

# **A STUDY ON THE SOCIO-ECONOMIC IMPACT OF DAIRY FARMING**

A Project Work Submitted

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**2022 – 23**



# *CERTIFICATE*

This is to certify that this project is a bonafide work done  
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and that this project is genuine

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# **DECLARATION**

I hereby declare that the Project Report entitled

**“A STUDY ON THE SOCIO-ECONOMIC IMPACT OF DAIRY FARMING.”**

Submitted for the Award of the 56th Post Graduate Diploma in Cooperative Business Management, 2022 – 23, is an original work done by me, participants Roll No 5624, Vaikunth Mehta National Institute of Cooperative Management ( VAMNICOM ) Pune.

I also declare that no part of this project has been submitted for the award of any other Degree or Diploma

Place : Vaikunth Mehta  
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## **Literature review**

Dairy farming is an important sector of the agricultural economy in many countries around the world. It provides an important source of income for farmers and contributes significantly to the national economy. Dairy farming is a intensive form of livestock production, and is often associated with large-scale industrialized systems. However dairy farming can also be practiced on a smaller scale, with a variety of production systems, including those based on pasture, zero-grazing and mixed systems.

The success of a dairy farm depends on the quality and quantity of milk produced, and the efficiency of the dairy production system. This review looks at key factors affecting the performance of dairy farms, including herd management, animal nutrition, milking techniques, and management practices.

Herd management is a critical factor in dairy farming. It includes the selection and breeding of animals, housing and health management, and the management of reproductive cycles. Proper herd management is essential for optimal milk production and the prevention of disease.

Animal nutrition is also a critical factor in dairy farming, as it affects milk production and the health of the herd. Dairy cows require a balanced diet that includes energy, protein, vitamins and minerals.

Dairy farming is an important agricultural sector in many countries around the world. In the United States, dairy farming is a major industry, providing more than \$40 billion in economic contribution annually to the nation's gross domestic product. As a result, understanding the impacts of dairy farming on the environment, the economy, and social welfare is of great importance. A review of the literature on dairy farming reveals that the sector has both positive and negative impacts on the environment, the economy, and social welfare. With regards to the environment, dairy farming is a major source of greenhouse gas emissions. Cows produce large amounts of methane, which is a potent greenhouse gas. Dairy farming also contributes to water pollution through the release of nutrients, such as nitrogen and phosphorus, into surface water bodies. Additionally, dairy farming can lead to land degradation, such as soil compaction, erosion, and loss of biodiversity. On the other hand, dairy farming can have positive economic impacts. Dairy farming is an

important source of income for many farmers, and it contributes to the local and national economy through the purchase of farm inputs and the sale of milk and other dairy products. Additionally, dairy farming can provide employment opportunities in rural areas, which can help to reduce poverty

Dairy farming in India is a vital component of the Indian agricultural sector and a major source of nutrition and employment for millions of people. India is the world's largest producer of milk, with a production of around 180 million tonnes in 2019, representing about 18.4% of global milk production. This puts it ahead of the United States, China, and Pakistan. India is also the largest consumer of dairy products, with an estimated daily consumption of around 150 million litres. The sector is a major contributor to India's Gross Domestic Product (GDP) and accounts for around 4% of the country's agricultural GDP. It provides direct and indirect employment to around 70 million people. Dairy farming is largely a small-scale activity and is mainly undertaken by rural households, with an estimated 80% of dairy farmers operating on less than two acres of land and using traditional methods of production. The sector has seen significant growth in recent decades, with the introduction of improved technologies, increased productivity, and the development of dairy cooperatives. The government has also implemented various policies and schemes to promote the sector, such as the National Dairy

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## **Abstract**

In order to find out the socio-economic impact of dairy farming, a study was conducted at Umlyngka Milk Producer Dairy Cooperative, East Khasi Hills, District Meghalaya during December 2022 to January 2023. Umlyngka is a village around 8 km away from the State capital of Meghalaya. As per the discussion with the chairman of the Umlyngka Milk producer Cooperative society, it was learnt that way back in the year 1990, the inhabitants of this village were very poor due to lack of economic opportunities available to the people in and around the locality where the society exists at present. Mostly people engaged in agricultural activities like cultivation of ginger, cauliflower, and other mix vegetables and perform other casual works. The income they get from these activities was very small as the way of cultivation especially mix vegetables were on a subsistence basis. Further the mode of cultivation was shifting cultivation. Because of the speedy lost in the fertility of the soil people could not expand the agricultural activities. To get manure for the people during that time was very difficult, as umlyngka is no longer a place where people can own and graze large number of cattle just like in other rural areas of Meghalaya.

In order to mitigate the problems faced by the people due to lack of economic opportunities. An idea flashed in the mind of some people to practice dairy farming activities. Dairy farming was seen by the people during that time as a potential business activity, because umlyngka though it is still fall under the Community and Rural Development Block of Myllem as per the system of arranging and delivering of government services to the people of the society, yet it is close to the Shillong Town where the milk consumption habit of the people was good to some extent in comparison with some other localities of the state during the early days.

Information from the Dairy farmers of the said society was randomly collected by using questionnaire and direct interviewing with the respondents. The mode of collecting data was by conducting household survey of the 114 Dairy farmers of the said Dairy Cooperative society. The Collected data were stored and analyzed using Micros excel program. Different sources of income have been recorded and analyzed with major category as dairy farming, Government Service, Agriculture Work, Casual labor work and others. Among them, income from dairy farming was found to be the major source of income to the household of the dairy farmers under the study area.



## **Introduction**

Livestock farming has been one of the main farming systems practiced in our state since time immemorial by the agricultural farmers. Traditionally people of our state especially in rural areas rear cows, buffalos, goats not for the purpose of procuring and selling milk. They used to rear cattle for meat, fertilizer (manure) and for using them in the cultivation and transportation activities. Milking of cows though existed in earlier days, but it was not on a major scale. In rural areas cows were used for procuring milk on an irregular basis sometimes once or twice weeks, the availability of milk per cow used to be less than two kilograms per day and they used to sell the milk in rural weekly markets for obtaining small amount of income to help meeting the expenses for household consumption. The income from selling milk used to be very less as the quantity available used to be very small. The major reason for the low productivity of milk could be assigned to the way of feeding and treating the cows which usually done on a traditional style, where one household having a total number of around twenty cows, used to appoint one family member or a hired labor to look after the cows by letting them feed on the green pastures of hills or valleys during the day and bring them back home in the evening. Likewise the income from selling manure used to be insignificant, as they get to sell manure only once a while to the local people who used to purchase in less quantity. Manure from the cattle shed could not reach to far places in larger quantity, as the cattle shed, used to be located in remote places with poor road connectivity, therefore the condition did not appeal to the larger buyers of manure. The major income which people get from rearing cattle like cows, buffalo, and goat is by selling them when they become fully matured either for slaughtering or for cultivation and transportation purposes. Another interesting part about rearing cattle like cows by the people of our state especially in rural areas, was that the household rearing cattle like cows used to expect of getting male calf, because when the male calf grown up into a bull with good quality horns, used to bring a good income to the owner or family, as the bulls were always used for fighting (ia daw) in the bull fighting competition. In our state bull fighting has been a traditional game since time immemorial. The bull owners used to get huge amount of income, if the bull they reared used to fight very well and always comes out victoriously in any bull fighting competition. The audience in the bull fighting competition used to get a kind of pleasure by cheering and laughing at the bull that they support and bet. If the bull comes out victoriously from any competition, bull owner used to get the price money while that audience who enjoy in the betting of the bull fighting competition used to get the kind of betting-reward if the bull they support wins the fight. The price of good quality bull with a good fame in fighting and winning used to reach to the tune of lakhs or more also as per the current scenario.

With the passage of time there has been a great change in the perception of the people about dairy farming in our state. People could see the kind of regular income they are going to get from rearing cattle like cows, buffalo and goats by procuring and selling milk other than the income used to get by selling for slaughtering or for cultivation and transportation purpose. Considering the increase in the consumption habit of milk and milk products by the people in urban areas as well as in some towns away from the State Headquarter, the favorable climate and excellent environmental condition, it suggests that dairy farming as business activity has a good potential to grow and develop in the coming days.

### **Objectives**

The term “**Impact**” can be broadly classified into two parts (i.e Negative and positive), but the main focus of this study was on the positive impact of dairy farming on the socio-economic condition of the dairy farmers as well as the non-dairy farmers in the area under study. The following areas were the major concerned of the study.

- To understand the economic impact of dairy farming
- To understand the social impact of dairy farming.
- To indentify the problems and prospects of dairy farming in the area under study

### **METHODOLOGY OF THE STUDY:**

The study is mainly exploratory and descriptive in nature. Collection of data was restricted to observation and interview of the members and non - members and as well as workers of the society. For completion of the study, the following methodology was undertaken to acquire necessary information.

#### **1. TOOLS AND TECHNIQUES USED FOR DATA COLLECTION:**

- I.** Questionnaires
- II.** Interview
- III.** Observation
- IV.** Personal Interaction

## **2. PRIMARY DATA**

- I.** Primary data collected by distributing questionnaires, conducting interview and discussion with the secretary of the society
- II.** Interview was also conducted on few members of the society and the workers employed by the society at collection centre on salary basis
- III.** The observation method was used to see the actual working of the society during the visit

## **3. SECONDARY DATA**

- I.** Additional information was obtained from office of Registrar of Cooperative Societies Meghalaya Shillong.

### **SCOPE OF THE STUDY**

This study is confined to the overall function of the **UMLYNGKA MILK PRODUCER COOPERATIVE SOCIETY LTD** and the area where the society is located. An in depth study into the district or the state as a whole could not be made due to limitation of time. The data and information contained in this project is only for understanding and for knowledge point of view.

## Importance of the study

### Socio-Economic Impact of Dairy Farming

The socio-economic impact of dairy farming means the benefits obtained by the people from dairy activity either directly or indirectly. As usual the direct benefit is mainly enjoyed by dairy farmers while indirect benefits could also be enjoyed by some other members in the locality in the form of positive externalities.

#### **Conceptual framework of Socio-economic impact of dairy farming**

Economic Impact	Social Impact
Selling of Animal	Education
Selling of Milk	Health
Selling of Fertilizer	Communication
Cultivation	Environment
Employment generation	Employment

Two types of impact are categorized in the above table, are economic and social impacts. Economic impacts refer to the financial achievements from dairy farming usually received by the dairy farmers and the social impact deals with their links in the achievement of the whole society. All the economic impacts as shown in the above table are inter-linked in terms of social impact such as income from sell of animals, selling of milk cash, fertilizer and employment generation. They will contribute for education and health leading to better life. Some of the components in the conceptual framework can be described as below.

**Selling of Animal:** Farmers of dairy cooperative used to sell those animals which have become less productive in milk production or those animals which have become too old. Similar they used to get income from selling of male

calves. Farmers used to get a good income from selling of animals as there is a good market for them.

**Selling of Milk:** Milk is considered as a cash product for farmer as it is being sold morning and evening daily. Farmers deliver their milk at Milk Producers Cooperatives (MPC) and get the milk cash as per quality parameter of fat and SNF and volume basis at each month.

**Fertilizer:** Farmyard manure is being prepared by the slurry from shed and dung of animals. This fertilizer makes the field more fertile rather than chemical fertilizers. Farmers of the Umlyngka Dairy Cooperative used to sell manure at RS 7000 per truck.

**Cultivation:** Generally bull and ox were used for tilling and ploughing the field. Using animals in agricultural practices increases the productivity of the soil.

**Employment:** Dairy farming has been the main source of direct and indirect employment to the people in the area under study. The dairy farmers had the benefit of getting direct employment in the form of rearing animals, milking, and transporting the milk, other members in the locality had the benefit of getting indirect employment due to existence of forward and backward linkages of dairy farming.

All the above economic impacts are inter-linked in terms of social aspect such as income from animal sale, milk cash, fertilizer, cultivation, and employment finally help to accord in education and health. Education makes individual educated and its influences in society make them civilized and healthy. Likewise, agro by-products, dung, urine and litters, which converts into farmyard manure maintains sustainable positive natural cycle that improves environment by producing and maintaining more greens and control pollution. Dairy farming creates direct employment to workers working at shed, feeding, housing etc. It also creates employment to those working at dairy collection center of the society like technical workers, accountants, managers etc. An employee is also a good communicator through which people are in contact to get services. At last, all these directly and indirectly make an effect to the society.

## **Origin of Dairy Cooperatives In India**

The cooperative dairying in India really came into reckoning from 1946 onwards. The first farmers' integrated dairy cooperative was established in **Anand town of Kaira District of Gujarat** in 1946, to fight against the exploitation of farmers by the private traders. This cooperative is popularly known as AMUL (Anand Milk Union Limited).

In the early forties, the British Government in India decided to improve the quality of milk in Bombay city. The municipal corporation of Bombay city organized a scheme in November, 1945 (known as the Bombay Municipal Corporation Milk supply scheme) for bringing milk from Kaira District at a distance of about 400 Km from Bombay city and selling at subsidized rate to expectant mothers and children. The Bombay Municipal Corporation Milk supply scheme purchased a fixed quantum of milk from Polson Limited, a private enterprise at Anand. There was huge difference in the price paid under the scheme and that of final price paid by Polson to the farmers. Polson maximised its profit by minimising the price paid to the milk producers. He created a strong network of contractors in the district.

The Bombay Municipal Corporation Milk supply scheme faced severe financial problems during the early days of its operation. In 1946, the government of Bombay State took over the administration of the scheme and established a statutory body known as the Bombay Milk Scheme. The Bombay Milk Scheme awarded a monopoly right for procuring milk in Kaira District to Polson, a decision that aroused strong political opposition in the district as the benefits of a relatively high purchase price paid by the Bombay Milk Scheme were not likely to be passed on to the producers. The arrangement was satisfactory to all concerned except the farmers. The government found it profitable and Polson kept a good margin. Milk contractors took the biggest cut. No one had taken the trouble to fix the price of milk to be paid to the producers. Thus, under the Bombay Milk Scheme the farmers of Kaira district were no better off than before. They were still under mercy of milk contractors. They had to sell their milk at a price the contractors fixed. The discontent of the farmers grew. They met Sardar Vallabhai Patel, who had advocated farmers' cooperatives as early in 1942. On his advice farmers of

Kaira District launched a campaign to organize dairy cooperative, which paved way for the AMUL model of dairy development in India.

The AMUL cooperative movement began with organisation of two village level dairy cooperatives in June 1946. With five dairy cooperatives as its members, AMUL got registered in December 1946. The basic unit in Anand pattern cooperatives is the village level milk producers' cooperative society - a voluntary association of milk producers who wish to market their milk collectively. All the dairy cooperative societies in a milk-shed are affiliated to an apex organisation -The District Cooperative Milk Producers Union. The milk union procures milk collected by the member dairy cooperative societies, processes the same and arranges marketing of liquid milk and milk products. Besides paying to the member dairy cooperative societies for the milk supply, the milk union provides inputs for productivity enhancement of the animals.

The salient features of Anand pattern dairy cooperatives are:

- Availability of round the year market to the milk producers.
- Effective governance by elected representative of farmers.
- Effective professional management.
- Sharing of profits by members of the dairy cooperatives on equitable basis.
- Availability of inputs for enhancing milk production of milch animals of the members of dairy cooperatives.

The journey of dairy cooperatives beginning from organisation of Katra dairy cooperative society during 1907 in Allahabad District to the emergence of AMUL as a strong and vibrant dairy cooperative is a journey of untiring efforts of self-less leaders, committed milk producers supported by professionals, AMUL has proved to be an effective organisation which has been sensitive to the needs and aspiration of its members.

( source : [Cooperative Dairying Movement | Farmers' Corner \(nddb.coop\)](http://nddb.coop))

### **THE MEGHALAYA MILK MISSION**

The North Eastern state of Meghalaya has launched the National Milk Mission on 28<sup>th</sup> July, 2018 to promote dairy production and become self sufficient in terms of milk production by 2022.

In an attempt to facilitate the Centre's goal of doubling farmer's income by 2022 through promotion of milk business in the northeastern state of Meghalaya, the state government has taken the project of Rs 215 crore from NCDC; this amount would be channelized through Dairy Cooperatives in the state as a whole. Organized by the Meghalaya Livestock Enterprises Advancement Society (MLEADS), under its 'Milk Mission' initiative, the project aims to make the state self-sufficient in milk production. So far, the concerned mission has assisted 86 societies, thereby sanctioning a total of Rs 21.83 Crores to enhance the income of milk farmers.

### **OBJECTIVES OF THE MISSION**

To educate and train the farmers to produce hygienic milk, to increase productivity and thereby rural prosperity, the Mission have its objective clearly laid down

- To generate livelihoods through milch cattle, for the rural people of Meghalaya.
- To rear and breed good quality indigenous milch breed (Gir, Sahiwal, Red Sindhi, Rathi etc.) so the genetic strength of the animal breeds is properly utilized for the welfare of the state.
- To create and build the capacities of dairy cooperatives.
- To educate, train and encourage youth, to get into dairy farming to produce hygienic milk through indigenous breeds and make Meghalaya self- sufficient.
- To upgrade the local milch cattle by breeding them selectively so the strengths of superior strains will transfer to the native breeds.
- To provide for forward and backward linkages to Dairy farmers and create a viable set of entrepreneurial activities suitable for the youth of the state.



## **TARGETS**

### **a) Developing Community Ranch Model**

As Dairying is adopted by small and marginal farmers, residing in the outskirts of town and with limited availability of land, development of “Community Ranches” in the villages will be a most viable option to focus upon, to achieve the desired results.

It is only when the Dairy Farmers are trained and made aware of the proper rearing techniques, will the quantity, quality and clean milk be produced, which will in turn decrease the input costs and increase the output and revenue.

Community Ranches will address the land problems and introduce modern techniques in rearing of the dairy animals, addressing most of the constraints and ease of monitoring by the implementing agencies.

### **b) Development of Integrated Community Dairy Farming Model**

Eventually the state will have to achieve organic milk production and development of integrated community dairy farm model aims at achieving the mission’s goal. The model aims at developing and formation of Dairy Cooperative Societies (DCS) on community lands to cater to all round Dairy Development by encouraging and motivating Dairy farmers to carry on the trade most suitable for them that will ultimately contribute to achieving an organic environment in the following:

#### **Source :**

[EAST KHASI HILLS DISTRICT COOPERATIVE MILK UNION LTD. SHILLONG. \(MATI.GOV.IN\)](http://MATI.GOV.IN)

## **PRESENT DAIRY COOPERATIVES IN MEGHALAYA**

At present there are 159 numbers of Dairy Cooperatives in Meghalaya with 120 are functioning and 05 are non – functioning. Their functions and growth are somewhat satisfactory and are needed to improve much more better in their maintaining of their activity. There are many cooperatives dealing in dairy activity are well verse with their work and are commendable and based on their experience they are doing very great in their field. Many of the societies have availed the scheme from the Meghalaya Milk Mission of which many are doing well with the help from the mission while many others are still in need of engaging of experts in maintaining the activities.

Though the dairy sector is doing good job in their area, still to make the mission a success there still lots of works need to be done for example to provide help in terms of training to those who are still struggling in sustaining in the field of dairy and also to give more support in terms of technical or assistance in terms of good breeds to those who are doing well in it.

To say there are many dairy cooperatives in the states but the main reason of their fall are due to the lack of knowledge in the field but because of persuasion from somebody or the influence of the mission, they have entered in this field without knowing anything about this activity and they land up in closing down their cooperative. The main reason for this is due to lack of awareness about the sector and knowledge in cows rearing and many other factors which have led to the non – functioning of their society. Lack of participation of members is also one of the reasons because the members don't have any knowledge regarding the dairy activity.

## List of Dairy Cooperative Societies in Meghalaya as on 31.03.2022

Sl.No	Districts	Functioning	Non-functioning
1	West Khasi Hills	16	8
2	South west Khasi Hills	02	1
3	Ribhoi District	18	2
4	West Jaintia Hills	27	5
5	West Garo Hills	15	7
6	East Garo Hills	6	
7	South west Garo Hills	12	7
8	North Garo Hills	6	3
9	East Khasi Hills	18	2
10	South Garo Hills	0	2
11	East Jaintia Hills	0	2
Total		120	39

**TABLE 1**

*Source : Cooperation Department Government of Meghalaya  
Office of the Registrar of Cooperative Societies, Meghalaya, Shillong*

The Meghalaya Milk Mission was launched on 28<sup>th</sup> July, 2018 with the objective to take milk production, collection, aggregation and add value to milk production and marketing through the project to be implemented by the State Nodal Implementing Agency viz the East Khasi Hills District Cooperative Milk Union Ltd, Shillong popularly known as the Shillong milk union. The Government through the Department of Animal Husbandry and Veterinary and The East khasi Hills District Cooperative Milk union ltd launched the Meghalaya Milk Mission through funding from the National Cooperative Development Corporation (NCDC) to fulfill the desire of the dairy farmer in the state.

The Meghalaya Milk Mission will take the state to a new level by integrating the AMUL Model and the Community Approach. Initially, the Mission will be to assist the present dairy farmers in increasing the milk production and parallelly encouraging the new farmers in the development of community farming based dairy cooperative societies and development of community ranchers. The Shillong Milk Union will be tasked to develop modern infrastructure for community farms/ranchers to breeding, feed and fodder, milk production, procurement, processing the cost-effective, marketing strategy. The state level Dairy Development Agency will be developed an efficient for capacity building, monitoring evaluation, with the objective of achieving genetic up-gradation of the indigenous breeds.

The total project cost of Meghalaya Milk Mission is RS 215.48 Cr for a project period of four years from 2018 -19 to 2021-22.

As per the information from the Dairy Development Agency, milk production was very less compared to the rest of India and this is due to the fact that in Meghalaya, the Milk consumption habit of the is not at par with the rest of people in India are not into drinking milk as the protein that people get from the meat they eat. Dairy Development is still in the infancy stage in Meghalaya and it is still a long way for the state to be at same level as AMUL, an Indian Dairy Cooperative Society, based in Gujarat. When asked about the involvement of the youth in this sector, Shangpliang said with the implementation of the Milk Mission in 2019, the Agency has witnessed a considerable number of young entrepreneurs engaging in the Dairy sector.

To provide a platform for farmers in the Dairy and the other allied sector, the Agency also opened the outlet “Na Ri essentials” at Mawiong where products of Na Ri the brand adopted by the East Khasi Hills District Cooperative Milk Union Ltd, and the other local products are being sold. This outlet is runned by the employees of Shillong Milk Union. The main aim of the society/ union is to set up a Parlor cum Consumer store. By setting up these kind of Parlors, it helps market the local produce because the main problems faced by the local entrepreneurs is marketing.

Dairy cooperatives are not equally developed in all parts of Meghalaya. Some District like East Jaintia Hills, South West Khasi Hills, Northeastern West khasi Hills and all district of Garo Hills are still lagging behind in terms of the existence of Dairy Cooperatives. However other districts like East Khasi Hills, west Jaintia Hills, West khasi Hills and Ribhoi district are observed the existence of certain number of functional Dairy Cooperatives, though are comparatively lesser in relation with other Dairy developed states of the country. The total numbers of Dairy Cooperatives which are functional at present in our state are as under.

## **Umlyngka Dairy Producer Cooperative Society Ltd.**

Umlyngka is a locality in the East Khasi District, Meghalaya, falling under the Myllem C&RD Block; it is having a distance of about 8 km away from the Shillong City. It has a total population of around 3000. In this Locality the Umlyngka Primary Milk Producer Cooperative Society Ltd operates and functions.

According to the chairman of Umlyngka Primary Milk producer cooperative society Shri. P. R Kharbteng, initially there were only seven members and with the consistent effort of the chairman as the leader the society was able to attain the required number to form and register the society under Meghalaya Cooperative Societies Act, bearing the Registration No Shill-4 of 1990 dated 25.06.1990. At present the membership strength of the society increased to 114 members where 84 are male members and 30 are female members. The Society could produce over 4000 liters of milk per day. The society besides purchasing and sale of milk of the members, it used to purchase and sell cattle feed and cattle medicine to the members rearing Milk cows. The total business turnover of the society during the year 2022 was R54237194.00/ only. The gross profit and net profit during the current accounting period were RS 1083919.00/ and RS 666068.00/ only respectively. The members of the society actively participated in the affairs of the Society for achieving the common interest.

The main function of the society is to collect the milk produced by the dairy farmer members and sell the same to the East Khasi Hills Milk Union. The society has got one Milk tanker and a building where the dairy farmers used to come and deliver their milk twice a day. The total milk collected by the society on daily basis from the members is around 4000 liters a day. The society used to purchase the milk from the dairy farmers at RS 47/liters and took a commission of RS 1/ only per liter of milk. With this commission the society manage to meet the management expenses like paying honorarium to the board members and paying salary to 6 employees who work as driver, accountant and staffs at the collection centre.

The collection center of the society has equipped with all the scientific equipments for testing the quality of milk as well as to know the fat content and water content, like Milk analyzer and lactometer. The workers at the milk collection centre are very professional and punctual in their way of doing the work.









Besides rendering marketing service to the milk produced by the farmer members, the society used to provide temporary loan to the member for purchasing cattle, cattle feed and for household consumption. The society never charges interest to the temporary loan it used to provide to the members. It used to recover the same by deducting on monthly basis from the milk billing of the dairy farmers. The pattern of advancing loan to the member is on the basis of the quantum of milk the farmer member could produce and it used to recover on monthly basis by deducting from the milk billing of farmer.

### **The pattern of loaning and loan recovery of Umlyngka MPCs LTD**

<b>Milk production on daily basis</b>	<b>Quantum of loan sanctioned</b>	<b>Daily recovery in liters</b>	<b>Monthly recovery in Rupees.</b>
<b>1-5 liters</b>	<b>20000</b>	<b>.5 liters</b>	<b>RS 500/</b>
<b>5-10 liters</b>	<b>50000</b>	<b>1.5 liters</b>	<b>RS 1000/</b>
<b>10-20 liters</b>	<b>75000</b>	<b>3 liters</b>	<b>RS 1500/</b>
<b>20-30 liters</b>	<b>100000</b>	<b>4 liters</b>	<b>RS 2000/</b>
<b>30-40 liters</b>	<b>150000</b>	<b>6 liters</b>	<b>RS 2500/</b>
<b>40 liters above</b>	<b>200000</b>	<b>6 liters</b>	<b>RS 3500/</b>

Usually the daily production of milk by each milk producer is not the same. There are farmers who have large number of cattle will be able to get more quantity of milk, while those with less number of cattle can produce with lesser quantity. On average the per farmer milk production in the society is closed to 40 liter per day.

Recently with the launch of Milk Mission in the state, the NCDC through the Government of Meghalaya provide loan to the East Khasi Hills Cooperative Milk Union. The total project cost of Meghalaya Milk Mission is RS 215.48 Cr for a project period of four years from 2018 -19 to 2021-22. This loan is made available to the union at Zero percent (0%) interest, for a period of 8 years, as the interest portion is guaranteed by the state government. The East Khasi Hill Milk Union taking the responsibility for further promoting the growth and development of dairy cooperatives in the district as well as the state as a whole channelize the loan to various existing dairy cooperatives as well as to the newly registered dairy cooperatives.

The Umlyngka Milk Producer Cooperative Society took the opportunity of taking loan RS 1.crore from the East Khasi Hills Milk Union. This loan was utilized by the society to advance loan to all the members who are in need of the same. Though the Union gave period of recovering the loan within a span of 8 years, but the society for efficient and timely recovery of the loan, it gave 5 years time to the loanee members for returning the loan to the society at 0% interest .

### **Analysis on the Socio-Economic impact of Dairy Farming**

The qualitative and quantitative data were collected from the 114 dairy farmers of Umlyngka Milk Producer Cooperative Society Lt.. Primary data were collected from the milk producers, cooperative society and secondary data from the various sources of published reports. In primary data, questionnaire, interview schedule as well as field observation were applied. Questionnaire for primary data comprised of dairy husbandry, feeding, milking, socio-economic impact, care and management system, transport of the milk, hygiene and sanitation, daily activities of farmers and employees at cooperative. The data processing was carried out after the collection from the field and was analyzed by using descriptive and analytical tools. The situation analysis before and after intervention of cooperative was carried out based on the interview and questionnaire obtained from related farmers in the same community which provided the picture for the evaluation of major impacts on community of Umlyngka.

## **RESULT AND DISCUSSION**

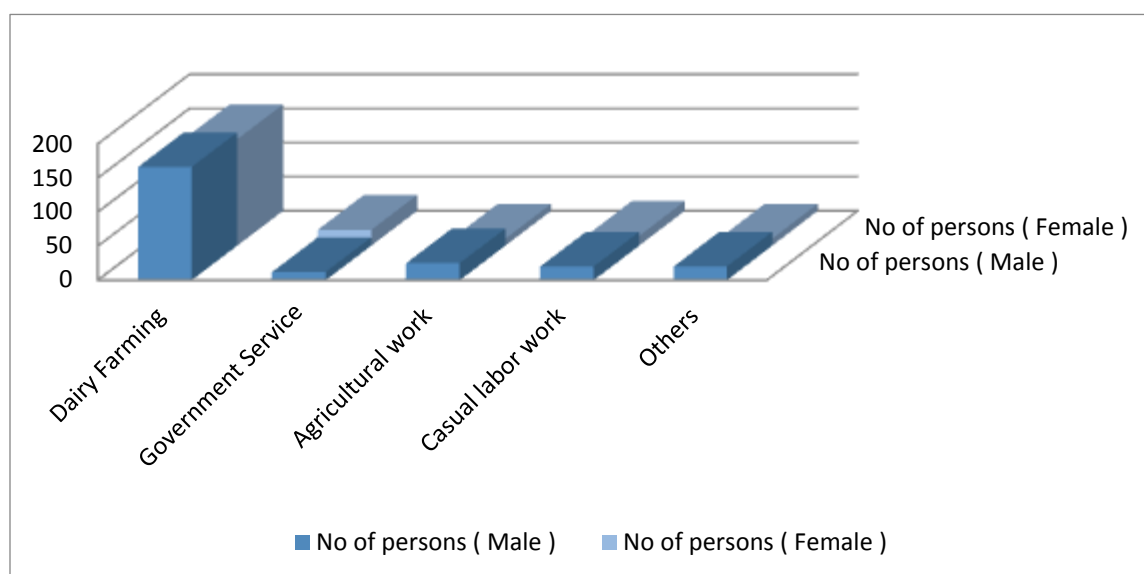
The interpretation on the basis of the collected data is divided into different sub-headings.

### **Occupation of the people in the area under study area**

Respondents and their family were mainly engaged in dairy farming, Government service, Agricultural work, Casual labor works and other as reflected in the following table

## Different occupation of people above the age of 14 years

	No of persons		Percentage		Total
	Male	Female	Male	Female	
Dairy Farming	166	156	36%	34%	69%
Government Service	12	23	3.00%	5%	8%
Agricultural work	25	10	5%	3.00%	8%
Casual labor work	20	14	4%	3%	7%
Others	20	10	4%	3.00%	7%
<b>Total</b>	<b>243</b>	<b>213</b>			



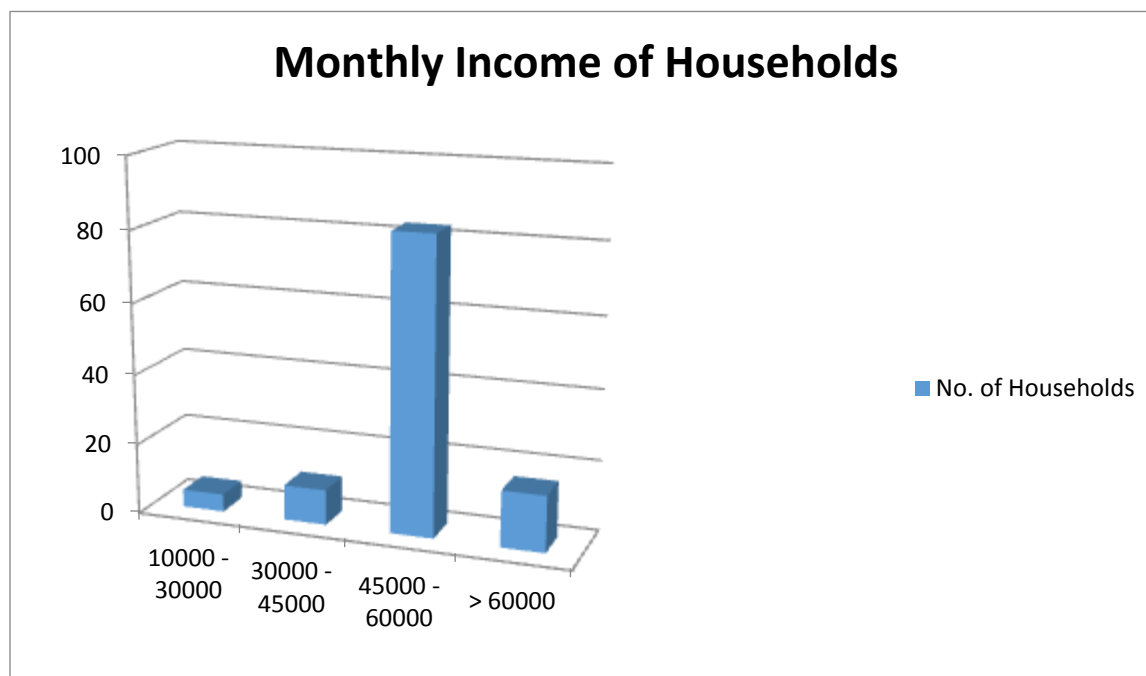
In the above table and bar graph, the total number of people engaged in different economic activities is 456, where 243 are males and 213 are females. Most of the people were found engaged in dairy farming (69%). People engaged in government office and agricultural work was at 8% each. While people engaged in casual labor work and other activities was at 7% each. Gender wise the percentage of male population engage in dairy farming was 36% while the percentage of female population engaged in dairy farming was 34%.

## Income Source

The following table shows the existence of households in the area under study getting main income from dairy farming.

### Monthly family income from dairy farming.

Income range	No. of households
10000-30000	5
30000-45000	10
45000-60000	83
Above 60000	16
Total households	114



### Income range of the households

Since in every household in the area under study almost two to four family members engaged directly or indirectly in the dairy farming, therefore though the families are also getting additional incomes from some other sources like agricultural work, government service, casual labor work and other services, the incomes from other sources were not taken into account, as the main intention of the study is to find out the contribution of dairy farming towards the family income of the dairy farmers.

As could be seen from the abover table and bar graph, out of the total number of households (114), 83 households are getting monthly income from dairy farming in the range of Rs 45000-60000, these households are domesticating cows in the range of 7-15 nos of cows. Families having the income range of RS 10000-30000 are having cows in the range of 3-5, while those families having cows in the range of 5-7 are getting monthly income of RS 30000-45000 and those families having cows in the range of 16-20 are getting monthly income above RS 600000.

## **Social Impact**

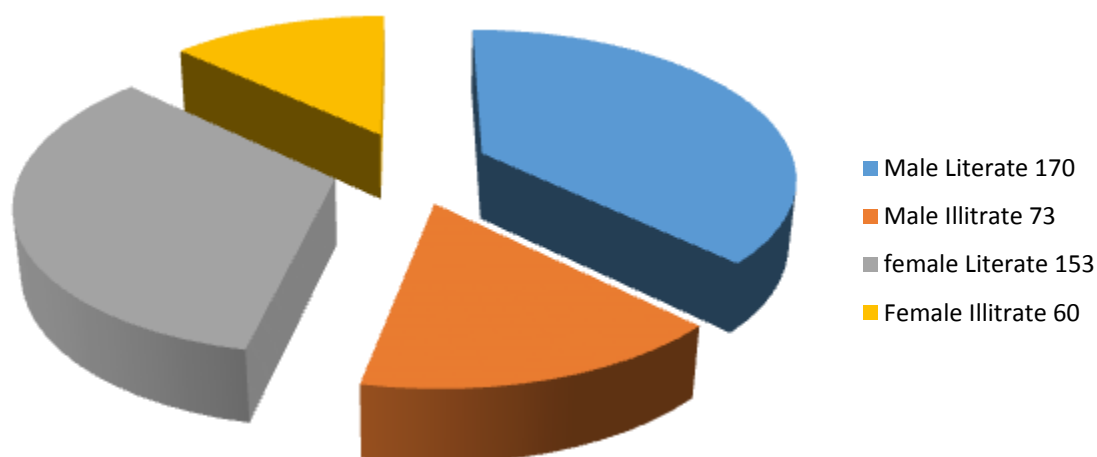
The social impact of dairy farming could be seen basically in the harmonious and friendly relationship amongst the members of the society, since collection centre is a common place for the people, who deliver milk in the morning and evening, thus people interact even on a new thing, introduce its communication and thus it is being spread within a short time though it may or may not be adopted in the society. Besides the intra harmonious relationship between members, there is also an inter harmonious relationship between the dairy farmers of Umlyngka Milk Producer Cooperative Society and the other inhabitants by way of buying and selling things. The dairy farmers of Umlyngka used to buy cattle feeds, cattle medicine and other household items from the local shops, this strengthen the economic position of those traders, which in turn give rise to the growth of other economic avenues in the economy of the locality. For example with the income people received from dairy farming, can create demand for other goods and services which were provided by other section of people who engage in activities like agriculture, casual labor work, health, education and other activities. Since Umlyngka is a semi-urban/Semi-rural area, there are people who engaged in agricultural activities. This group of people used to interact with the dairy farmers by purchasing the manure regularly from the dairy farmers. On the other hand the dairy farmers used to but the locally available cattle feed like Hay stack and green grass from the local agricultural farmers.

The advancement of educational status of the people in the area under study can also be considered as one of the fruit of dairy farming, though there are many other factors equally contributing to the growth and development of education. Since the process of collecting, processing and marketing of milk with the passage of time demands the service of the more qualified and experienced people, therefore the feeling of the people to rush for acquiring education was also very high in the locality.

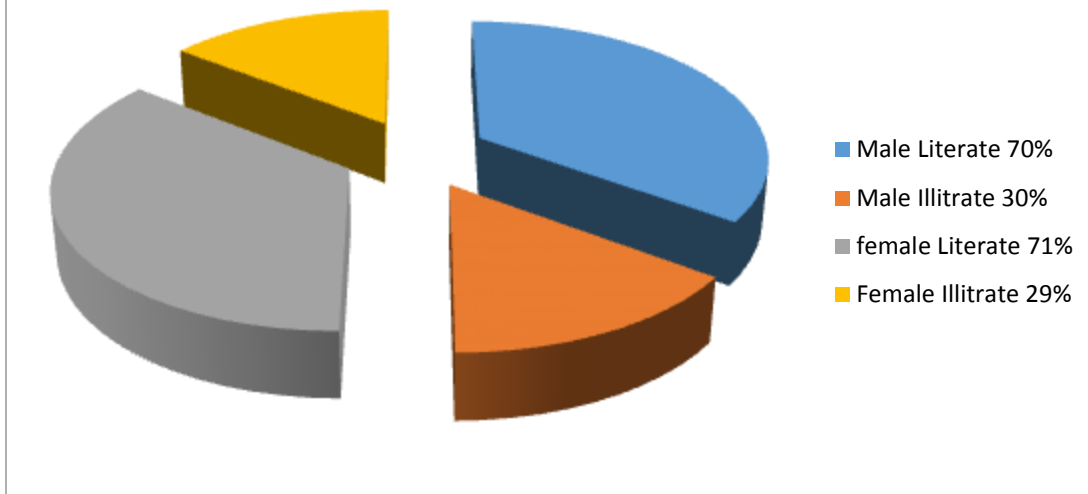
## **Literary rate of the people in the area under study**

		Literate	Illiterate	% of Literacy	% of Illiteracy
Male	243	170	73	70%	30%
Female	213	153	60	71%	29%
Total	456	323	133	71%	29%

### **Literary rate of the people in the area in terms of number**



## Literary rate of the people in the area in terms of %



. The above table and Pie-chart show that the existence of literate people is higher the number of illiterates. As the percentage of literates is 71% while that of illiterates is only 29%. Gender wise the literacy rate of female is higher than that of male by 1% (Female-71% and Male-70%).

### **The social impact of dairy farming could also be seen in the existence of other civic facilities like**

**Electrical supply:** Power supply in the area under study is regular

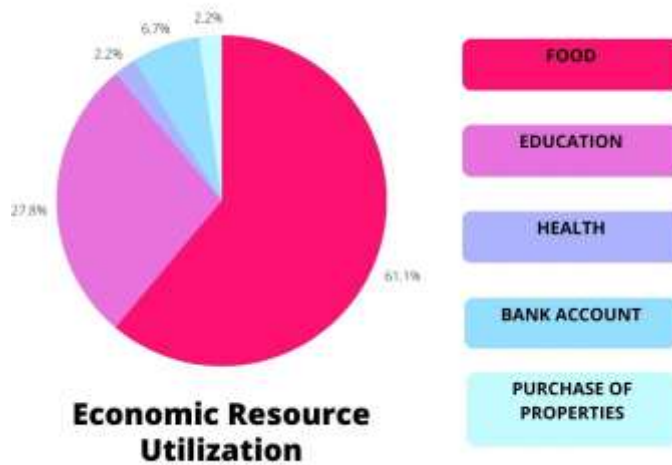
**Waters supply:** Water supply is good

**Road connectivity:** Road connectivity and condition is also good.

## Economic Resource utilization

The economic importance of dairy farming to the people in the area under study could be observed in the following table.

Food	61.1%
Education	27.8%
Health	2.2%
Bank account	6.7%
Purchase of properties	2.2%
	100%



The utilization of dairy income as shown in the above table was found as expenditure on food, education, health, bank balance and purchase of properties. Regarding the use of income from dairy farming majority of respondent (55%) said it was spent in purchasing food, likewise (25%) used in providing education, (6%) on health, on bank account (6%) and on purchase of properties (2%).



## **FINDINGS**

Some of the findings are enumerated as under

- Looking at the employment of the people who engaged in dairy farming and other activities like government services, agricultural work, casual labor and others, it was found that the major percentage of the working population of the Umlyngka Milk producer Cooperative Society, most of them (69%) engaged in dairy farming, the rest are appropriated into the other mentioned activities.
- Out of the total 114 nos. of dairy farming households in the area under study, it was found that the no. of households which got the monthly income range between RS 45000 to 60000/ only was the highest, in the distribution. This clearly shows that dairy farming has contributed a lot towards the economic development of the people in the area under study.
- Looking at the monthly expenditure of the dairy farmers in the area under study, it was found that the major portion of their income is spent for consumption purposes (61.1%) followed by the expenditure for providing education for their children and other family members. The literacy rate of male is 70% while that of female is 71 %. This shows that the dairy farming in the area under study has a huge potential to further grow and develop in the future, as the farmers have become more literate to engage in dairy farming in a more scientific and productive manner.
- Most of the farmers did not employ insurance policy for their animals, due to lack of this facility farmers used to face of lot of financial burden when the death of their cattle occurs.
- The farmers used to sell the milk collectively through the society at RS 46/litters, to the East Khasi Hills Milk Cooperative Union. The price of milk sold by the retailer is RS 60/liter. In this regard farmers show some concerned and they wish the society to raise the price to a higher level from the present rate, so as to minimize the huge difference between the producer price and the consumer price.

- The Umlyngka Milk producer Cooperative Society did not establish any kind of shop for selling cattle feed and medicine. Most of the dairy farmers have to buy cattle feed and cattle medicine from the open market. The members wish that an arrangement for cattle feed and medicine would be better if is done at the society level, so that the direct and indirect benefits would flow into the members and the society.
- The society simply collects the milk and sells raw milk to the union. The members expect that the society would arrange a kind of dairy development program for the members, so that they can also develop milk into various kind of milk products like butter, curd, ghee etc at the individual level.

## **Suggestions**

Some of the recommendations given to the members and to the management of the Umlynga Milk Producer and Dairy Cooperative Ltd are as under:

- Members should be made aware about the importance of insurance cover for their animals. This can be done by the society itself or through other insurance institution.
- Capacity building should be given to farmers for further quality production of milk and development of milk into various milk products.
- The Society should open cattle feed and medicine store for the benefit of the member as well as generating income to the society.
- Farmers should be made aware of giving good quality feed and fodder to their cattle as well as encourage them to produce improved grass.
- Farmers should be made aware about the conversion of dung into biogas which can be used for cooking and lighting purposes.
- Farmers should rear improved breed for higher production of milk, because higher the breed higher is the milk production.
- Farmers should take insurance cover for their cattle so that in times of death of animals, could save their loss
- Farmers should manage proper shed for their cattle.
- Besides the suggestions being given to the members. It is also very much required to have a State level Milk union and every district of the state should have their own milk union for accelerating dairy development in Meghalaya .

## **CONCLUSION**

Dairy farming is an important livelihood activity for both the people living in rural areas as well as urban areas. The intention of the researcher was not to showcase Meghalaya as a dairy farming developed state, but to show that how the perspective of the cattle farmers changed from rearing cattle just for non-milking purpose to milking purpose as well. Since the milk consumption habit of the people, especially in areas in and around the main cities and towns of the State has been very high. Therefore there is a good chance for dairy farmers to get a good market for their milk and milk products, this ultimately will turn dairy farming as a lucrative business in the state.

From the forth going explanations it may be understood that the concept of dairy farming in our state has changed in its form and nature with the progress of time, from the rearing of large number of local breed and derived economic benefit only by selling of animals and fertilizer which do not occur frequently, to the rearing of cross breed and obtain economic benefit on regular basis (ie every day/month) by selling milk. As per the information given by the chief Minister of Meghalaya (Shri. Conrad K Sangma) in one of the National Newspaper (Economic Times, January 2023) the total production of milk in Meghalaya was only 12 lakh litters per annum, while the consumption of milk in the state as a whole was more than 200 lac litters per annum. To match the gap between demand and supply there is a good potential for dairy farming to grow and develop in our state.

## Questionnaires

### Information about the socio-economic impact of Dairy farming

(Household survey for dairy farmers of Umlyngka Milk producer Cooperative Society Ltd)

1 Name of the respondent: \_\_\_\_\_

Male : \_\_\_\_\_ Age \_\_\_\_\_ Qualification \_\_\_\_\_

Female : \_\_\_\_\_ Age \_\_\_\_\_ Qualification \_\_\_\_\_

2 How many family members are there in the household?

(i) Male : \_\_\_\_\_

(ii) Female : \_\_\_\_\_

(iii) Number of members below 14 years of age \_\_\_\_\_

(iv) Number of members above 14 years of age \_\_\_\_\_

(v) How many are educated \_\_\_\_\_ Below matriculation \_\_\_\_\_ Above Matriculation \_\_\_\_\_

(vi) How many are uneducated \_\_\_\_\_

3 How is the availability of water supply for household consumption and dairy activities?

(Tick )

(i) satisfactory

(ii) very good

(iii) Unsatisfactory

4 How is the road communication from dairy shed to the collection centre? (Tick)

(i) Satisfactory

(ii) Very good

(iii) Unsatisfactory

5 How is the availability of electricity in the locality?

(i) Satisfactory

(ii) Very good

(iii) Unsatisfactory

6 How many cows are domesticated?

(i) Local breed: \_\_\_\_\_

(ii) Cross breed: \_\_\_\_\_

(iii) Other breed: \_\_\_\_\_

7 How many times a day milking is done? (Tick (i) or (ii) )

(i) Once: \_\_\_\_\_

(ii) Twice: \_\_\_\_\_

8 How much is the price per kg of milk?

9 How many litters of Milk obtained on daily basis?

(i) One cow: \_\_\_\_\_

(ii) From all the cows: \_\_\_\_\_

10 How is the mode of selling milk? (Tick (i) or (ii) )

(i) Individually: \_\_\_\_\_

(ii) Collectively: \_\_\_\_\_

- 11 Where milk is sold? (Tick)
- (i) Local market
  - (ii) Dairy chilling Plant Center.
- 12 How Dairy inputs like cattle feed, cattle medicine etc. are procured? (Tick (i) or (ii))
- (i) From open Market: \_\_\_\_\_
  - (ii) From Society: \_\_\_\_\_
- 13 How many persons in the household engaged in any of the following economic activities?
- (i) Dairy farming: \_\_\_\_\_
  - (ii) Government Service: \_\_\_\_\_
  - (iii) Agricultural work: \_\_\_\_\_
  - (iv) Casual labor work: \_\_\_\_\_
  - (v) Others: \_\_\_\_\_
- 14 How many persons are engaged in dairy farming?
- (i) Directly: \_\_\_\_\_
  - (ii) Indirectly: \_\_\_\_\_
- 15 How much is the average family income per month from the following s?
- (i) Dairy farming: (a) 15000-30000 (b) 30000-45000 (c)45000-60000 (d) above 600000
  - (ii) Government Service: (a) 15000-30000 (b) 30000-45000 (c)45000-60000 (d) above 600000
  - (iii) Agricultural work: (a) 15000-30000 (b) 30000-45000 (c)45000-60000 (d) above 600000
  - (iv) Casual labor work: (a) 15000-30000 (b) 30000-45000 (c)45000-60000 (d) above 600000
  - (v) Others: (a) 15000-30000 (b) 30000-45000 (c)45000-60000 (d) above 600000
- 16 How is the availability of cattle treatment?
- (I) Government Doctors
  - (II) Private Doctors
  - (III) Trained persons of the Society
  - (IV) Self-treatment by cows- owner
- 17 How much percent of the family income is spent on any of the followings?
- (I) Food
  - (II) Education
  - (III) Health
  - (IV) Bank account
  - (V) Purchase of properties
- 18 How is the payment of milk billing? (Tick)
- (i) Satisfactory
  - (ii) Very good
  - (iii) Unsatisfactory
- 19 Any other comments if you would like to suggest

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