A DISSERTATION

ON

A STUDY ON ECONOMIC PROSPECTS OF DAIRY FARMING IN PUB NALBARI BLOCK, NALBARI

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CERTIFICATE

This is to certify that M. com 3rd semester dissertation which is entitled "**A study on Economic prospects of Dairy Farming in Pub-Nalbari Block"** is prepared by Chayanika Dutta Baruah independently under my guidance and supervision in connection with M.com 3rd semester dissertation in commerce. The project has not been copied from existing project or submitted to any other institution to the best of my knowledge.

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DECLARATION

I, the undersigned Chayanika Dutta Baruah student of M.com 3rd semester, hereby that the study entitled, "**A study on Economic prospects of Dairy Farming in Pub-Nalbari Block**" is my own original work, carried out under the supervision of Dr. Uddipana Gogoi, Department of Finance, Nalbari Commerce College, Nalbari.

I further declare that this work has not been previously submitted to any other university for any type of degree.

Date:

Place: Nalbari Signature

ACKNOWLEDGEMENT

This project has been carried out with the co-operation of innumerable individuals; I express my heartiest thanks and gratitude to all who have helped me in completing the project work successfully.

I also my deep sense of gratitude to principal for giving me the opportunity, my guide. Assistant professor, Department of Finance, Nalbari Commerce College, for his invaluable guidance in this endeavor. She has been a constant source of inspiration and I sincerely thank her for her suggestions and help to prepare this report.

I also thank to other teachers and friends for their constant support and help in completing the dissertation. i would like to thank God almighty for giving me the opportunity and guidance to achieving my goal.

Finally, it is my foremost duty to thank my respondents who helped me to complete my field work without which this project report would not have been possible.

Last but not the least; I express my appreciation and thanks to my family members for their help, encouragement and financial assistance during the entire period of the study.

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PREFACE

Research is an important part of the course curriculum because it gives a scope to do an in-depth study in the selected topic. Research helps the students to acquire knowledge through objectives and systematic method of finding solution to a problem and sometimes refreshes mind of the students. Research indicates scientific and inductive thinking and it promotes the development of logical habits of thinking and organization.

This project acts as a guide to apply theoretical knowledge in the practical world. It is a path way towards placing ourselves in the practical world. It is a path way towards placing ourselves in the corporate world. The selected topic helps me to gather knowledge about the various difficulties faced by the farmers and to know their marketing channels. Thus looking at the topic, some analysis has been done which has brought certain findings and recommendations as well. This project contains 4 chapters excluding annexure and bibliography. The experienced team faculty is assigned to a group of student to guide them in the whole project journey.

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CHAPTER 1: INTRODUCTION

INTRODUCTION:

Dairy farming has played greater role in rural economy. Milk has become major source of revenue generation in rural India. Milk and different kind of dairy products are important components of our modern diets. India is the world's largest dairy herd, comprised of water buffalo and indigenous and crossbred cattle. Annual growth in milk production and consumption has been a robust 4.2 percent since 2000, and India has also emerged as a small net exporter of dairy products. As per 19th livestock census India possesses largest number of livestock in the world and ranks first in buffalo population (108.7 million) and second in cattle population (190.9 million) (GoI, 2014). It contributes nearly about one fourth of world's total bovine population. India enjoying as highest producers of milk at global level with achievement of around 155.5 million tons during 2015-16 with per capita availability of 337 g/day (GoI, 2017). Dairy farming is a central source of livelihood for over 100 million people. Many of these small-scale livestock keepers have no access to land and the number of rural landless households is likely to be increase due to further subdivision land holdings. For smallholder and landless farmers, livestock are becoming an increasingly important source of income. These activities have contributed to the food basket, nutrition security and household income of the farmers and play a significant role in generating gainful employment in the rural area.

1.1. Dairy Farming scenario in India:

Since 1970, India's milk production has grown by an average of nearly 4% per year and in 2006 became the largest milk producing country in the world (Muhammad et al, 2009). At national level, 57% of the milk production consists of buffalo milk and 43% of cow's milk. Each year buffalo milk production rises by 4% and that of cow milk by 1.2% (Brower's, 2006). Between buffaloes and cows, the Indian buffalo herd is expanding by 1.2% per annum, while the dairy cow herd is decreasing by 1% per year. The population of buffaloes increased from 8.74 million MT in 1970 to 44.10 million MT in 2008 corresponding to an increase in population of milking cows from 21.8 million heads in 1970 to nearly double at 38.5 million heads in 2008 (Muhammad et al. 2009), indicating the enhancement in productivity of the animals. The increase in production potential notwithstanding, the present potential is far below the averages reported from Asian countries like Japan (9270 kg/head), Korea (9480 kg/head) and even China

(3990 kg/head), not to speak to European countries. The Indian dairy industry has come a long over years from a milk production of 17 million tons in 2010 (GOL, 2010). In 2000, India had about 27% of Asia's population and more than 50% of Asia's dairy production (Meyfroidt et al, 2010).

Dairy farming, a crucial component of the global agriculture landscape, plays a pivotal role in providing a steady supply of milk and dairy products to consumers worldwide. This sector has been instrumental in meeting the nutritional demands of a growing population, contributing to rural economics, and sustaining livelihoods for countless farming communities. However, the dairy industry is not without its share of economic prospects and problems that require in-depth analysis and attention.

Dairy farming in India was a significant agricultural sector. India is one of the world's largest producers and consumers and consumers of dairy products. Here are some key points about the dairy farming scenario in India.

Amul cooperative Model: The Amul cooperative model, initiated by the Gujarat cooperative Milk Marketing Federation (GCMMF), has been highly successful. It involves millions of dairy farmers working together to produce and market dairy products under the Amul brand.

Variety of Dairy products: India produces a wide variety of dairy products, including milk, yogurt, ghee (clarified butter), Paneer (cottage cheese), and various traditional dairy-based sweets.

Cattle breeds: India has several indigenous cattle breeds, such as Gir, Sahiwal, and Red Sindhi, known for their milk production. These breeds are adapted to local conditions.

Small-scale Dairy: Much of India's Farming is carried out by small-scale and marginal farmers who own a few cattle. Dairy farming provides them with a crucial source of income.

Government Initiatives: The Indian government has launched various initiatives and schemes to promote dairy farming, improve cattle breeds, and enhance milk productivity.

Challenges: Despite its success, the dairy sector faces challenges like inadequate infrastructure, low mil yields, and issues related to animal health. Access to modern technology and veterinary services is often limited in rural areas.

Export Opportunities: India has also been exploring opportunities for exporting dairy products to international markets particularly in the Middle East and Southeast Asia.

1.2 Dairy Farming Scenario in North-East India:

Popularity of milk in the plains of NE India is a part with other parts of the country. There is also a positive trend in milk consumption by hill tribes. Unlike in 70s, dairy farming is now an important farming activity throughout the hill states of the region.

Dairy sector in North East India of late assumes significance from the point of view that the region provides ample opportunity for investment. Guwahati- the gateway to N E India, alone requires an estimated 6 lakh liters of milk against local supply of 1, 25,000 lit of milk per day. The market for UHT (Ultra Heat Treated) milk is growing exponentially within the region. The production in the states of the region is far below the requirement and unconfirmed report indicates huge interstate import of liquid milk. High consumption of dairy-whitener in the region is also indicative of the fact that locally product milk is not available to the consumers as per demand. Besides low surplus production at farmers end, inadequate marketing infrastructure/ milk delivery systems another reason for non-availability. Major cities of the region are chronically suffering from shortage of quality milk. High demand is the root cause for whispered adulteration.

Future of processed milk and other products-based industries in the region appears bright in the light of the Act East Policy of government of India; Free Trade Agreement with ASEAN, Pan Asian Highway etc. These environmental changes will provide a plethora of opportunities for the North Eastern states to interact commercially with international neighbors with whom they share 98% of their borders.

Various Indian dairy companies are chalking out plans to widen their footprints in the North Eastern states, encouraged by the regions wet climate which is considered favorable for setting up dairy farms and processing units.

Market report indicates that large organizations both from cooperatives and the private sector are selling skimmed milk powder in the region. These organizations are now planning to expand the offering to include value-added dairy products. As a step towards this, they are looking to forge alliances with local players for procuring milk and selling their branded products. Those already in the regions markets are looking at expanding capacities. Gujarat co-operative Milk Marketing Federation (GCMMF), which sells its products under the 'Amul' brand, and Hyderabad-based private dairy firm Dodla Dairy are among those preparing to enter North East India market. National Dairy and cigarettes-to-consumer goods giant ITC have been selling dairy whiteners within the region. As per news report quoting sources in Amul, the company intends to invest Rs 3,000 crore on expansion and proposes to enter the Assam market thought third-party manufacturing arrangement, where the partner will supply milk to processors in Assam and the dairy giant will market it.

There is an urgent need to improve the milk production scenario within the region as lower milk availability is a major deterrent for investment in procurement and processing.

In Nalbari district total population in 7, 77369 and total milk production is 270239 liters per day requirement of milk is 74,038 liters. The total availability of milk in Nalbari district in 95 Gms per day per person. As per ICMR/WHO, 280 Gms of milk is required per day per person (2.18 lakh 1st/day).Thereby shortfall of 185 Gms per person (1.44 lakh 1st/day)..

1.3 Statement of problem

It is known face that dairying has become an important secondary source of income for millions of rural families in India. It has played the most important role in providing employment and income. Income from dairy activity has a great role in increasing per-capita income, As it is specially related to the secondary sources of income. Some of income for down traders rural families, it is decide to find out the related problems of dairy activities some of the practical dairy farming challenges are-

(i) Feeding of Animals- The dairy farming of Assam is a supplementary business to agriculture. Means the dairy animals are raised on the residue of agriculture mainly very few farmers have separate fodder cultivation fields. Other constraints in feeding are:

a) No awareness about balance feeding of cattle.
b) Water only given in limited amount.
c) Supplements feeding are very minimal or absent.

(ii) Health Issues- In animal health there are following challenges like:

a) Availability of qualified veterinarians in rural areas.
b) Frequent disease incidence like FMD which has negative impact on dairy production. It also affects many animals in village.

(iii) Management of animals- In management there are challenges like:

a) Hygienic animal shed.
b) Treat washing and dip before milking.
c) Dis-infection of animal shed regularly.

(iv) Farm economic- Dairy Farmers are not aware of proper reared keeping and dairy farm economics. This has a negative impact on the income of the farmers and his spending on dairy farm

In Nalbari district also dairy farmers are facing many problems like financial farmers are facing many problems like financial constraint, transportation constraint, infrastructure constraint, lake of technical skill for farm management etc. Despite of such challenges some unemployed youth have adopted and also adopting dairy farming as a source of livelihood because of economic prospects. Therefore in this study and attempt is made to study economic prospects of dairy farming in the study area and highlight the challenges faced by dairy farming in the study area.

1.4 Review of Related Literature*:*

Karmakar K.G and Banerjee, G.D (2006) pointed out in their paper titled "Opportunities and challenges in the Indian Industry" that growth in milk production is likely to continue at the present rate of 4.4% in the near future. Demand for milk at current rate of income growth is estimated to grow at 7% per annum. Interestingly over the next two decades as the low income rural and urban families who have higher expenditure elasticity would also increase their income due to new economic environment.

Hasan Cicek, et al. (2007) "Effect of some technical and socio-economic Factors on milk production costs in Dairy Enterprises in Western Turkey" examined the technical and socio

economic factors that may affect the cost in dairy enterprises in Turkey. They highlighted that the parameters such as education of the producers. Scale of the enterprises, feed consumption, feed procuring and litter size had significant effect on the average milk costs on the other hand marketing main occupation and age of the producer were found to be statistically in significant and socio-economic factors were bound to have to important effect on decreasing the profitability of the enterprise.

Nigam R.K and Kumar S.(2008) "Contribution of livestock in India scenario" in their opined about growing human population rising per capital income and increasing urbanization are fuelling rapid growth in the demand for food and animal origin in largest livestock population in the world. Country to the large population of livestock in India productivity of Indian livestock is low compared to many developing countries.

Singh M. and Joshi. A.S (2008) reported on their project title "Economic Analysis of crop production and dairy Farming on Marginal and small farms in Punjab" that the economic analysis of dairy farming has been found that a majority of the farm householders are not able to meet their requirements from their income from their crops. Further dairy farming has emerged as a major allied enterprise for supplementing the income of marginal and small farmers in Punjab.

Dhanabalan M. (2009) "Producing Efficiency of Milk production in Tamil Nadu" opined that dairy has an important role in improving the overall economic condition of rural India. Dairy farming is described as a small industry which provides gainful employment opportunities. It comprises of about six percent of the national income.

Patnakar S. (2012) "International Journal of management Research @ Review" in their study founded that Assam initiated organized development of milk processing way back in the mid 1960s. The total installs incapacity of pasteurization per day respectively.

Shergill H S (2006) "Commercial Dairy Farming in Punjab; Problems and Strategy for Further Development" and from this study, it was reported that, in Punjab, the feed cost was the major cost component in the total expenses incurred in dairy farming.

Das M (2010) studied 'Certain Economic Traits and Input-Output Relationship with Milk Production of Crossbred and Indigenous Cattle in Kamrup District of Assam'. A calculation on the net profit from both breeds, the study showed that the average income from a crossbred cow was Rs.6257.09 whereas from a local bred cow, it was Rs.2447.28.

Singh S (2006) conducted a study on economics of milk production and marketed surplus in Imphal, West district of Manipur and found that there was a significant difference in the net return between a local bred and a crossbred cow. Net income from a crossbred cow was Rs.48.70 while local cow it was Rs.4.27 in milk production.

1.5 OBJECTIVES OF THE STUDY :

The fundamental objectives of the study are given below:

i) To study economic prospects of dairy farming in the study area.
ii) To highlight the challenges faced by dairy farming in the study area.

1.6 Research Methodology

Research Methodology is a way to systematically solve the research problem by logically adopting various steps. Thus, the present chapter deals with the methods adopted in conducting the present study.

1.6.1. Nature of research:

The nature of present study is descriptive in nature which describes the nature of variables only.

1.6.2. Nature and sources of data:

The present study uses data from both primary and secondary sources. The primary data has been collected with the help of structural questionnaire. The researcher personally met the farmers located in different villages of Pub-Nalbari Block where research has to be performed. The Secondary data was collected from relevant research journals, economic survey of Assam and related websites.

1.6.3. Population:

The population for the study is the dairy farmers in Pub Nalbari Block and they are not registered as farm or industry.

1.6.4. Sampling Technique:

The sampling method used for the present study is convenient sampling. The population comes under unorganized sector because they are engaged in dairy farming as home based industry which is not registered. Therefore, the sample selected is on the basis of convenient sampling.

1.6.5. Sample:

The total number of sample selected for the study is 40.

1.6.6. Area of the study:

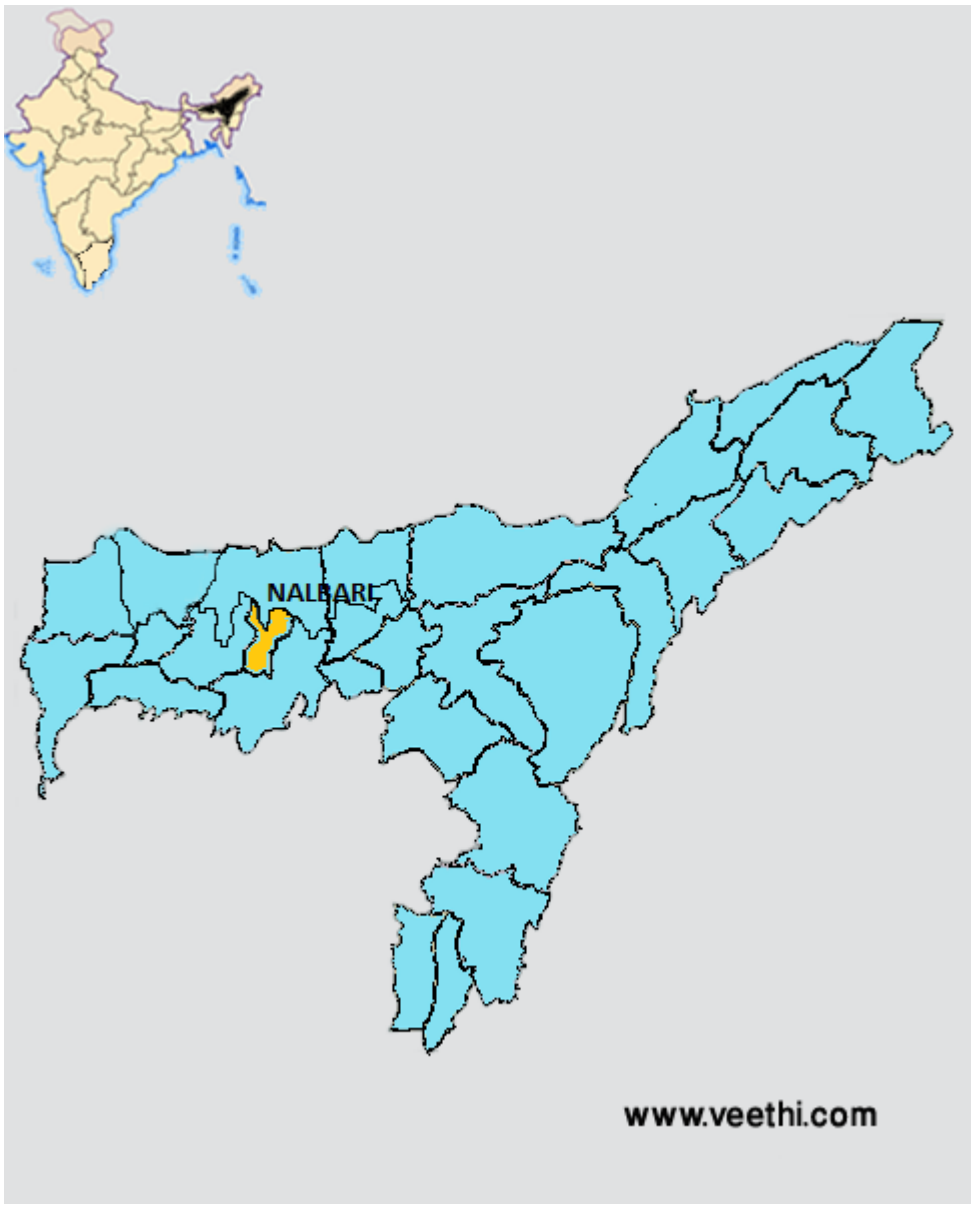
Nalbari District is situate**d** in between Kamrup and Barpeta District. For better administration old Kamrup district has been divided into three districts. Nalbari was declared a sub division of undivided Kamrup District in 1967. Nalbari sub-division is formally declared as a district of the 14^{th} august 1985. Nalbari district was further divided in 2003 for creation of Baksa district in BTAD.

Nalbari district is situated between 26^0 N and 26.51^0 N and 91^0 N latitude and 91^0 E AND 91.47^0 E longitudes. The North and West side of the district is bounded by Baksa and Barpeta district respectively. The south and east side of the district is bounded by Kamrup district.

The entire area of the district is situated at the plains of Brahmaputra valley. The tributaries of the Brahmaputra Nona, Buradia, Borolia and Tihu which originate from the foothills of the Himalayan range are wild in nature are wild in nature and have enormous of the district.

Nalbari districts occupy an area of 2257 square kilometers (871 square meters) comparatively equivalent of Indonesia's Norotai Island. Nalbari district is situated in between 26 degrees North and 27 degrees North latitude and 91 degrees east and 97 degrees East longitude.

Figure-1: Location of Nalbari District in Assam, India.



Source: WWW.VEETHI.COM.

In Nalbari district there are three no's of Legislative Assembly constituencies (LAC). There are-

i) Barkhetry LAC.

ii) Dharmapur LAC.

iii) Nalbari LAC.

The above three LACs are included in three no's High Powered Committee. The Barkhetry LAC is included in Guwahati HPC. The Dharmapur LAC included in Barpeta HPC and Nalbari LAC is included in Mangaldoi HPC.

The Nalbari district has an area of 1009.57 sq km consisting of 1 sub-division, 7 no's revenue circles,7 community development blocks, 7 police stations,7 anchalik panchayats and 65 gaon panchayats covering 470 villages.

According to the 2011 census, Nalbari district have a population of 771,639. The total population is divided between rural population and urban population by 688,909 and 82,730 respectively. Male population is 396,006 female populations are 375,633. This gives it a ranking of 488th in India (out of a total of 640). This district has a population density of 63 inhabitants per square kilometer (1,980/square meter). Its population growth rate over the decade 2001-2011 was 11.74%.

As per 2011 census, out of the population of Nalbari district, 89.28% people lives rural areas and only 10.72% people lives in urban areas. Nalbari has a sex ratio 945 females of every 1000 males, and a literacy rate of 79.89% scheduled castes and scheduled tribes made up 7.80% and 3.03% of the population respectively. According to 2011 census, 63.71% of total populations are Hindu. 35.96% Muslim, 0.06% Christian, 0.01% Sikh, 0.13% Jain and 0.13% are not stated.

The rate of total literacy of Nalbari district, according to 2011 census, is 79.89% as against 80.95% in 2001. The rural literacy rate is 78.44%, while the urban rate is 91.46%. Male literacy is 85.58% consisting of rural 84.38% the urban 95.24%. Female literacy is 73.85%consisting of rural and 72.14% and the urban 87.48%. The total literacy rate of the state as a whole is 73.18%.

The economy of Assam continues to be predominantly agrarian. Majority of the population (around 75%) of the state is depending directly or indirectly activities. The economy of the Nalbari district is in the same line with the economy of Assam, which is also based on agriculture. Almost 80% of the population of the Nalbari sub-sets on agriculture.

The production of milk in the district accounts for 3% of states production. The per capita daily availability of milk is estimated at 90 ml. In the district farmers have already adopted stall-fed crossbreed cattle rearing, but the number is very less. With support like induction of high

yielding cattle, massive AI programmed, feed and fodder development programmed. The dairy sector is a massive way. The potential for credit under the sector for the year 2016-17 is estimated at Rs. 1275.12 lakh.

The Pub Nalbari Block falls in Nalbari district situated in Assam state, with a population 156072. The male and female populations are 80391 and 75681 respectively. The size of the area is about 160.44 square kilometer.

Area - 160.44 km^2

Population (2020) - 156072

Population Density- 972 people per km^2

Nearest airport & distance (Areal) – Lokpriya Gopinath Bordoloi International Airport, 31.81 km

Nearest Railway Station & Distance (Arial) – Nalbari, 2.05 km

There are 85 villages in Pub- Nalbari block.

1.7 Limitation of the study

The present study suffers from the following limitations-

- Due to time constraint the present study is conducted 40 samples in Pub-Nalbari Block.
- Due to cost constraint the present study is conducted among 40 samples in Pub-Nalbari Block.
- The authenticity and reliability of primary data is dependent on responses of respondents only. Further, the validity of secondary data based on source of secondary data only.

CHAPTER 2: ECONOMIC PROSECTS AND CHALLENGES IN DAIRY FARMING IN INDIA

2.1. Economic prospects of dairy farming in India:

India is the highest milk producer and ranks first position in the world contributing 24% of global milk production in the year 2021-2022. The milk production of India has registered 61% increase during the last eight years i.e., during the year 2013-14 and 2021-22. The milk production has increased by 5.29% over the previous year 2020-21.

The top 5 milk-producing states are- Rajasthan (15.05%), Uttar Pradesh (14.93%), Madhya Pradesh (8.6%), Gujarat (7.56%) and Andhra Pradesh (6.97%).They together in the country.

India's Export of Dairy products was 67,572.99 MT to the world for the world for the worth $284.65 Mn during the year 2022-23.

The market growth in dairy requires support of significant infrastructure investment across processing, chilling, logistic, cattle feed etc. further, lucrative untapped opportunities exist in areas such as value-added dairy products, organic/farm fresh milk and exports. To facilitate the infrastructure growth, Central/state governments have released various incentives to attract investments in this sector. Animal husbandry infrastructure development fund Animal Husbandry Infrastructure Development. AHIDF is one of the flagship schemes by Department of Animal Husbandry Dairying, Government of India whereby INR 15,000 Cr fund has been setup for offering financial support to set up new units in areas of dairy processing & related value addition infrastructure, meat processing & related value addition infrastructure and Animal feed Plant. The benefits available are:

> 3% interest subvention on loans.

> 2 year moratorium with 6 year repayment period.

> INR 750 Cr credit guarantee.

Dairy farming in India is part of a integrated farming system farming system characterized by crop-livestock interactions (Singh 2004; Kumar and Van Dam 2013). The by-products from several of the (crop residues, hay and straw) are used as input for dairy production, in addition to other inputs for which they have to directly incur cost (cattle feed, veterinary medicines , and artificial insemination). Animal dung and urine are used as inputs (biofertilizers and

biopesticides) by farmers for improving soil fertility). To arrive at the economics of livestock farming, it is important to have realistic estimates of the cost of producing biofertilizers and the economic value of biopesticides.

Under intensive dairy farming, milk yield and revenue are high, but the input costs are also high as farmers have to grow green fodder, use expensive cattle feed to increase the milk yield and revenue are low, with animals grazing in the wild and crop residues as fodder for animals, using small amounts of cattle feed. Family members perform the domestic labour for animal rearing. This could be due to the unique situation with respect to land availability is low, biomass is available round the year. The opportunity cost and the direct cost of using these inputs for dairy farming are negligible (Kumar and Singh 2008. The low land availability also creates surplus family labour that can be gainfully employed for animal rearing; for this the market value of labour should not be considered.

A sizeable portion of total produce was retained by the dairy farmers 37% in Bihar, 27% in West Bangle, and 21% in Uttar Pradesh and Delhi (northern region in the study). Higher the amount of milk production per capita, lower the proportion of milk used domestically as found in states such as Gujarat and Punjab. This means that for traditional dairy farming by smallholders, it is all the more important to get the real economic value of the milk consumed by the household, and the actual economic cost of all inputs, including labour.

2.2. Challenges of dairy farming in India:

The Indian dairy sector faces many challenges, such as:

Low productivity

India's productivity per animal is very low. The significant reasons are limited availability and affordability of quality feed and fodder, traditional feeding practices, lack of veterinary, limited supply of quality animals, and ineffective cattle and buffalo breeding programs.

Production Inefficiency

Inadequate farm management, inadequate access to finances, lack of affordable technology, and access to information led to low production efficiency in India.

Shortage of feed/fodder

When it comes to using the grain and fodder that are readily available, there are too many inefficient animals competing with profitable dairy animals. The amount of grazing land is being drastically reduced each year as a result of industrial growth, which causes a shortage of feeds and fodder to meet demand. Dairy sector animals' performance is hampered by the widening feed and fodder supply-demand mismatch. Additionally, providing dairy cattle with the feed of inadequate quality limits the system for animal production.

The small and marginal farmers, as well as the agricultural laborers working on the growth of the dairy sector, have limited financial resources, which leads to inadequate nutrition. Mineral deficiency disorders are caused by a mineral mixture that is not supplemented. High-cost feeding lowers the dairy sector revenues.

Hygiene Conditions

Many cattle owners neglect to give their animals the required protection, leaving them vulnerable to harsh weather conditions. Mastitis is brought on by the unhygienic environment in the milking parlors and cattle sheds. Milk and other products lose quality while stored and deteriorate due to unhygienic milk manufacturing.

Health

Facilities for veterinary treatment are scattered throughout remote areas. Because of the larger ratio between the population of cattle and veterinary hospitals, animals receive insufficient health care. An excessive amount of mortality occurs in calves, especially in buffalo, as a result of the lack of a regular and periodic immunization schedule and a regular deworming program that is not carried out according to plan. There is not a sufficient level of protection against many cow illnesses.

Education and Training

The production of safe dairy sector products could be achieved through intensive education and training programs on excellent dairy practices, but for this to happen, they must be participatory. For all of the employees to grasp what they are doing and feel a sense of ownership, education, and training are crucial in this regard.

However, creating and putting such initiatives into action in the dairy sector calls for a strong commitment from the management, which can be a roadblock at times.

CHAPTER 3: DATA ANALYSIS AND INTERPRETATION

3.1 DATA ANALYSIS AND INTERPREATATION

Data analysis and interpretation of primary data are made with the help of tables and diagram. The brief discussions are mentioned below-

A) Demographic Profile of the respondents

The demographic profile of the respondents consists of age, gender, occupation, residential area, duration in engagement in occupation etc. Data analysis and interpretation of such demographic factors are discussed below-

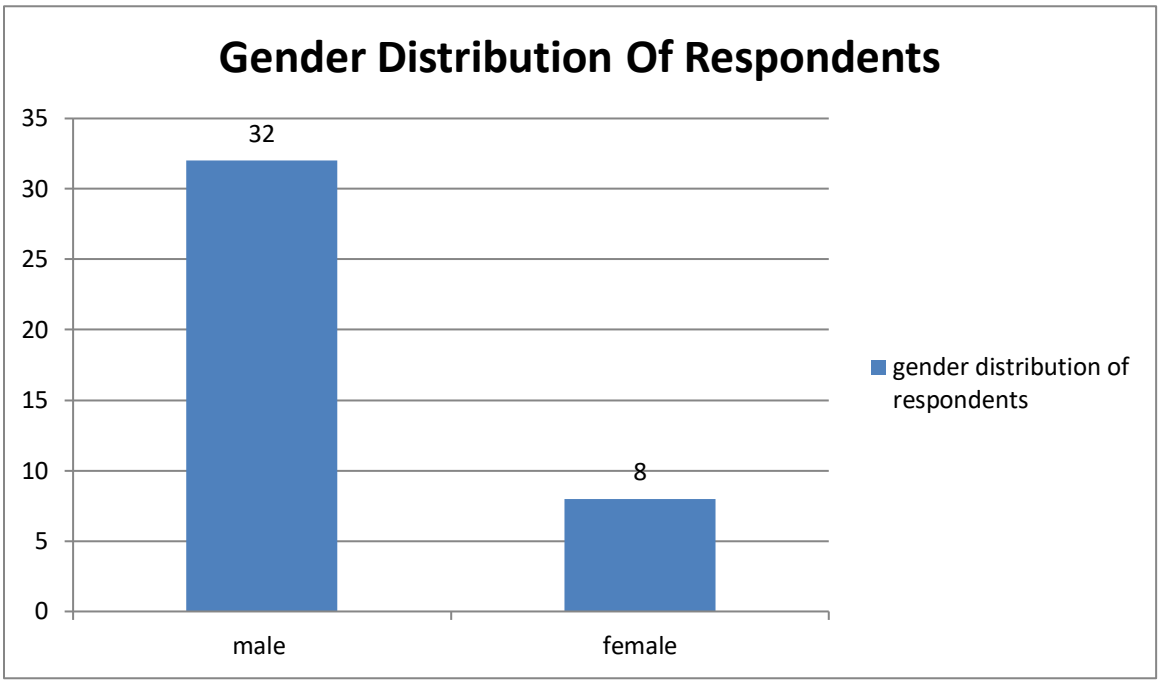
3.1. Gender of the respondents

Table 3.1: Gender Distribution of the Respondents

Gender	No	Percentage (%)
Male	32	80%
Female	8	20%

Source: Primary Data

Figure- 3.1: Gender Distribution of the Respondents



Source: Primary Data

Interpretation: From the analysis of table 3.1 and figure 3.1 reveals that, Out of 40 respondents the sample consists of 32 Male(80%) and 08(20%) Female respondents.

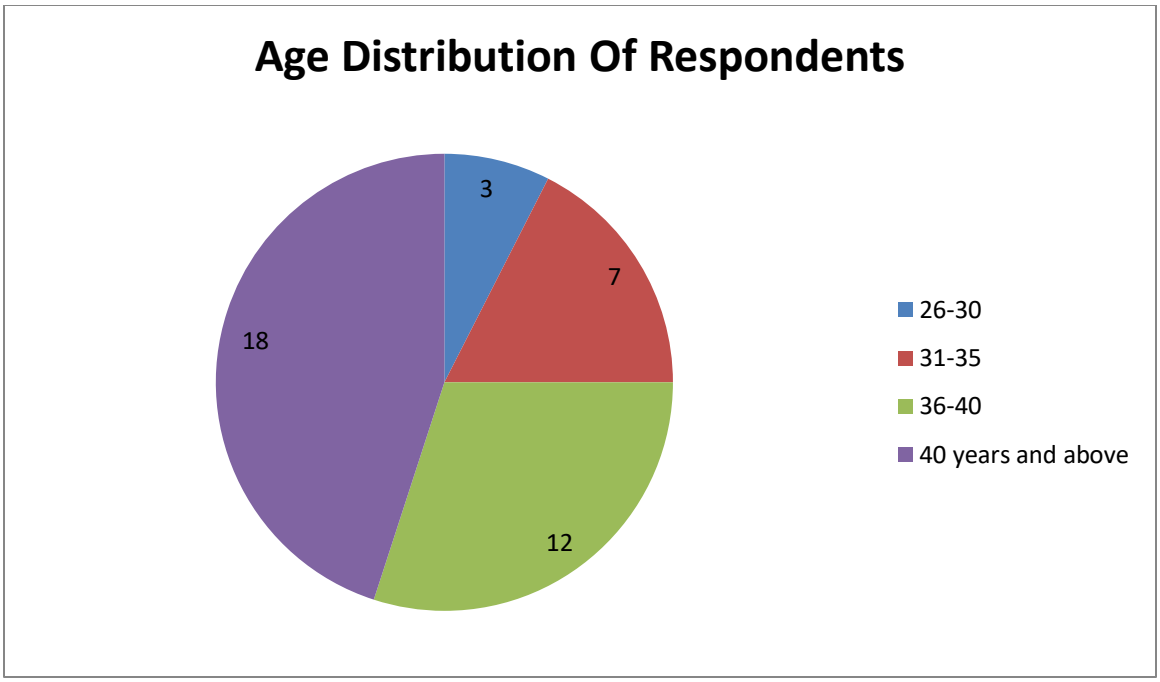
3.2. Age of the respondents

Table 3.2: Age distribution of the respondents

Age	No of respondent	Percentage (%)
26-30	3	7.5%
31-35	7	17.5%
36-40	12	30%
40 years and above	18	45%

Source: primary data

Figure-3.2: Age distribution of the respondents



Source: primary data

Interpretation

From the analysis of table 3.2 and figure 3.2 reveals that most of the respondents (18 respondents) belongs to the age group of 40 years and above(45%), 12 respondents are belongs to the age group of 36-40(30%), 7 respondents belongs to the age group of 31-35(17.5%) and only 3 respondents are belong to the age group of 26-30(7.5%).

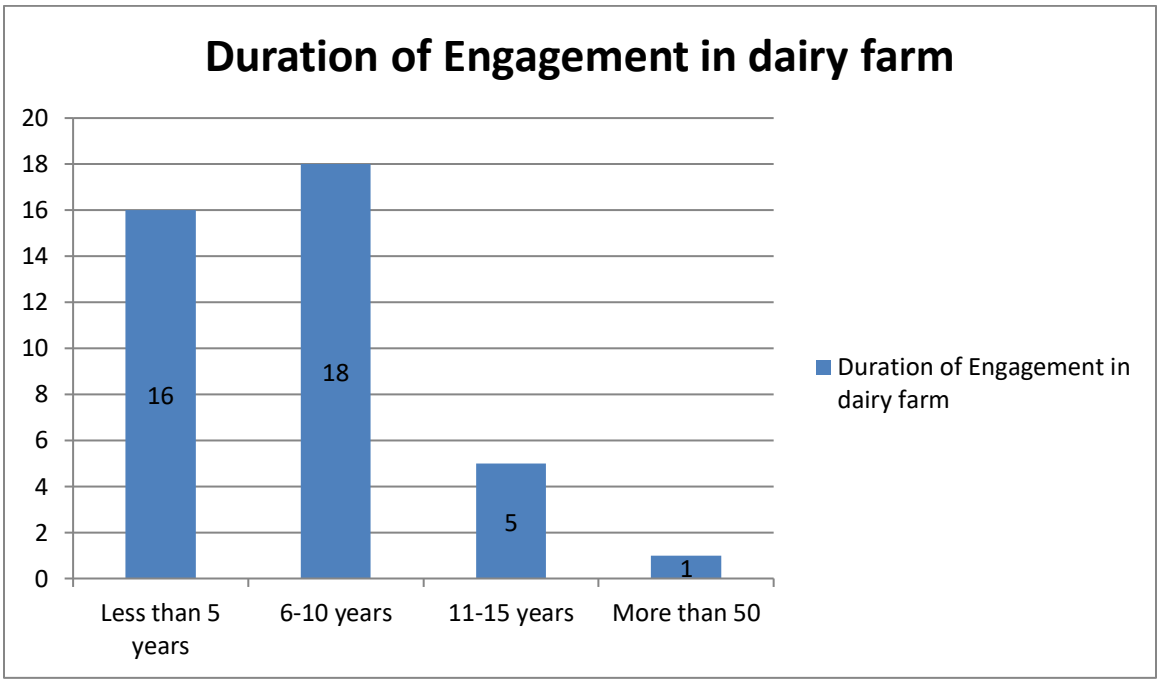
3.3. Duration of Engagement in Dairy Farming

Table 3.3: Duration of Engagement in Dairy Farming

Duration of Engagement	No	Percentage (%)
Less than 5 years	16	40%
6-10 years	18	45%
11-15 years	5	12.5%
More than 50	1	2.5%

Source: primary data

Figure-3.3: Duration of Engagement in Dairy Farming



Source: primary data

Interpretation

From the analysis of table 3.3 and figure 3.3 illustrates that 16(40%) respondents engaged in less than 5 years, 18(45%) respondents engaged less than 6 to 10 years, 5(12.5%) respondents engaged less than 11-15 years and 1(2.5%) respondent involve more than 50 years.

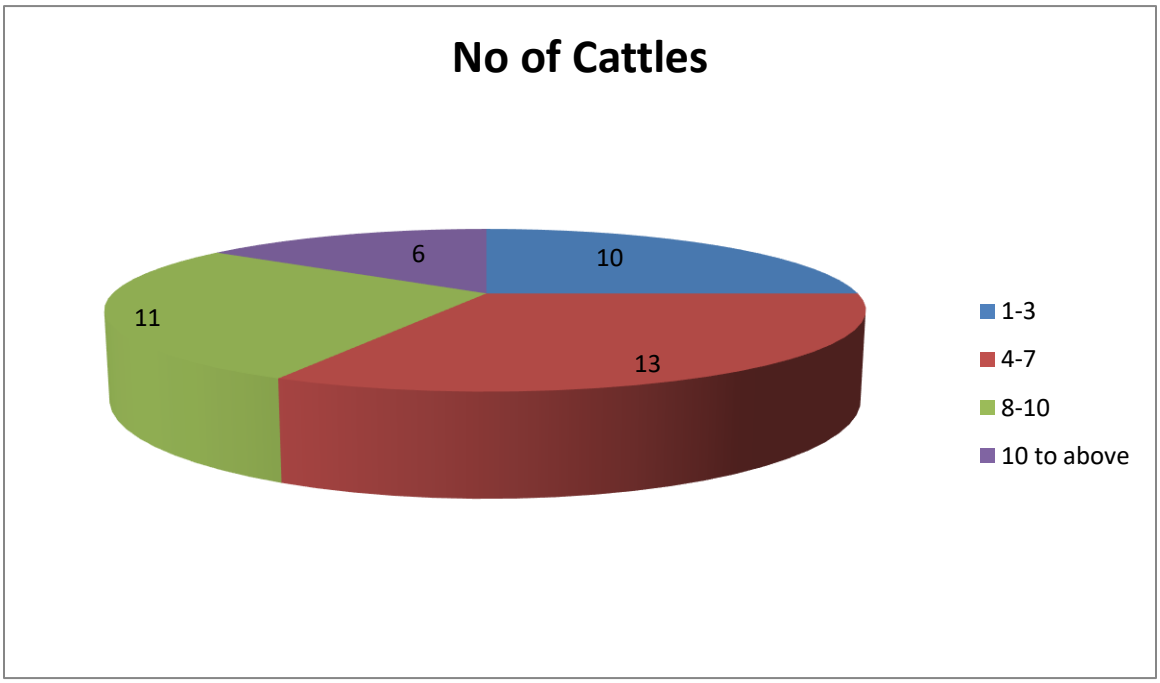
3.4. Numbers of cattle's

Table 3.4: No of cattle's

Group of Cattles	No	Percentage (%)
1-3	10	25%
4-7	13	32.5%
8-10	11	27.5%
10 to above	6	15%

Source: primary data

Figure-3.4: Number of cattle's



Source: primary data

Interpretation:

From the analysis of table 3.4 and figure 3.4 reveals that out of 40 respondents 10 respondents belongs to the group of 1-3 cattle's(25%), 13 respondents belongs to the group of 4-7 cattle's(32.5%), 11 respondents belongs to the group of 8-10 cattle's(27.5%)and 6(15%)respondents belong to the group of 10 to above.

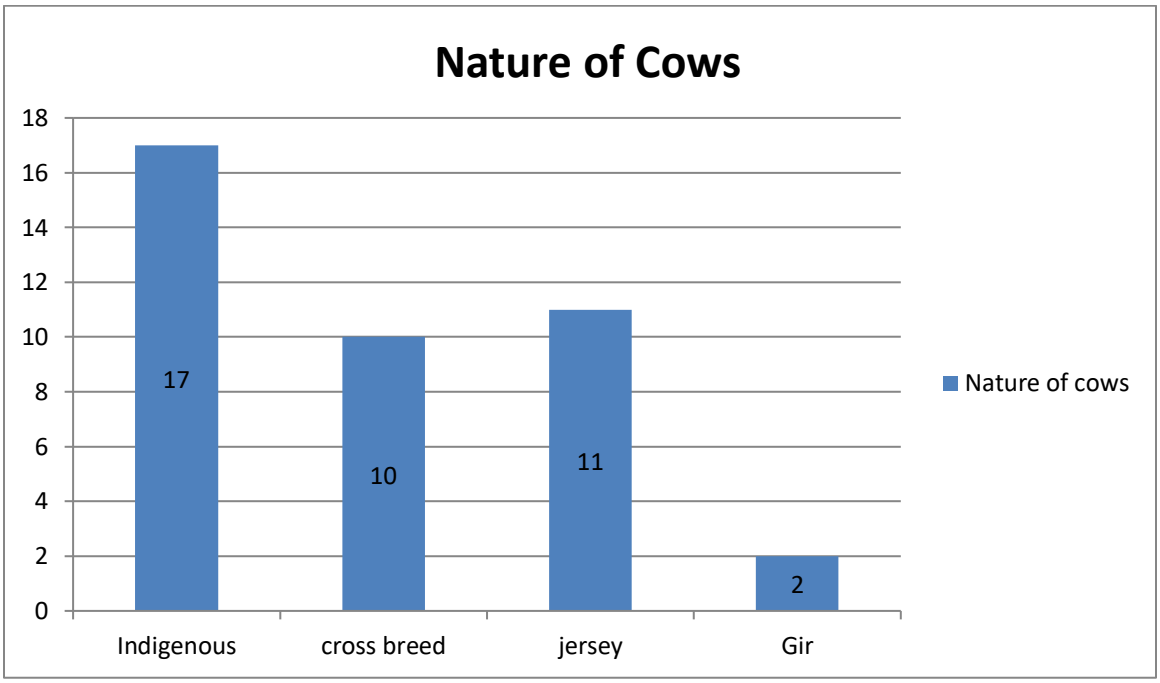
3.5. Nature of cows

Table 3.5: Nature of cows

Nature	No	Percentage (%)
Indigenous	17	42.5%
Cross Breed	10	25%
Jersey	11	27.5%
Gir	2	5%

Source: primary data

Figure 3.5: Nature of cows



Source: Primary data

<u>Interpretation</u>:

From the analysis of table 3.5 and figure 3.5 expos that out of 40 respondents 17(42.5%) respondents have Indigenous cow, 10(25%) respondents have Cross Breed, 11(27.5%) respondents have Jersey and 2(5%) respondents have Gir cow.

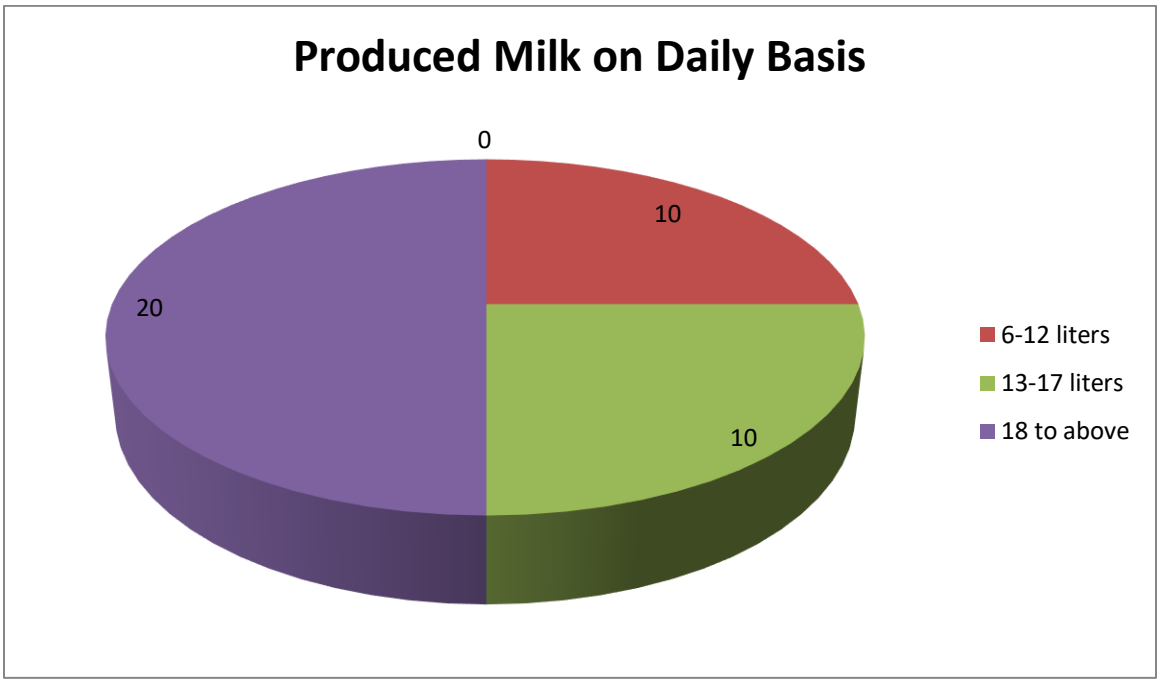
3.6. Produced milk on daily basis-

Table 3.6: Produced milk on daily basis

Proportion of milk	No	Percentage (%)
6-12 liters	10	25%
13-17 liters	10	50%
18 to above	20	25%

Source: Primary data

Figure:3.6: Produced milk on daily basis



Source: Primary data

Interpretation

From the analysis of the table 3.6 and figure 3.6 reveals that out of 40 respondents 10(25%) respondents produced 6-12 liters milk, 10(25%) respondents produced 13-17 liters milk and 20(50%) respondents produced 18 to above liters milk on daily basis.

3.7.: Types of selling products

The products mainly sold by dairy farmers in the study area are raw milk, paneer, ghee and curd. The analysis is highlighted in table 3.7 and figure 3.7.

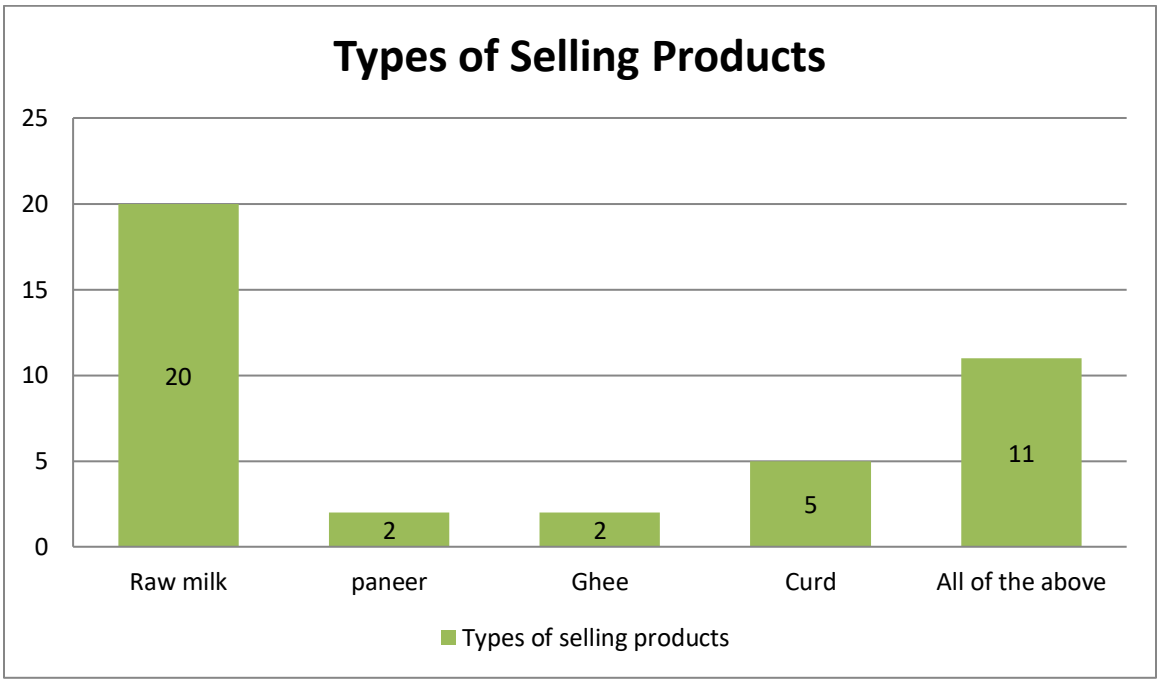
Table 3.7: Types of selling products

Types of products	No	Percentage (%)
Raw milk	20	50%
Paneer	2	5%
Ghee	2	5%

Curd	5	12.5%
All of the above	11	27.5%

Source: Primary data

Figure: 3.7: Types of selling products



Source: Primary data

Interpretation:

From the analysis of table 3.7 and figure 3.7 expos that out of 40 respondents 20(50%) respondents sale Raw Milk, 2(5%) respondents sale Paneer, (5%) respondents sale Ghee, 5(12.5%) respondents sale Curd and 11(27.5%) respondents sale all of the product.

3.8. Area of the selling product

Table 3.8: Area of the selling products

Area	No	Percentage (%)
At village level	14	35%
To neighbors only	4	10%

Other centre place	8	20%
Supply to shops	14	35%

Source: Primary data

Figure 3.8: Area of the selling products

Source: Primary data

Interpretation:

From the analysis of table 3.8 and figure 3.8, found that out of 40 respondents 14(35%) respondents selling his dairy product at village level, 4(10%) respondents selling to neighbours, 8(20%) respondents selling in the other place and 14(35%) respondents supply to shops.

3.9 Customers on monthly basis

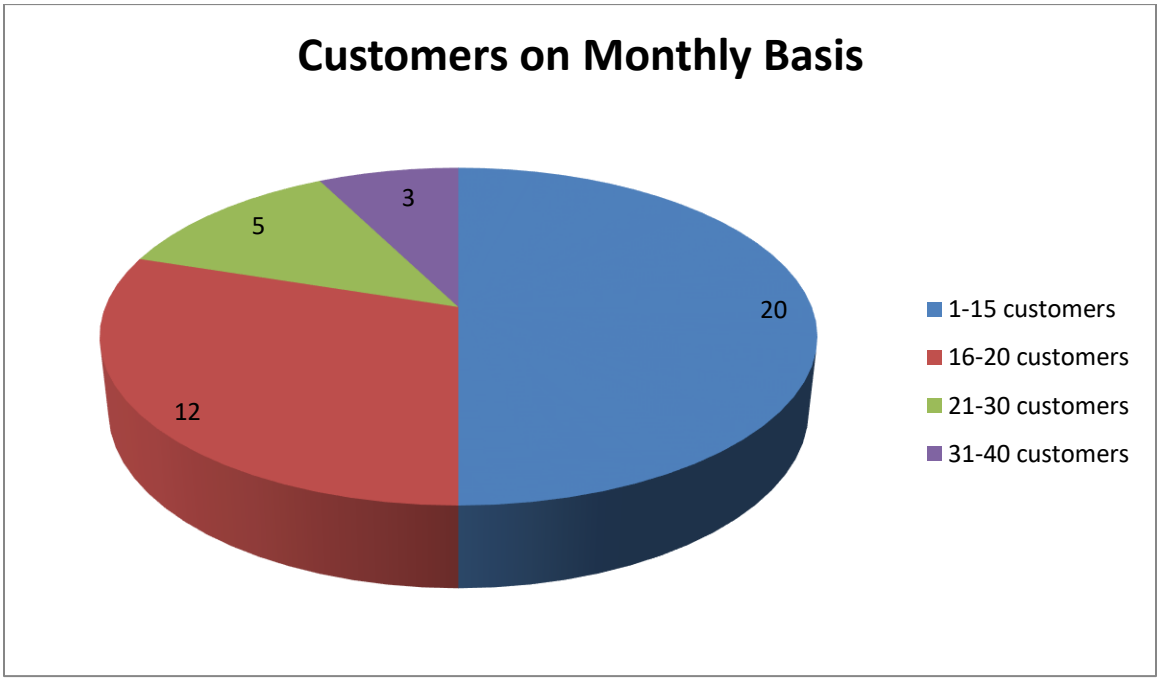
Table 3.9: Customers on monthly basis

Customers	No	Percentage (%)
1-15	20	50%
16-20	12	30%

21-30	5	12.5%
31-40	3	7.5%

Source: Primary data

Figure 3.9: Customers on monthly basis



Source: Primary data

Interpretation

On the basis of table 3.9 and figure 3.9, reveals that out of 40 respondents 20(50%) respondents have 1-15 customers, 12(30%) respondents have 16-20 customers, 5(12.5%) respondents have 21-30 customers and 3(7.5%) respondents have 31-40 customers.

3.10 Types of Selling Price

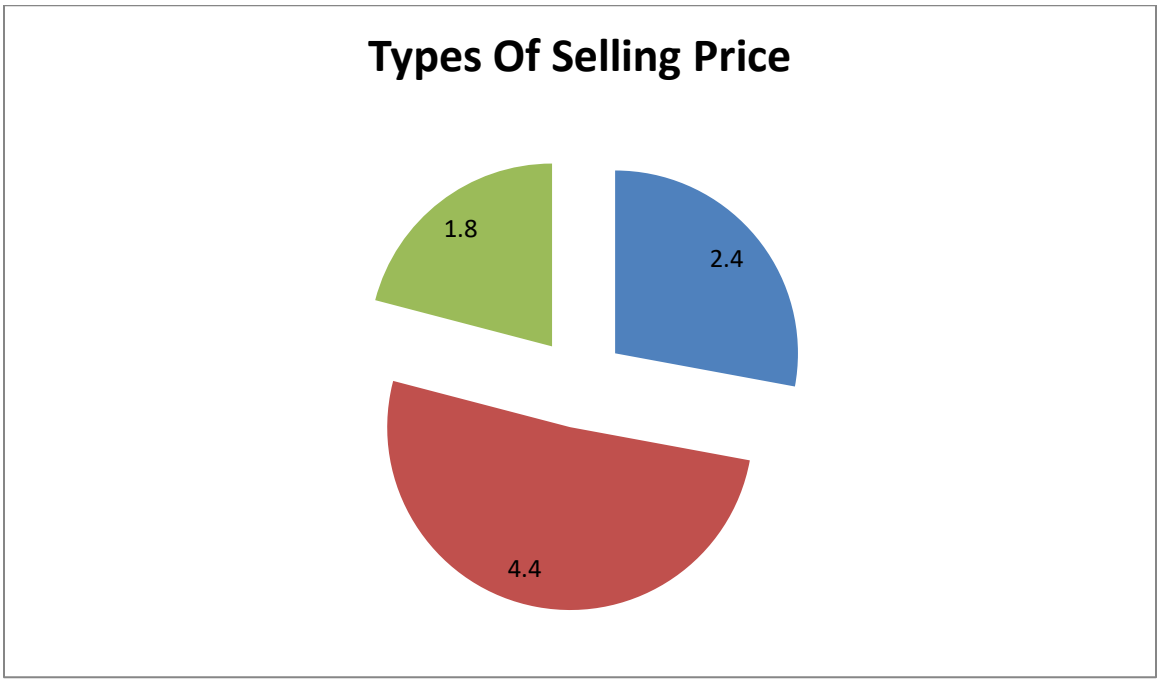
Table 3.10: Types of Selling Price

Types	No	Percentage (%)
Wholesale Price	10	25%
Retail Price	24	60%

Local Price	6	15%

Source: Primary data

Figure: 3.10: Types of Selling Price



Source: Primary data

Interpretation-

On the basis of table 3.10 and figure 3.10, reveals that out of 40 respondents 2.4(25%) respondents selling their product on wholesale price, 4.4(60%) respondents sell their product on retail price and 1.8(15%) respondents selling their products on Local price.

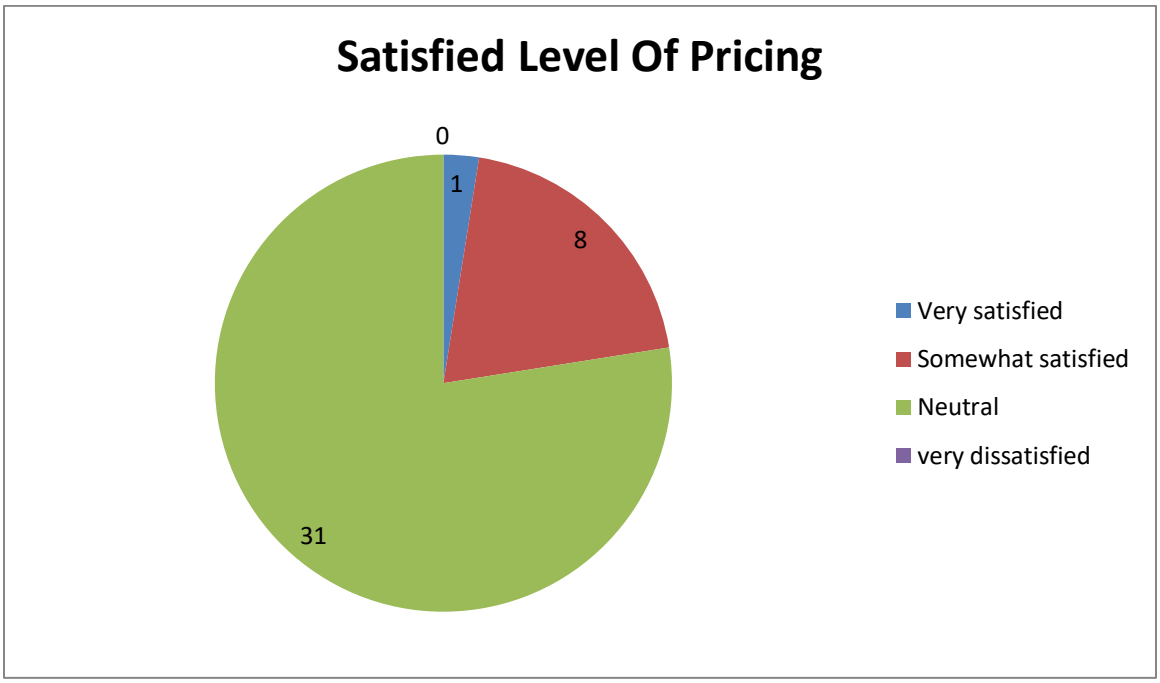
3.11. Satisfied level on pricing

Table. 3.11: Satisfied level on pricing

Satisfied Level	No	Percentage (%)
Very satisfied	1	2.5%
Somewhat dissatisfied	8	20%
Neutral	31	77.5%

Source: Primary data

Figure: 3.11: Satisfied level on pricing



Source: Primary data

Interpretation

From the basis of table 3.11 and figure 3.11, illustrates that out of 40 respondents 1(2.5%) respondent is very satisfied, 8(20%) respondents are somewhat satisfied and 31(77.5%) respondents are neutral in their pricing.

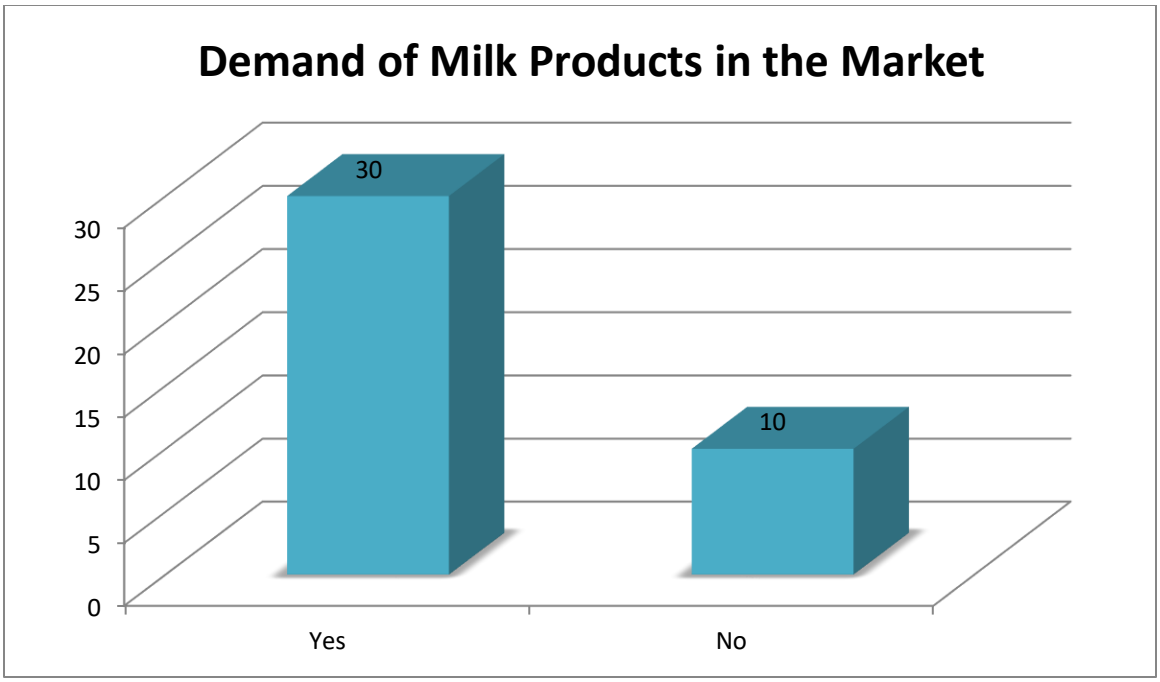
3.12. Demand of milk products in the market

Table 3.12: Demand of milk products in the market

Products Sold	No	Percentage (%)
Yes	30	75%
No	10	25%

Source: Primary data

Figure 3.12: Demand of milk products in the market



Source: Primary data

Interpretation

From the basis of table 3.12 and figure 3.12, reveals that out of 40 respondents 30(75%) respondents sold their all milk product and 10(25%) respondents didn't sold their product.

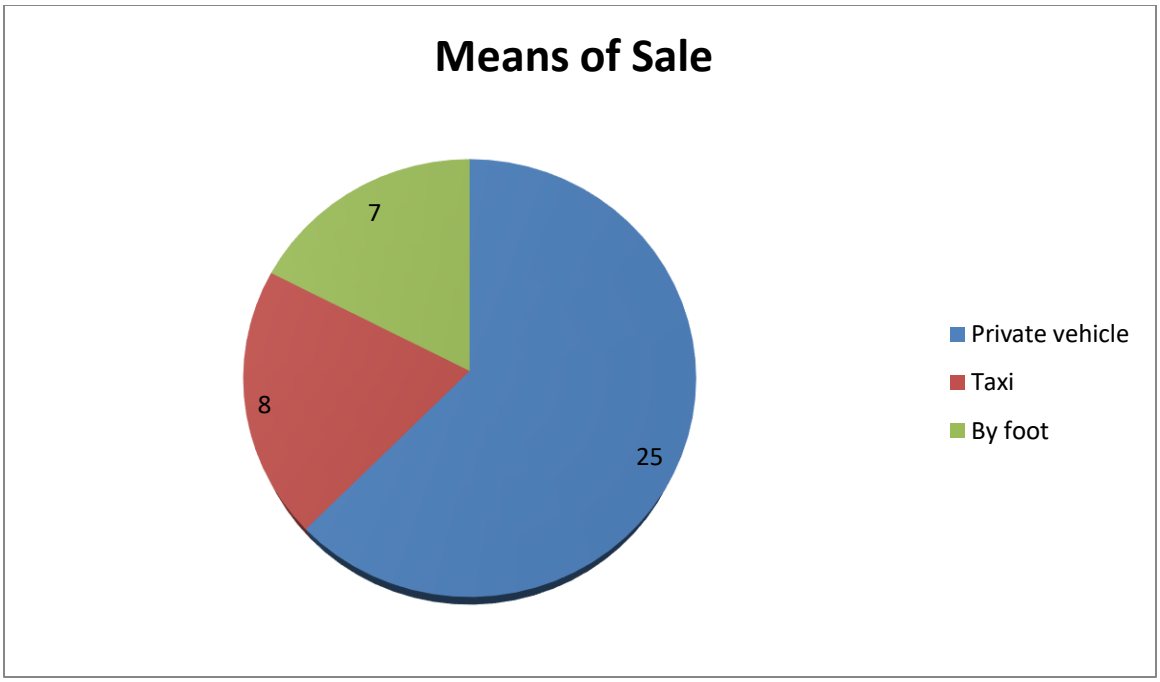
3.13. Means of sale

Table 3.13: Means of sale

Way of selling	No	Percentage (%)
Private Vehicle	25	62%
Taxi	8	20%
By Foot	7	17.5%

Source: Primary data

Figure: 3.13: Means of sale



Source: Primary data

Interpretation

From the basis of table 3.13 and figure 3.13, reveals that out of 40 respondents 25(62%) respondents go to sale their products by private vehicle,8(20%)respondents go to sale their product by taxi and 7(17.5%) respondents go to sale their products by foot.

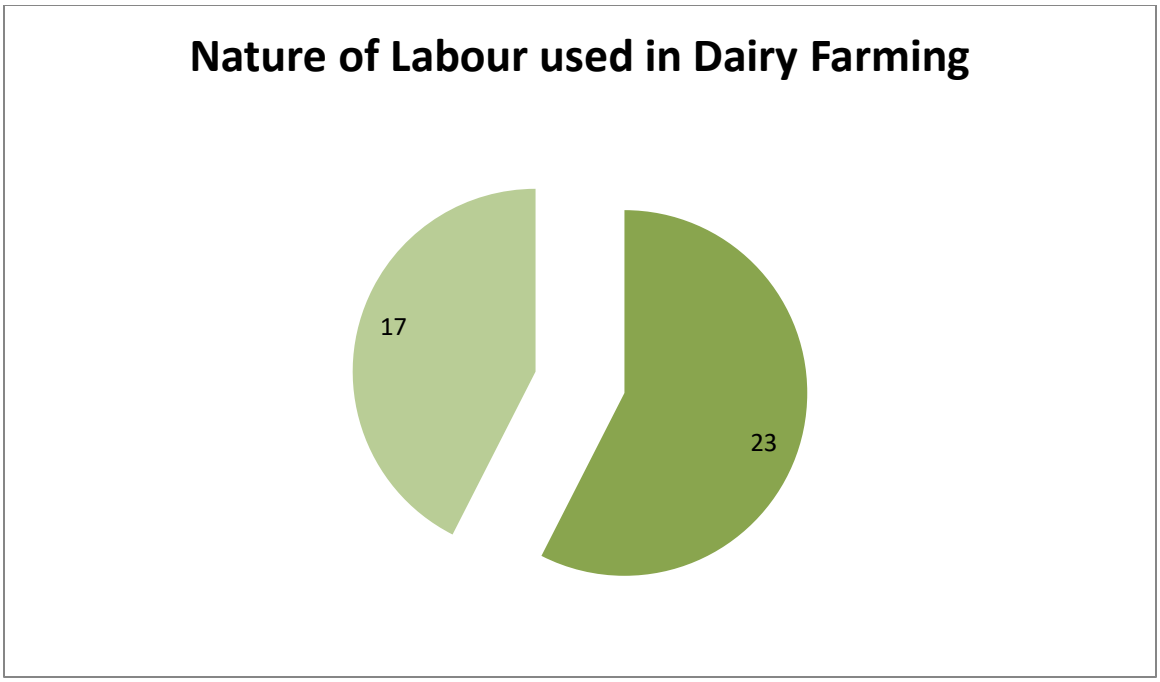
3.14. Nature of labour used in dairy farming

Table 3.14: Nature of labour used in dairy farming

Types	No	Percentage (%)
Internal / Home Labour	23	57.5%
External Labour	17	42.5%

Source: Primary data

Figure: 3.14: Nature of labour used in dairy farming



Source: Primary data

Interpretation

From the basis of table 3.14 and figure 3.14, reveals that out of 40 respondents 17(42.5%) respondents have internal / home labour and 23(57.5%) respondents have external labour.

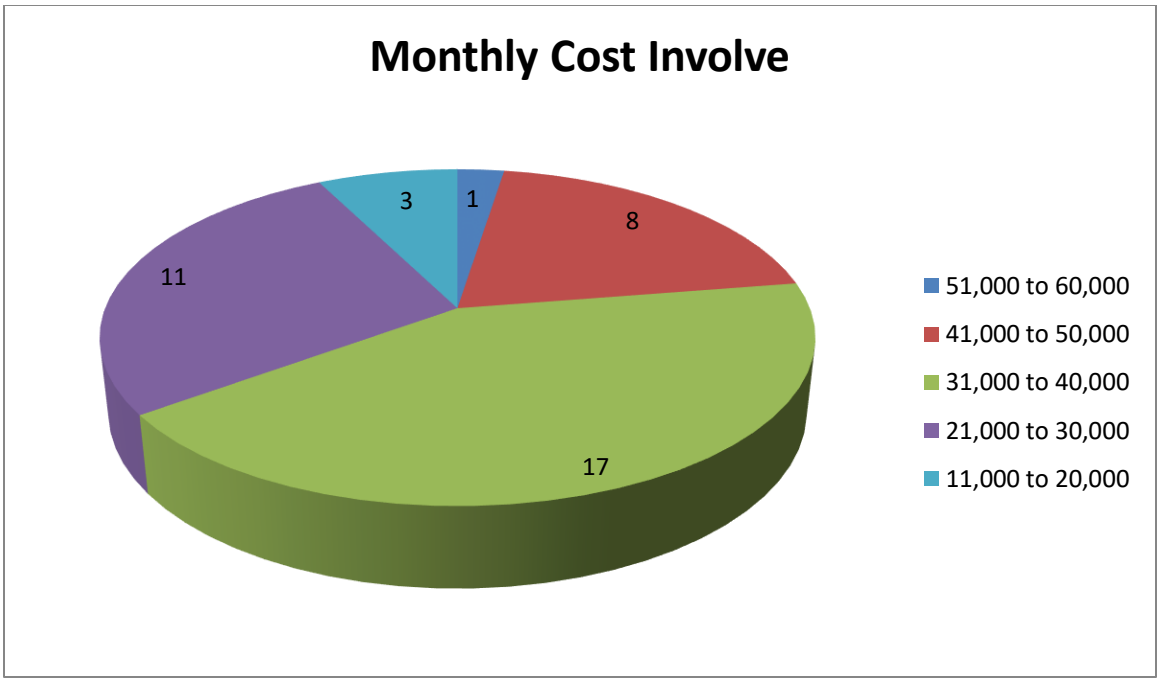
3.15. Cost incurred by respondents for maintenance of dairy farming on monthly basis

Table 3.15: Monthly Cost Involve

Monthly cost	No	Percentage (%)
51,000 to 60,000	1	2.5%
41,000 to 50,000	8	20%
31,000 to 40,000	17	42.5%
21,000 to 30,000	11	27.5%
11,000 to 20,000	3	7.5%

Source: Primary data

Figure 3.15



Source: Primary data

Interpretation

On the basis of table 3.15 and figure 3.15, expos that out of 40 respondents 1(2.5%) respondents monthly cost on 51,000 to 60,000, 8(20%) respondents monthly cost on 41,000 to 50,000, 17(42.5%) respondents monthly cost on 31000 to 40000, 11(27.5%) respondents monthly cost on 21000 to 30000 and 3(7.5%) respondents monthly cost on 11000 to 20000.

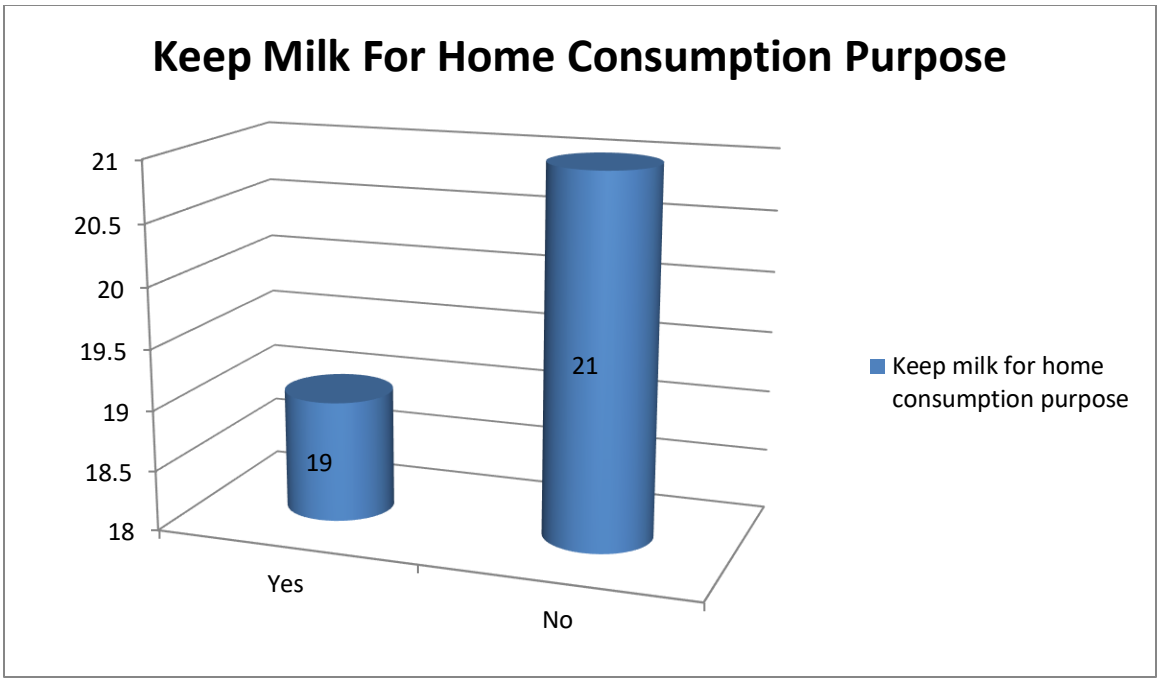
3.16. Keep Milk for Home Consumption Purpose

Table 3.16: Keep Milk for Home Consumption Purpose

Keep Milk for home consumption purpose	No	Percentage (%)
Yes	19	47.5%
No	21	52.5%

Source: Primary data

Figure.3.16: Keep Milk for Home Consumption Purpose



Source: Primary data

Interpretation:

From the table 3.16 and figure 3.16, point up that out of 40 respondents 19(47.5%) respondents keep milk for home consumption purpose and 21(52.5%) respondents didn't keep milk for home consumption purpose.

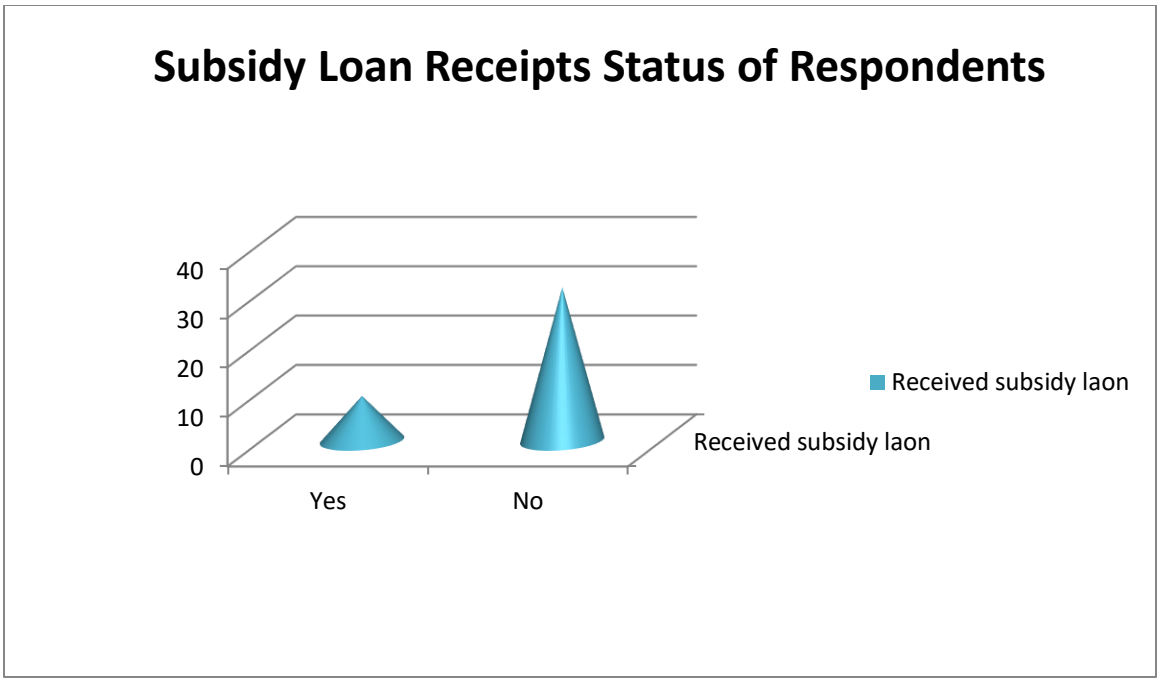
3.17: Subsidy Loan receipt status of respondents

Table.3.17: Subsidy Loan receipt status of respondents

Loan received	No	Percentage (%)
Yes	31	77.5%
No	9	22.5%

Source: Primary data

Figure.3.17: Subsidy Loan receipt status of respondents



Source: Primary data

Interpretation

On the basis of table 3.17 and figure 3.17, point up that out of 40 respondents 31(77.5%) no of respondents received loan and 9(22.5%) numbers of respondents didn't received loan.

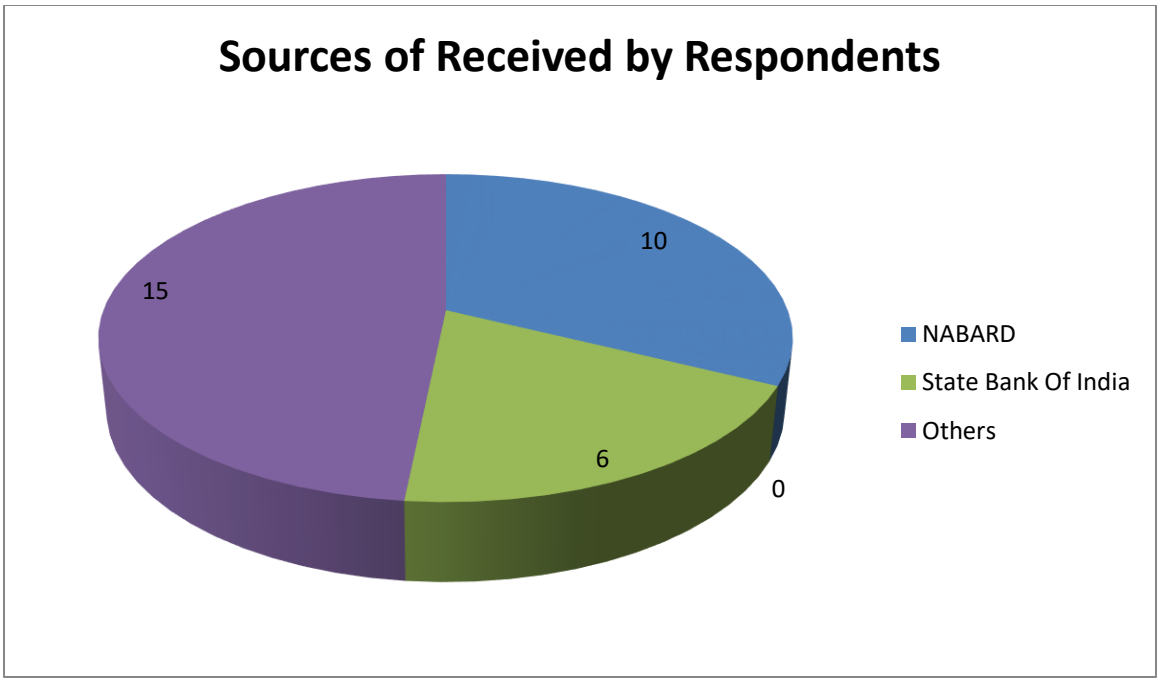
3.18: Sources of loan received by respondents

Table 3.1: Sources of loan received by respondents

Sources of loan	No	Percentage (%)
NABARD	10	25%
State BANK of India	6	15%
Others	15	37.5%

Source: Primary data

Figure 3.18: Sources of loan received by respondents



Source: Primary data

Interpretation

From the analysis of table 3.18 and figure 3.18, illustrate that out of 40 respondents 10(25%) respondents received loan from NABARD, 6(15%) respondents received loan from State Bank of India and 15(37.5%)respondents received loan from others.

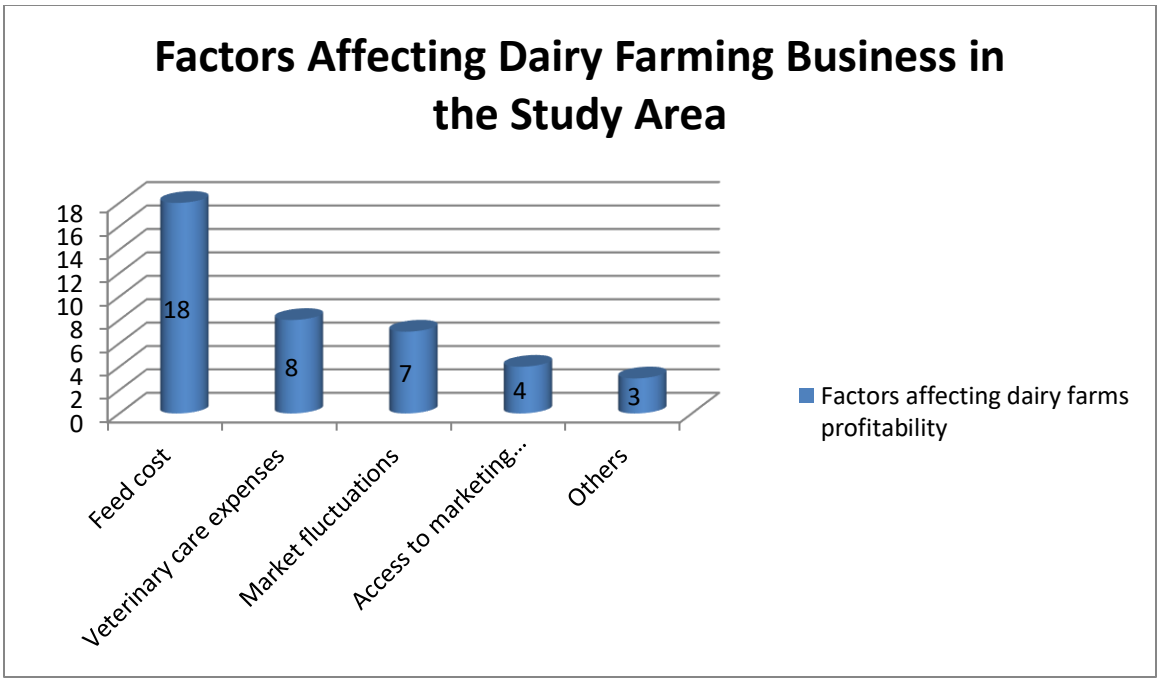
3.19: Factors Affecting Dairy Farming Business in the Study Area

Table.3.19: Factors Affecting Dairy Farming Business in the Study Area

Factors	No	Percentage (%)
Feed Cost	18	45%
Veterinary Care Expenses	8	20%
Market Fluctuations	7	17.5%
Access to marketing Channels	4	10%
Others	3	7.5%

Source: Primary data

Figure 3.19: Factors Affecting Dairy Farming Business in the Study Area



Source: Primary data

Interpretation

From the table 3.19 and figure 3.19, expos that out of 40 respondents feed cost affects 18(45%) respondents, veterinary care expenses affects 8(20%) respondents, market fluctuation affects 7(17.5%) respondents, access to marketing channels affects 4(10%) respondents and others factors affects 3(7.5%) respondents.

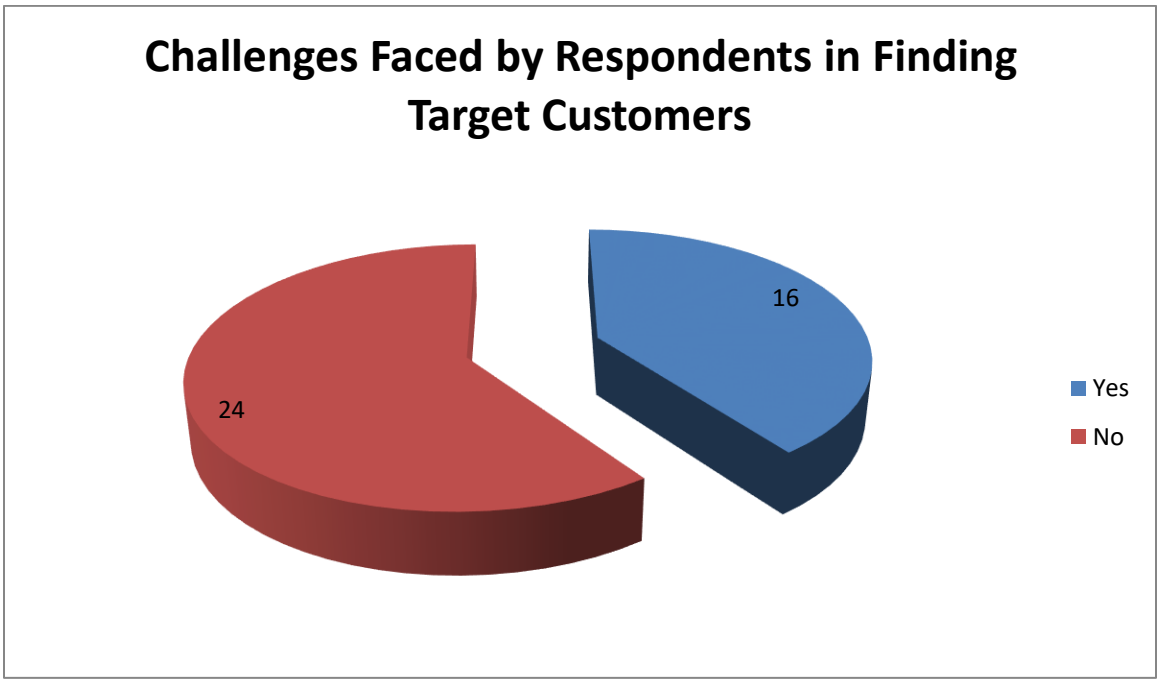
3.20. Challenges faced by respondents in finding target customers

Table 3.20: Challenges faced by respondents in finding target customers

Challenges faced by respondents in finding target customers	No	Percentage (%)
Yes	16	40%
No	24	60%

Source: Primary data

Figure.3.20: Challenges faced by respondents in finding target customers



Source: Primary data

Interpretation

From the table 3.20 and figure 3.20, illustrates that out of 40 respondents 16(40%) respondents face difficulties in finding buyers and 24(60%) respondents didn't dace difficulties.

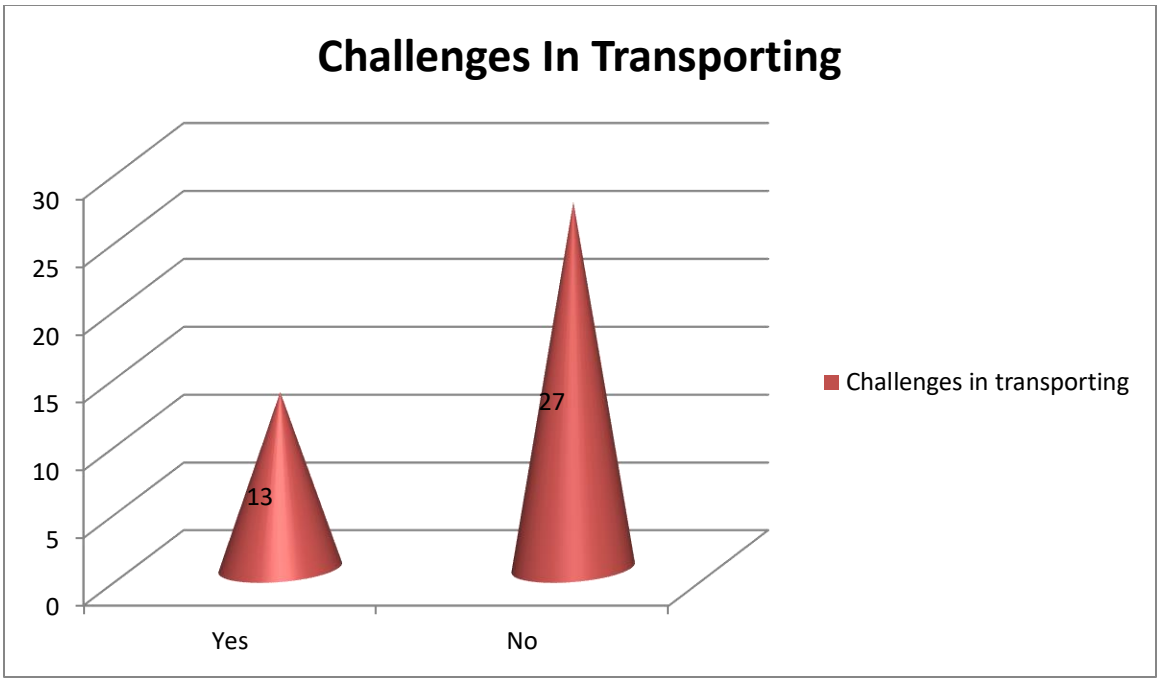
3.21: Challenges faced by respondents in Transporting

Table 3.21: Challenges in Transporting

Challenges in Transporting	No	Percentage (%)
Yes	13	32.5%
No	27	67.5%

Source: Primary data

Figure 3.21: Challenges in Transporting



Source: Primary data

Interpretation

From the table 3.21 and figure 3.21, reveals that out of 40 respondents 27(67.5%) respondents didn't face challenges in transporting and 13(32.5%) respondents face challenges in transporting.

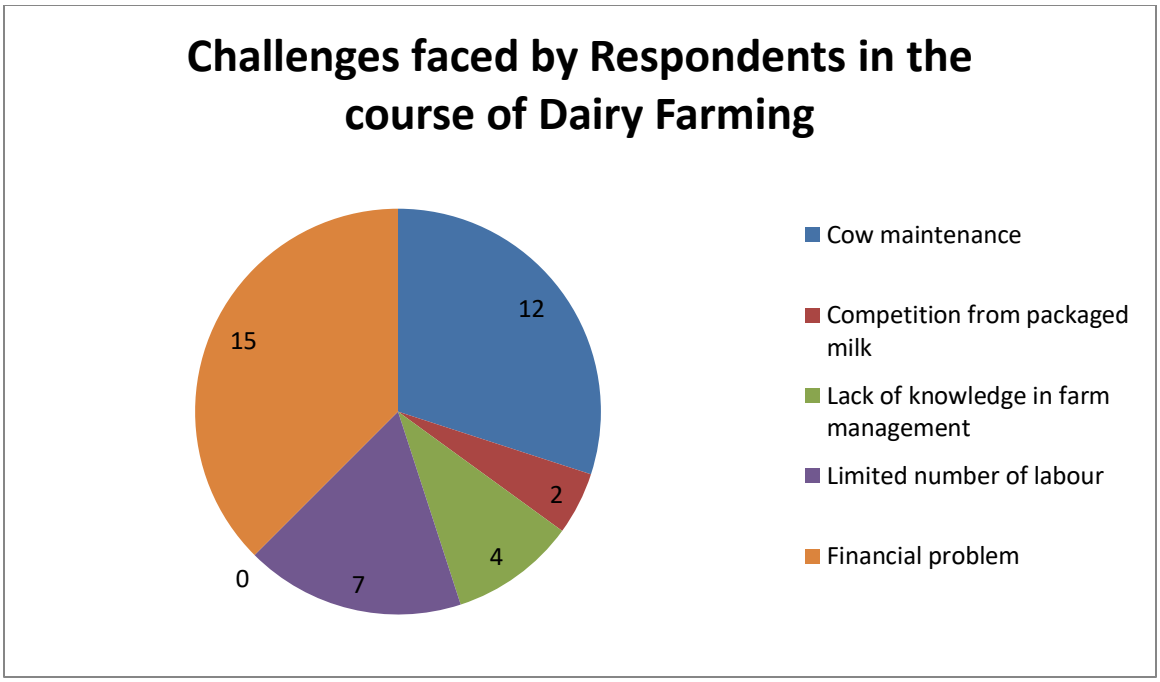
3.22: Challenges faced by respondents in the course of dairy farming

Table 3.22: Challenges faced by respondents in the course of dairy farming

Problems	Respondents	Percentage (%)
Cow Maintenance	12	30%
Competition from Packaged Milk	2	5%
Lack Of Knowledge In Farm Management	4	10%
Financial Problem	15	37.5%
Limited number of labour	7	17.5%

Source: Primary data

Figure 3.22: Challenges faced by respondents in the course of dairy farming



:

Source: Primary data

Interpretation

From the table 3.22 and figure 3.22, expose that out of 40 respondents 12(30%) respondents faced problems by cow maintenance, 2(5%) respondents faced by competition from packaged milk, 4(10%) respondents faced by lack of knowledge in farm management, 7(17.5%) respondents faced by lake of limited number of labour and 15(37.5%) respondents faced financial problems.

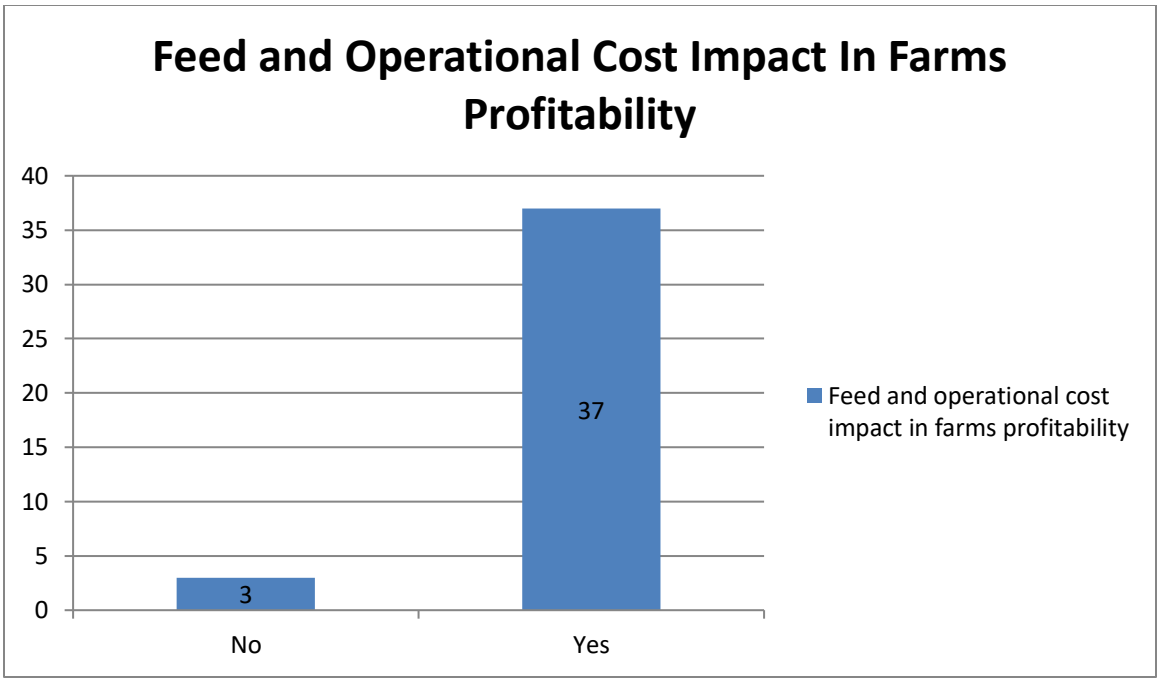
3.23: Feed and Operational Cost Impact in Farm's Profitability

Table 3.23: Feed and Operational Cost Impact In Farms Profitability

Feed and Operation Cost Impact in farms profitability	No	Percentage (%)
Yes	37	92.5%
No	3	7.5%

Source: Primary data

Figure3.23: Feed and Operational Cost Impact in Farms Profitability



Source: Primary data

Interpretation

From the table 3.23 and figure 3.23, illustrates that out of 40 respondents 37(92.5%) respondents have rising feed and operational costs impacting in dairy farms and 3(7.5%) respondents didn't have.

CHAPTER IV- FINDINGS, RECOMMANDATIONS AND CONCLUSION OF THE STUDY

4.1 FINDINGS OF THE STUDY

From the analysis and interpretation of primary data following major findings are made-

1. From the analysis of the interpretation of demographic profile it is revealed that 80% respondents are male respondents and 20% respondents are female and than 7.5% respondents belongs to the age category26-30,17.5% to the category 31-35, 30% to the category 36-40 and the rest 45% to 40 more categories.

2. Among the respondents 40% respondents engaged in their farm less than 5 years, 12.5% engaged less than 11-15 years and 2.5% engaged their farm more than 50.

3. Than, in the study area 25% farmers have 1-3 cattle's, 32.5% have 4-7 cattle's, 27.5% have 8-10 cattle's and 11% respondents have 10 to above. Some causes, the researcher find that many farmers lack of land an due to the reasons, they unable to feed cattle's.

4. In the study 42.5% respondents has owned in Indigenous cow, 25% farmers has owned in Cross Breed, 27.5% has Jersey Breed and 5% has Gir Breed.

5. among those respondents 25% respondents produced milk 6-12 liters on daily basis, 50% produces 13-17 liters and 25% produces 18 to above liters. Further, in milk category 50% respondents produces Raw milk, 5% produces Paneer, 5% produces Ghee, 12.5% produces Curd and 27.5% produces all of above.

6. In the study, the 35% respondents sale their products at village level, 10% to neighbours house, 20% to other centre place and 35% respondents supply to shop their milk products. They limited their market to nearby places because of limited production, its perishability nature and also sometimes limited market demand due to large number of competitors.

7. 50% respondents have responded that they have 1-15 customers, 30% respondents have 16-20 customers, 12.5% have 21-30 customers and 7.5% respondents have 31-40 customers.

8. Other hand 40% respondents faced difficulties in findings buyers because of high competition from local producer, large scale milk producing units like Amul, Purabi, Sitajakhala etc.

9. Among those milk products, 60% products sale in retail price and 25% sale wholesale and local price. The retail and wholesale price of milk is decided by the milk producers whereas local price of milk is decided at market rate which varies place to place.

10. On the other hand, in pricing 25% respondents are responded as very satisfied, 20% of respondents responded as somewhat dissatisfied and 77.5% responded as neutral.

11. From the basis of the study, 75% respondents sold their all milk products. 25% of the respondents are not able to sale their products completely on daily basis because of small market share in the locality. The products not sold in the market are kept from home consumption as responded by the respondents.

12. Among the respondents, 62% respondents go to sale their products by private vehicle, 20% respondent's sale product by taxi and 17.5% respondents go to sale their product by foot. 32.5% respondents revealed that they are facing difficulties in transporting the products to the market because of non ownership of private vehicle, far away of customer's location, limited availability of public transportation, pathetic road condition etc are few to mention.

13. Among the respondents, majority (57% respondents) are employing external labour and 42.5% respondents are employing internal and home labour in their dairy farming business. Thus, respondents are able to give employment to local people apart from self employment. The nature of employment is on regular basis as responded by the respondents.

14.42.5% of the respondents mentioned that they incurred monthly expenses of Rs. 31,000 - 40,000, 27.5% respondents incurred monthly cost of Rs.21,000-30,000, 20% respondents incurred monthly cost of Rs.41,000-50,000, 7.5% respondents incurred monthly cost of Rs.11,000 to 20,000 and 2.5% respondents incurred monthly cost of Rs. 51,000 to 60,000.

15. Among the respondents 47.5% respondents keep milk for home consumption purpose and 52.5% respondents didn't keep milk for home consumption purpose.

16. 77.5% number respondents received loan and among their 25% respondents received loan from NABARD, 15% from SBI and 37.5% respondents received loan from others. Other hand 22.5% respondents didn't received loan.

17. Among, the factors feed cost in their greatest affective factors, 20% respondents have veterinary care expenses, and 17.5% respondents have market fluctuation, 10% have access to marketing channels, 7.5% respondents have other factors. These factors affecting their farms profitability.

18. In the study area 37.5% respondent have financial problem, 30% have cow maintenance problem, 17.5% have limited number labour, and 10% have lack of knowledge in farm management and other 5% have competition from packaged milk.

4.2 Recommendation

The following recommendations are given for dairy development in Pub-Nalbari Block-

a) Livestock management arrangement for animal feed should be made during months. There is a need to established fodder banks at strategic locations for providing fodder during emergencies. On a fixed day the Veterinary doctor should visit the village level and check up all the animals. For this the department should assist.
b) It is suggested to follow the natural feeding for this sufficient training should be important at regular intervals of time.
c) The available quantity of milk should be fixed season wise.
d) The sale price has to be improved, as the monthly expenses are higher according to the sale price.
e) There should be a monthly meeting at the village level where the people should be providing proper guidelines to increase milk production. Dairy farmers should focus on increasing milk production regarding animal husbandry focus should be on increasing festivals, exhibitions etc.

f) The indigenous cows are poor reproductive efficiency. All the breeds of livestock are native to Assam. Efforts are necessary to upgrade the indigenous cattle through infusion of Indian breed of cattles.

g) The production of milk depends on the availability of quality feed and fodder. Good quality grass-fodder helps increased production of milk at a separate rate. The cultivation of quality grass fodder is rare and the quantity is inadequate. Because the smaller land holding are devoted to cultivation of food crops on first priority and the cultivation of fodder gets lower priority.

h) Focus has to be given on value added products region wise and had to follow consumer's tests and preferences. To popular wise products like butter, paneer, lassi in the rural areas, a regular supply of their products was required. These could be started by providing subsidized sale of refrigerators to the societies for keeping these products.

i) Motivations at large scale should be done so that unemployed youths are to achieve these objectives govt. should take initiatives at different level specially pestering and announcing subsidy and awards to the dairy farmers.

4.3 CONCLUSION

There is enough scope of dairy development in Pub-Nalbari Block, people are accustomed in rearing cattles and it is one of the most important tradition businesses of the people of Pub–Nalbari block. Dairy farming can earn the livelihood of the people. Available land exists in Pub Nalbari Block. There is enough scope of fodder cultivation. There are number of problems of dairy farming especially in production and marketing considerations. If there problems are solved it should be developed in future. Main importance is given only in local cow-rearing. But, gradually and steadily educated unemployed youth are coming to start dairy activity as their main occupation. This is a good symptom to reduce un-employment problems. So dairy farm plays a pivotal role in our society. But it is seen that the existing dairy farmer are facing number of problems. There problems are related to different angles like management of scientific dairy farm. Reproduction, artificial insemination, population genetics, method of breeding, housing and hygiene and record keeping etc. These problems can be solved by frequent training given to the farmers by govt. functionaries so that they can be motivated. They are also facing some

natural problems like frequent flood during rainy season, deficiency disease caused by deficiencies of certain nutrients like vitamins and minerals in the diet entry of poisoning, arthrose, and ring war foot and mouth disease. These problems exist due to climate conditions and humidity etc.

It is therefore, expected that the related problems of a dairy farming will be solved with active participation of farmers and govt. initiatives at different role in the economy of the district.

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