market price for milk	31	41	44	59
Lack of veterinary services	52	70	23	31
Natural Calamities	11	15	64	85
Shortage of fodder	25	33	50	67
Lack of water	30	40	45	60

*Multiresponse

The data shown that challenges faced by the farmers were expressed as seventy-two percent of farmers responded that they struggle for lack of quality feed, followed by seventy percent of the farmers responded due to lack of veterinary services, sixty six percent of the farmers responded due to lack of financial support, forty nine percent of the farmers responded due to lack of natural pasture, forty one percent of the farmers responded due to Low quality of milk and Low market price for milk, forty one percent of the farmers responded due to lack of water, thirty seven percent of the farmers responded due to lack of quality of breed, thirty three percent of the farmers responded due to shortage of fodder and minimum fifteen percent of the farmers responded due to natural Calamities.

Therefore, it demonstrates that poor quality fodder is caused by a scarcity of fodder in the community whereas it is caused by climatic change for others**.**

Case study on Dairy farmers of Kakaveri Gram Panchayat, Namakkal District

Case Study: I

Name: Mr. Saravanan

Age: 50

Village: Kakaveri

Saravanan is a small scale farmer with five acres of land. Before 2010 he was earning a sum of Rs.30, 000/- annually as net income from crop cultivated in three acres of land which was not sufficient for raising his family. Due to low income he was unable to give good education to his children. He was desperately looking for new opportunities to start a new enterprise in order to boost his annual income for better living standards. He came to know about Dairy farming through his relatives, and he also learnt about various aspects of dairy farming including selection of dairy animals, housing, feeding, breeding and scientific management of dairy cows.

So, he planned to start a dairy farming and the government also gave many opportunities through various schemes, National Livestock Mission. He also got loan from bank for purchase of livestock and repaying it regularly. Saravanan has 12 dairy animals and became a successful dairy entrepreneur and producing 80 liters of milk per day which is sold to local vendors and consumers in his village. By selling the milk at the rate of Rs.25 per liters, he is able to generate revenue of Rs. 60,000/- per month. Furthermore, he has employed 2 labourers in his farm from the nearby villages to look after the daily routines of the dairy enterprise. He is also getting additional income by, Selling manure, Selling animals

After meeting out all the expenses, he is now earning an annual net income of Rs. 1, 00,000/- from dairying, and this income has given him to manage the family needs and the other expense from his family members. Saravanan and his family members are satisfied with the dairy farming.

Case Study:II

Name: Mr. Govind

Age: 46

Village: Kakaveri

Govind is a farmer and involved in agriculture and allied farming activities since 2011. The annual income of his family was around Rs. 50,000- one lakhs which did not meet the family expenses and children's education. He came to know that the Dairy farming and goat rearing is a beneficial enterprise. Goat rearing is one of the important aspects in dry land farming system. In rural areas open grazing is a common practice for rearing of goat and cattle flocks. Due to the reduction in open grazing there is a need to search another alternate option i.e. Purchase of fodder from market and he also got loan from Government bank for purchasing the fodder for farm animals. Now, G ovind has 10 dairy animals and 10 goats became a successful dairy entrepreneur and producing 85 liters of milk per day which is sold to milk vendors and consumers in his village. By selling the milk at the rate of Rs.25 per liters, he is able to generate revenue of Rs. 80,000/- per month.

Furthermore, he has employed 1 laborer in his farm from the nearby villages to look after the daily routines of the dairy enterprise. He started slatted floor goat rearing shed with 10 local goats and gradually replaced with hybrid goat breed. In the beginning he sold out the kids and male goats for breeding and slaughter purposes in the block. Goats are being sold as live weight for Rs. 250/kg for male and Rs. 300/kg for female at the farm gate. He is getting an annual income of Rs. 1, 37,500 from the sale of 10 goats (9 months age) at an average weight of 30-40 Kg and also through dairy farming. He started mixed fodder cultivation practices like Cumbu, Fodder Sorghum and supplying seed and slips to other farmers. Apart from Goat farming he started Mini dairy farming with 10 dairy cows and regularly selling milk in nearby areas. He established Mini Dairy farming unit at farm level to meet out his expenses. Govind continues to monitor the unit with the support of his wife and family members. Govind has become motivation for other farmers to start a dairy business.

Case Study:III

Name: Mr. Chinna Samy

Age: 53

Village: Velampalayam

Chinna samy is a farmer and he had two daughters. His village in kakaveri is basically an agriculture and milk producing area where farmers have been practicing dairy farming as primary income generating profession and occupation. He purchased 4 cows and get monthly income Rs. 18,000/-. In dairy farming he has been facing green fodder supply often becomes a problem. There was a in need of alternate and to find additional sources of green fodder. So he had got loan from the government bank and he is being repaying the due regularly. Though some dairy farmers said, it has been source of income and produce profit.

Chinna samy has not agreed with it, he said that the buying fodder for animals is equally balanced with the profit. At present his cropping pattern includes cultivation of Guava Pumpkin and Drumstick. He also grows Onion, Grapes and Vegetables under shade net. He sells his produces at various markets taluka level markets. Currently, Chinnasamy has 4 dairy animals and producing 30 litres of milk per day which is sold to local vendors and consumers in his village. By selling the milk at the rate of Rs.20 per liters, he is able to generate revenue of Rs. 20,000/- per month. Furthermore, he has employed one laborer in his farm from the nearby villages to look after the daily routines of the dairy enterprise. He is also getting additional income by, selling manure, seeds, Onions, Guava, Drumstick

Case Study:IV

Name: Mrs. Anjali

Age: 43

Village: J.J. Colony

Anjali is a small and traditional farmer, living in a joint family; about 10 years ago she started a Dairy farm in the year 2011 on two acres with one buffalo and climbed the success ladder. She bought a buffalo by barrowing a loan of rupees fifty thousand (40,000/-) from government bank. The buffalo yielded about 6 liters of milk per day. Later, she bought two buffaloes and six cows. Then the shed was constructed by tree shade. There is a sorghum fodder field around the farm for harvesting fodder. Mostly she uses the fodder from her own cultivated farm but occasionally she purchases it from other farmers. Besides dairy farm, she started agricultural allied activities poultry farm and wastage from these farms are used for gobar gas.

For monitoring the farm she employed one labor with a salary of Rs.35, 000/- per year. Now she owns a well established farm with 3 buffalos, 8 cows with a well constructed shed along with poultry farm. She is earning about Rs.3, 20,000/ year with Rs.2, 50,000/ expenditure. Her in-laws and her husband support her during difficult period and she is able to manage her household works and other works with their help. In order to increase her dairy farm, she has planned to get loan and the government also gave many opportunities through various schemes, National Livestock Mission. She also got loan from bank for purchase of livestock and repaying it regularly. Anjali has 7 dairy animals and became a successful dairy entrepreneur and producing 40 liters of milk per day which is sold to milk vendors and consumers in his village.

Case Study:V

Name: Mrs. Panchali

Age: 50

Village: Appanaickenpatty

Dairy farming is very profitable business. India has been playing significant role in the development of dairy production over the past few decades. Besides men's role, women also play crucial role in agriculture especially in the allied sector however women's role is grossly underestimated and undervalued. Their role includes various activities such as milking of the cattle, churning of cream to get butter and preparation of by-products of milk (such as butter, cheese, curd). Panchali a 45 year old lady started the dairy business in the year 2009, as dairy is their family occupation. In spite of handling all household chores, she worked with her husband in order to reach her family's business new heights. Panchali has 8 dairy animals and became a successful dairy entrepreneur and producing 60 liters of milk per day which is sold to milk vendors and consumers in his village.

By selling the milk at the rate of Rs.25 per liters, she is able to generate revenue of Rs. 50,000/- per month. Further more, she has employed 1 laborer in her farm from the nearby villages to look after the daily routines of the dairy enterprise. Panchali has living in a joint family and now she is able to manage her family needs with the profit from dairy enterprise. She has bought loan from the government bank for the purchase of animals and to buy fodder for the animals. Now, she is able to manage her income and repaying the loan due regularly. Her family member also supports her, in the emergency period. She also understood the increasing demand of the hygienic milk production so she adopted with automatic milk handling facility. She decided to expand dairy farm and supported by her husband. She owned 8 acres of land and took 22 acres on lease to cultivate green fodder. She bought a Fodder harvester to prepare silage by realizing the nutritional requirements of animal. Now, she is running a profitable dairy enterprise with the supports of the family members.

Case Study:VI

Name: Mr. Sakthi

Age: 40

Village: J.J Colony

Sakthi, a farmer from the village Kakaveri of Namakkal District is a regular practicing farmer. He has 6 family members at his home, mother-in-law, two sons and one daughter, wife and himself. After the death of his father, the pension that he got was not enough to look after his family, so he took up farming to run his family. He has two acres of land for lease. He has bought 6 dairy animals and also his family members practice agricultural allied activities, by practicing small kitchen gardening behind the house. To buy all this materials, he has bought loan from bank and he is repaying the due regularly. His family member also supports him in all the way. Both sakthi and his wife are taking care of the dairy farm. They purchase fodder from other village, and they also planned to increase the amount of milk. Though, sakthi has 6 dairy animals and its producing 45 liters of milk.

By selling the milk at the rate of Rs.20 per liters, he is able to generate revenue of Rs. 40,000/- per month. Furthermore, he has not employed any laborer in his farm; instead his family members are helping him to look after the daily routines of the dairy enterprise. His wife has been maintaining small kitchen gardening near the house. Mango, drumstick, papaya and other plants are also planted in her Kitchen garden by practicing agricultural farming and other allied activities. She is also helping her husband in dairy animals and they have also planted improved fodder crops in her farmland for dairy animals. All this helps to improve their income and now they are able to manage their requirements. Now, they are able to give their children proper education and they have bought own land for their cultivation and dairy farming. Sakthi has bought three more dairy animals. He has bought these dairy animals with the loan and he is managing to repay the loan due regularly.

Case Study:VII

Name: Mr. Prakash

Age: 38

Village: Vengayapalayam

Prakash is a farmer and he had two daughters and one son. His village in kakaveri is basically agriculture and Poultry farming area as well as farmers have been practicing dairy farming as primary income generating profession and occupation. Prakash has studied upto five standard and started dairy farming in the year 2012. He purchased 8 cows and get monthly income Rs. 30,000/-. In dairy farming he has been facing green fodder supply often becomes a problem. He has bought loan from the bank for the purchasing of fodder for animals and also for the health checkup services. He also started mini poultry farming; Namakkal is known to be the best layers of all the poultry farming. So, Prakash has planned to start mini poultry farming. The eggs were fresh, large size and palatable. The entire produce was sold in the local market due to high demand of eggs and meat in the region. The eggs are sold at Rs 10/- per egg. Prakash was also maintaining the field through proper cleaning, grading and packaging of eggs to get premium price in the market.

The eggs with proper labeling on nutritive values in an attractive 6 egg pack were marketed in outlets in Namakkal town. Prakash was highly benefitted from the dairy enterprise and poultry farming. He has also diversified his source of income. With the money earned, he started a livestock feed, supplement and poultry supply outlet at Namakkal town to benefit the farmers of the district. With the mounting business, he now employs 2 youths to take care of the dairy and poultry farming. Though Prakash is facing difficult during the sick period of animals, because medical service is not available near his village, he has to travel far away for the medical services. If the animals fall sick he sold the entire sick animal to the market. With the proper feeding, housing and health care, the hens matured and started laying eggs that paved a way for generating income. Now, he is an established entrepreneur and has planned to further expand the enterprise considering the demand. Now, he is able to manage their income and also other expenditure.

Case Study:VIII

Name: Mrs. Chellammal

Age: 55

Village: Appanaickenpatty

Chellammal is a small scale farmer with five acres of land. She was earning a sum of Rs.20, 000/- annually as net income from crop cultivated in three acres of land which was not sufficient for raising her family. Due to low income she was unable to give good education to her children and not able to manage the family needs. She was desperately looking for new opportunities to start a new enterprise in order to boost her annual income for better living standards. She came to know about Dairy farming through her relatives, and she also learnt about various aspects of dairy farming including selection of dairy animals, housing, feeding, breeding and scientific management of dairy cows. So, she planned to start a dairy farming and the government also gave many opportunities through various schemes, National Livestock Mission. She has started dairy farming in the year of 2010

Chellammal also got loan from bank for purchase of livestock and repaying it regularly. Currently, Chellammal has 11 dairy animals and became a successful dairy entrepreneur and producing 70 liters of milk per day which is sold to local vendors and consumers in her village. By selling the milk at the rate of Rs.25 per liters, he is able to generate revenue of Rs. 55,000/- per month. Furthermore, she has employed one labourer in her farm from the nearby villages to look after the daily routines of the dairy enterprise. She is also getting additional income by, selling Crops, selling sick animals to market

After meeting out all the expenses, she is now earning an annual net income of Rs. 90,000 /- from dairying and this income has given him to manage the family needs and the other expense from his family members. Chellammal and her family members are satisfied with the dairy farming. Now, she is able to give her children proper education and able to manage her family needs. Her husband is also helping in the dairy farming and both are involving in the taking care of dairy animals and collecting fodder for animals, maintaining the dairy animals.

Case Study:IX

Name: Mr. Balu

Age: 47

Village: Kakaveri

Balu is a marginal and traditional farmer; after completion of his middle school he has started a Dairy farm in 2015 on three acres with two buffalo and the dairy farm has bought profit to him. He bought a buffalo by barrowing a loan of rupees Sixty thousand (60, 000/-) from government bank. The buffalo yielded about 8 liters of milk per day. Later, he bought two buffaloes and seven cows. Then the shed was constructed by Tree shade and brick. There is not available of green fodder near his village. Due to the reduction in open grazing there is a need to search another alternate option. So, he has sorghum fodder field around the farm for harvesting fodder for animals. He bought a chaffer machine and grading mill machinery which costs Rs.20, 000/-. Mostly he uses the fodder from his own cultivated farm but occasionally he purchases it from other farmers. Besides dairy farm, he has started floriculture and poultry farm and wastage from these farms are used for gober gas. For monitoring the farm he employed one labor with a salary of Rs.30, 000/- per year. Now he owns a well established farm with 3 buffalos, 7 cows with a well constructed shed along with fisheries and poultry farm.

He is earning about Rs.3, 00,000/ year with Rs.2, 50,000/ expenditure. He has planning to increase his milk production by purchasing hybrid cattle. So, he has bought cattle from other village. The high breed of cattle is Jersey. Jersey has been producing 10-15 liters of milk per day. This has bought changes in his income level. Though his income level has increasing but at the same time he has to spend equal level amount for the purchase of fodder for animal. Balu and his family members are satisfied with the dairy farming. Now, he is able to give his children proper education and able to manage his family needs. His wife is also helping in the dairy farming and both are involving in cleaning the animal shed ; taking care of dairy animals and collecting fodder for animals. Balu has sold the sick animals to the market, because he is not able to manage the medical cost. By selling the sick animals to market, he has got some amount. This amount has been useful for their family needs and also for to repay their loan purposes.

Case Study:X

Name: Mrs. Kaala

Age: 50

Village: J.J. Colony

Kaala was a simple housewife and farm woman and helping her husband in farm work. She was engaged in household work, she and her husband were engaged in animal husbandry and in agricultural activity. She had a plan to increase their income level and asked small land for the cultivation of crops. They had bought dairy animals through the loan amount from government bank. They had five cows and two buffalos, and this had helping them in economic status. The buffalo yielded about 7 liters of milk per day. As a house maker in an agriculturist family she used to actively help her husband in all her agricultural activities. They had a plan to increase the milk production. She established a small dairy unit in her farm with 2 crossbred milch animals, as an additional enterprise and the production of milk were increased in the following years. This has increased their income level and also their family expenditure. Kaala has 10 dairy animals and became a successful dairy entrepreneur and producing 85 liters of milk per day which is sold to local vendors and consumers in her village and also to the nearby village.

By selling the milk at the rate of Rs.20 per liter, she is able to generate revenue of Rs. 40,000/- per month. She and her husband both involve in the cleaning of animal shed and maintaining of the dairy animals. They feed the dairy animals thrice in a day. Both are taking care of dairy animals and collecting fodder for animals. Mostly, they do open grazing for the fodder. Though there is no available of medical services, they are somehow managing to sell the sick animals to the market. If the animals are cured, they are rearing it but if the animal does didn't get any improvement with the medicines, and they are selling to the nearby market. They said, that the reason for rearing dairy animals is that they can at any time to the nearby market for their immediate financial need, and also the production milk cost is high during the winter season and its reducing during the summer animals, because during summer season the animals are not able to manage heat, so the production of milk is also less. This entire amount has been useful for their family needs and also for to repay their loan purposes.

CHAPTER-5

SUMMARY AND CONCLUSION

The Animal Husbandry sector plays a pivotal role in the socio economic development and has an immense potential, substantially contributing to regional economy. Animal Husbandry sector has a significant impact on everyone's lives, whether directly or indirectly, and is crucial to sustainable production systems. The sector is largely incharge of the welfare of the nation's animals, although it also bears tremendous, diverse responsibilities for creating jobs, reducing poverty, providing food security, empowering women, and creating wealth in addition to serving as a source of income. Maintaining a healthy productive livestock resource holds the key for sustaining production and achieving the self sufficiency in milk, meat and egg production. A productive, healthy animal resource requires maintenance through scientific management that includes measures for feeding, and disease prevention.

The study entitled “Animal Husbandry as a Source of Self-Employment for Farmers” was undertaken with the objectives name as study the socio- economic characteristics of the farmers, collect the information on types of agriculture and agriculutural allied activities, identify the types of existing animal husbandry practices adopted by farmers, examine the income gain through animal husbandry, analyze the benefits of animal husbandry farming among farmers and assess the challenges faced by farmers in the field of animal husbandry. The area chosen for the study was Kakaveri village under Namakkal District. The 75 farmers were chosen as a sample and purposive sampling method was used. Interview schedule was used as a tool to collect the information according to the objectives.

FINDINGS:

Findings are given below

A. General Information about the Farmers

- Seventy five percent of the farmers were between the age group of above 45- years.
- Sixty one percent of the farmers were male.
- Forty four percent of the farmers completed middle school.
- Ninety six percent of the farmers were married.

- Sixty nine percent of the farmers were involved in dairy farming.
- Seventy nine percent of the farmers lived in mixed house i.e mix of both katcha and pucca.
- Ninety nine percent of the farmers were under the category of possessing 0-2 acres of land.
- Ninety seven percent of the farmers earning Rs.50,000-1lakh yearly.
- Sixty three percent of the farmers have10-15 years' experience
- Ninety three percent of the farmers are living in joint family.
- Sixty nine percent of the farmers' family members' occupation is farming.
- Eighty seven percent of the farmer's father is the head of the family.
- Eighty seven percent of the farmer's family engagement in animal husbandry.
- Fifty seven percent of the farmers do savings.
- Forty four percent of the farmers' savings in Rural Bank.
- Forty eighty percent of the farmers saved to buy fodder for animals.
- Cent percent of the farmers took a loan to buy livestock.
- Seventy five percent of farmers make a profit in Animal Husbandry.
- Ninety two percent of farmers have insurance for their livestock.
- Ninety two percent of farmers have animal mortality insurance.
- Cent percent of cattle, buffalo, and goats are being covered under animal insurance.
- Ninety two percent of farmers are covered for the protection of their animals during emergencies.

B. Information on types of Agriculture and Agricultural Allied Activities

- Ninety three percent of the farmers were not involved in ploughing.
- Eighty nine percent of the farmers not involved in keeping grains in storage.
- Cent percent of the farmers involved in animal husbandry and dairy farming.

C. Existing Animal Husbandry Practices adopted by the Farmers

- Cent percent of the farmers have land.
- Ninety-seven percent of farmers possess their own land.

- Forty three percent of the farmers has animal shed as roof slope.
- Eight percent of the farmers has hut as a shed for animal.
- Seventy nine percent of the farmers both men and women were incharge for maintenance of animal Shed.
- Cent percent of the farmers have their own livestock.
- Sixty four percent of the farmers has around 5-10 no. livestock.
- Cent percent of both men and women farmers were in charge of taking care of livestock.
- Cent percent of the farmers washed their livestock's.
- Cent percent of both men and women farmers collects cow dung.
- Fifty six percent of farmers spent Rs.15000-25000 for purchase of livestock.
- Sixty three percent of the farmers purchased livestock from another village.
- Eighty three percent of the farmers engaged in livestock rearing for 10 years .
- Ninety four percent of the farmers travelled for less than 2 kms for rearing livestock.
- Eighty percent of farmers use green grass as a fodder for animals.
- Sixty one percent of women farmers collect fodder for animals.
- Cent percent of the farmers feeds thrice a day to the livestock's.
- Ninety seven percent of the farmers do regular animals' health checkup.
- Ninety seven percent of the farmers spent money for checkup animals.
- Forty four percent of farmers are identified through Lethargy movement for the sick animals.
- Ninety nine percent of the farmers immediately taken action to sick animals.
- Ninety three percent of farmer treats sick animals with veterinarian care.
- Ninety five percent of the farmers are aware of National Livestock Mission (NLM).
- Cent percent of the farmers shared that animal husbandry is a independent job and farmers chose animal husbandry as self employment.
- Seventy two percent of the farmers disagree that less risk is the reason of animal husbandry.
- Forty eight percent of the farmers' established Dairy Farming 10 years before.
- Cent percent of the farmers had complete knowledge on dairy.

- Sixty four percent of the farmers have general knowledge in dairy farming.
- Forty five percent of farmers were encouraged by parents and relatives.
- Eighty two percent of the farmers' involvement in Dairy farming in full day.
- Sixty-eight percent of the farmers earn Rs. 30,000 monthly through selling milk.
- Forty five percent of farmers spent Rs.600 per day on dairy farming.
- Fifty four percent of farmers produce 30 liters of milk per day.
- Cent percent of the farmers taken decision to sell an animal when they face financial crisis.
- Cent percent of both men and women farmers equally involved in milching.

D. Benefits gained and Challenges experienced by the Farmers in Animal Husbandry

- Seventy-three percent of the farmers agree that animal husbandry helps to improve standard of living.
- Sixty percent of the farmers agree on helps to provides extra income.
- Fifty five percent of the farmers agree that animal husbandry helps in developing high yielding breeds as it includes the practice of cross-breeding.
- Seventy three percent of the farmers strongly agree that animal husbandry helps to increase food production such as milk, eggs, meat.
- Cent percent of the farmers strongly agree about animal husbandry helps in the production of manure or compost to enhance Agricultural Produce.
- Forty three percent of the farmers agree that livestock dung can be sold in the market.
- Seventy-two percent of farmers indicated that they struggle for lack of quality feed.
- Seventy percent of the farmers said that due to lack of veterinary services in the village.
- Sixty six percent of the farmers expressed due to lack of financial support from government.
- Forty nine percent of the farmers said that due to lack of natural pasture available in the village.
- Forty one percent of the farmers reported that due to low quality of milk i.e. less fat content in milk and Low market price for milk,

- Forty one percent of the farmers faced due to lack of water facilities.
- Thirty seven percent of the farmers opined low quality of breed.
- Thirty three percent of the farmers faced shortage of fodder.
- Fifteen percent of the farmers faced natural Calamities.

CASE STUDY:

- Case I highlighted that better communication and relationship in the society helped the farmers to earn extra income from the dairy business.
- Case II highlighted that family members helped the farmers to arrange the capital through other agricultural activities.
- Case III highlighted that dairy business focused on providing employment opportunities for aged and young farmers.
- Case IV highlighted that loans from the government banks helped the farmers for starting the dairy business.
- Case V highlighted that age didn't hinder the farmers to find employment opportunities to earn income through other agricultural activities.
- Case VI highlighted that government helps the farmers to create a linkage through the schemes.
- Case VII highlighted that having milch animals was a breakthrough for the farmers to enhance the business.
- Case VIII highlighted that National Livestock Mission helped the farmers to find market for the livestock.
- Case XII highlighted that effective cultivation of Crops and dairy farming helped to support the family.
- Case X highlighted that the women farmers also earn income through dairy business.

RECOMMENDATIONS:

FARMERS

- Proper hygiene should maintain to farm animals to prevent from diseases.
- Should provide proper nurture and care to farm animals.
- Provide safe shelter to farm animals.
- Timely supply of food for the farm animals
- Should build a proper bond with the animals

POLICYMAKERS

- The government should conduct more training programme or awareness generations to farmers regarding livestock management.
- Veterinarian clinic should be increased to strengthen the livestock health and management sector.
- The government should provide subsidies and minimum support prices (MSP) for livestock farmers to relieve financial pressure and distress.
- Provide skills and quality services to farmers for improving productivity of the farm animals.
- Proper dissemination of knowledge regarding livestock rearing among farmers.

CONCLUSION

According to the findings, dairy farmers are particularly good at reducing poverty and boosting employment in the dairy industry. The standard of living for farmers is steadily improving. Farmers who raise animals are typically male and have completed middle school. As a result, the demand for all kinds of wholesome and nutrient-dense animal products is increasing in a fast manner, particularly for quality meat, egg, and milk products.

So, the necessity for food is also increasing and it is contributing to the rise of animal husbandry. Therefore animal husbandry plays a key role in ensuring the quality of animal products.

CHAPTER-6

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APPENDIX-I

Interview Schedule on

ANIMAL HUSBANDRY AS A SOURCE OF SELF-EMPLOYMENT FOR FARMERS

A. General Information about the Farmer:

Name of the village _____

Block _____

Gram Panchayat _____

Post_____

Name of the Farmer_____

Telephone/ Mobile. No _____

1. Socio-Economic profile of Farmer

SI.No	**Socio Economic Factors**	**Categories**	**Tick below ✓**
1	Age (years)	18-35 years (young)	
		36-45 (Middle)	
		Above 45(old)	
2	Gender	Male	
		Female	
3	Caste	General	
		OBC	
		BC	
		SC	
		ST	
4	Religion	Hindu	
		Christian	

		Muslim	
5	Educational qualification	Primary school	
		Middle School	
		High school	
		Higher secondary school	
		Graduation & above	
6	Marital status	Married	
		Unmarried	
		Divorced	
		Widowed	
7	Nature of Occupation	Farming as a sole profession	
		Farming + Business	
		Farming + agricultural laborers	
		Farming +Services(salaried person)	
	If Agriculture, then	Fully engaged in Agriculture	
		Partly engaged in Agriculture	
8	Type of House	Hut	
		Katcha	
		Mixed	
		Pucca	
9	Size of Land	2-acres	
		4-acres	

		6-acres & above	
10	Annual Income	Less than 50,000	
		50,000- 1 lakh	
		Above 1 lakh	
11	Years of Experience in Farming	0-5 years	
		5-10 years	
		10-15 years	
		Above 15	

2. Details on Family Background of Farmer

SI.NO	**Family Background details**	**Categories**	**Tick Below ✓**
1.	Relation to farmers	Husband	
		Wife	
2	Nature of Family	Nuclear Family	
		Joint Family	
		Extended Family	
3	Nature of Occupation	Farming as a sole profession	
		Farming + Business	
		Farming + agricultural laborers	
		Farming +Services(salaried person)	
4	No.of.family members	4(small family)	
		5(nuclear family)	
		6 & above (extended family)	
5	Head of the Family	Father	

		Mother	
		Grandfather	
		Grandmother	
6	No. of. Family members engaged in Animal husbandry	1	
		2	
		3	
		4 & above	
7	Annual Income	Less than 50,000	
		50,000-1lakh	
		Above 1 lakh	

3. Details on Savings, Loan and Insurance of the Farmers

Savings		**Tick below**
Access to savings in Dairy farm	Yes	
	No	
If yes, source of saving	Rural bank	
	Private bank	
	SHG bank	
Purpose of savings	Purchase the animals	
	Buy fodder for animals	
	Education	
Loan		
Loan taken to purchase Livestock	Yes	
If yes, indicate the purpose?	Purchase animal feed	
	Purchase farming equipment's	

	Children Education	
Source of loan	Government bank	
Amount (Rs) of loan received from the bank	Below 50,000	
	50,000 – one lakh	
	Above one lakh	
Repayment of the loan	Yes	
Amount of savings in Dairy farming	Profit	
	Loss	
Insurance		
Availability of insurance coverage	Yes	
	No	
If yes, state the type of insurance	Livestock insurance	
	Rural insurance	
	Animal mortality insurance	
Year of livestock insurance implemented	Less than 5 years	
	6-10 years	
	More than 10 years	
Animals Covered	Cattle	
	Buffalo	
	Goat	
Benefits of subsidy restricted to number of animals for each household	5 animals	
	3 animals	
Reason of livestock insurance	Protection of animals during emergency like fire, smoke, explosion	
	Animal mortality coverage	
	Protection of animals and other farming equipment	

B. Information on types of Agricultural allied activities

Agricultural activities	**Yes**	**No**
Ploughing		
Sowing		
Manuring		
Irrigation		
Weeding		
Sowing		
Harvesting		
Winnowing		
Storage		

Agricultural allied activities	**Yes**	**No**
Horticulture		
Animal Husbandry		
Poultry		
Dairy		
Fishery		
Floriculture		

C. Existing Animal Husbandry Practices adopted by the Farmers

PRACTICES		**Tick Below**
Land		
Availability of Land	Yes	
	No	
Ownership of Land	Owned	
	Leased	
Animal Shed Pattern		
Type of Animal house	Kutcha	
	Pucca	
	Tree Shade	
	Roof Slope	
Type of animal shed Roof	bamboo	
	Hut	
	Thatch	
Type of Animal Shed floor	Concrete	
	Brick	
	Earth	
Person In charge of Animal Shed maintenance	Women	
	Both men and women	
Livestock		
Livestock owned	Yes	
Total no. of. livestock owned by farmer	Less than 5	
	5-10	
	10-15	
	More than 15	
Total no. of. livestock reared by farmer	Cattle Hybrid (female)	
	CattleHybrid	

	(Male)	
	Buffalo Local (female)	
	Bullock Local (male)	
	Goat Local (female)	
	Goat Local (Male)	
Maintenance of Livestock		
Person In charge of taking care of livestock	Both men and women	
Washing of livestock	yes	
If yes, place of washing	Outside the farm	
	Nearby ponds	
Collection of cow dung	Both men and women	
Purchase of Livestock		
Amount spend for purchase of livestock	15,000-25,000	
	more than 25,000	
Amount spend in fodder and medicine	1000	
	More than 1000	
Place of Purchase of the animals	Nearby Farms	
	From another Village	
	Nearby Market	
Number of years farmer involved in livestock rearing	10 years	
	More than 10 years	
Distance travelled by farmer for rearing livestock	Less than 2 kms	
	2-4 kms	

Livestock feeding practices		
Types of fodder for animals	Green	
	Dry Fodder	
	Paddy Straw	
Collecting fodder for animals	Women	
	Both men and women	
Person in charge for serving livestock	Women	
	Both men and women	
Feeding time to Livestock	Thrice a day	

Health Management on Livestock's

Animal Health Services		**Tick below**
Animal health checkup interval	Regularly	
	When needed	
Checkup budget of the animals	Free	
	Cost	
Identification of sick animal	Lethargy movement	
	Uncoordinated movements	
	Unprovoked aggression	
Sign of Sick Animal	Decrease in or loss of appetite or water intake.	
	Decrease in energy or activity level	
	Vomiting or diarrhoea	
	Blood in the urine or stool	
	Bloating of the abdomen	

	Straining or inability to urinate or defecate.	
	Increased shedding or bald patches.	
Taking care of the sick animals	Immediate	
	Wait for two days	
Ways to Prevent Sick Animal	Veterinarian treatment	
	Sell in Market	
Available of veterinary services	Yes	
	No	
If yes, place of veterinarian	Near the village	
	Far away	

Knowledge on the schemes available for Animal Husbandry

Name of the Schemes for Animal Husbandry	**Aware**	**Not Aware**
Rashtriya Gokul Mission		
National Animal Disease Control Program		
Livestock Health and disease control program		
Animal Husbandry infrastructure development fund		
Dairy infrastructure Development Fund		

Self-Employment through Animal Husbandry

SI.NO	**Reasons**	**Agree**	**Disagree**
1	Independent Job		
2	No opportunity for employment		
3	Due to lack of education		

4	Traditional occupation of the family		
5	Need not to answer anyone		
6	Low Stress to farmers		
7	Less risk		
8	Work at any Time		
9	Provide profit from dairy products		
10	Helps to start own dairy and allied services		

Generating income via Dairy Farming

Dairy Farming		**Tick below**
Years of Establishment of Dairy Farming	Less than 5 years	
	6-10 years	
	More than 10 years	
knowledge in Dairy Farming	Yes	
If yes, from where?	own	
	general	
Reason for own Dairy farm	Encouraged by parents and relatives	
	Self-motivated	
	Family Occupation	
Reason for Dairy farming	Not educated	
	Unable to get job	
No. of. hours involved in Dairy farming	Full day	
	Not a fixed work time	
Reason for choosing dairy farming as self-employment	To be independent	
Income generated via Dairy Farming		
Per month income (Rs) in selling of milk	25,000	

	30,000	
	15,000	
Per day expenditure (Rs)	500	
	550	
	600	
	650	
	700	
Total production of milk (liters) per day	20	
	25	
	30	
	35	
	40	
Factor influencing to sell the animal	Immediate financial need	
Milk Production		
Person Involved in Milching	Both men and women	
Number of times Milching in a day	2 times	
	3 times	
Cleaning milking utensils before milching	Yes	
Milk yield by livestock during High season in liter	30	
	25	
	20	
	15	
Milk yield by livestock during Low season in liter	20	
	15	
	10	
Do you plan to increase the amount of milk you produce?	Yes	
If yes, how do you plan to increase your	Increase the number of	

milk production?	dairy cows	
	Improve the grade of animals	
	Produce more feed	
Place of selling the Milk	Milk society	
	Distribution to every house	

D. Benefits and Challenges of the Farmers in Animal Husbandry

SI.NO	Benefits of Animal Husbandry	SA	A	N	SD	D
1	Helps to improve standard of living					
2	Generates employment opportunities and serve as a source of income					
3	Income leads to manage the family needs					
4	Helps to provides extra income					
5	Helps in developing high yielding breeds as it includes the practice of cross-breeding					
6	Helps to increase food production such as milk, eggs, meat etc.					
7	Helpful to be used animals as a Transportation					
8	Livestock dung can be used for fuel					
9	Helps in the production of manure or compost to enhance Agricultural Produce.					
10	Livestock dung can be sell in the market					

Challenges faced by farmers	**Yes**	**No**
Lack of quality of breed		
Lack of financial support		
Lack of natural pasture		
Lack of quality of fodder		
Low quality of milk		
Low market price for milk		
Lack of veterinary services		
Natural Calamities		
Shortage of fodder		
Lack of water		

APPENDIX- II

INSTITUTIONAL HUMAN ETHICS COMMITTEE

Avinashilingam

Institute for Home Science and Higher Education for Women
(Deemed to be university under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956) Re-accredited with 'A^{++}' Grade by NAAC.
Recognised by UGC Under Section 12 B
Coimbatore- 641043, Tamil Nadu, India

05.01.2023

To
Ms. F. Lauren Jeshu
Department of Social Work
Avinashilingam Institute for Home Science and
Higher Education for Women
Coimbatore- 641043

Dear Lauren Jeshu,

Ref: Your proposal No. IHEC/22-23/SW-12 entitled "Animal Husbandry as a Source of Self Employment for Farmers" submitted for approval of IHEC on 21.11.2022.

The Institutional Human Ethics Committee of our University hereby grants approval to your research proposal No. IHEC/22-23/SW-12 entitled "Animal Husbandry as a Source of Self Employment for Farmers" submitted by you. The Approval number for the same is AUW/IHEC/SW-22-23/XPD-12.

We wish you all the best in your research endeavours.

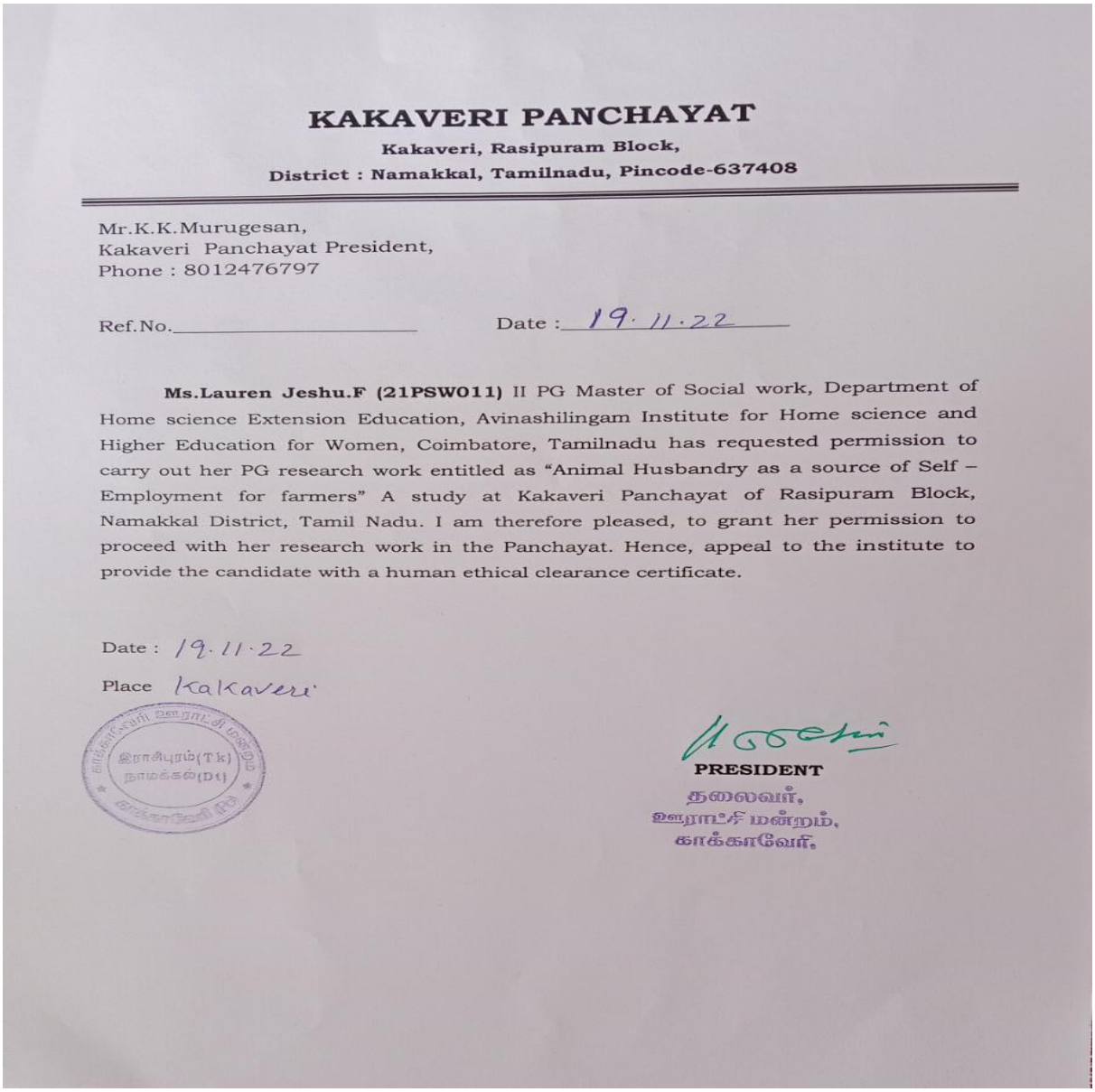
Regards

5.1.23

Dr. A Thirumani Devi
Member Secretary

Institutional Human Ethics Committee

APPENDIX-III



KAKAVERI PANCHAYAT

Kakaveri, Rasipuram Block,
District : Namakkal, Tamilnadu, Pincode-637408

Mr.K.K.Murugesan,
Kakaveri Panchayat President,
Phone : 8012476797

Ref.No._____ Date : 19.11.22

Ms.Lauren Jeshu.F (21PSW011) II PG Master of Social work, Department of Home science Extension Education, Avinashilingam Institute for Home science and Higher Education for Women, Coimbatore, Tamilnadu has requested permission to carry out her PG research work entitled as "Animal Husbandry as a source of Self – Employment for farmers" A study at Kakaveri Panchayat of Rasipuram Block, Namakkal District, Tamil Nadu. I am therefore pleased, to grant her permission to proceed with her research work in the Panchayat. Hence, appeal to the institute to provide the candidate with a human ethical clearance certificate.

Date : 19.11.22

Place Kakaveri

ராசிபுரம்(Tk)
நாமக்கல்(Dt)

PRESIDENT
தலைவர்,
ஊராட்சி மன்றம்,
காக்காவேரி.