DISTRIBUTION AND PRICING OF MILK AND OF MILK PRODUCTS IN AIZAWL CITY OF MIZORAM: A CASE STUDY OF MULCO

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MARINA LALRINTLUANGI

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DEPARTMENT OF ECONOMICS

AIZAWL, MIZORAM- 796004, Phone: 0389-2330708, Fax: 0389-2330709

Dr. LALRINTHANGA **8731916129(M)**

Associate Professor

Department of Economics

CERTIFICATE

This is to certificate that the dissertation entitled, **'Distribution and Pricing of Milk and of Milk Products in Aizawl City of Mizoram: A Case Study of MULCO'** submittedby Marina Lalrintluangi has been written under my guidance. This dissertation is the result of her investigation into the subject sited above and was never submitted to any other University for any research degree.

(Dr. Lalrinthanga)

Associate Professor

Department of Economics

Mizoram University

MIZORAM UNIVERSITY

TANHRIL: MIZORAM

2016

DECLARATION

I, Marina Lalrintluangi, hereby declared that the subject matter of this dissertation entitled **'Distribution and Pricing of Milk and of Milk Products in Aizawl City of Mizoram: A Case Study of MULCO'**is the record of work done by me. To the best of my knowledge and believe the contents of the dissertation is not based on any work done by others scholars for the degree of M. Phil or else and that this dissertation has not been submitted by me or any other for research degree in any other University/Institutions.

This is being submitted to Mizoram University for the degree of Master of Philosophy in Economics.

(MARINA LALRINTLUANGI)

Scholar

(PROF.LIANZELA) (DR.LALRINTHANGA)

Head of Department Supervisor

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CHAPTER-1

INTRODUCTION

1.1. INTRODUCTION

Dairy farming involves engagement in long-term production of milk, which is processed either on the farm or at a dairy plant for eventual sale of a dairy product

In India, dairying has been part of agriculture for thousands of year, but historically, it was usually done on a small scale on mixed farms. Most of the milk in India is produced in villages. About 56% of milk is available as marketable surplus for urban areas. Fairly large quantity of milk is converted to local milk products (khoa, paneer, butter, ghee etc). The share of organized sector is small. There is still a very large portion of milk market in the hands of unorganized sector which has adverse effect on the farm-gate price of the milk. In Government/cooperative sector, almost 80% milk is marketed as liquid milk and only 20% as milk products. While it is reverse in the private sector - only 30% is marketed as liquid milk and 70% as milk products with value addition.

Milk production in India had remained more or less stagnant from 1950-1970. Verghese Kurein (26 November 1921-9, September 2012) an Indian social entrepreneur who was also known as the Father of White Revolution in India for his Operation Flood which was launched in 1970, project of the National Dairy Development Board(NDDB) was the world's biggest dairy development program which made India from milk deficient nation to the world's largest milk producer surpassing the USA in 1998, and made dairy farming India's largest self sustainable rural employment generator by following 'Amul Model' the three tired cooperative structure of village level dairy cooperative societies, district level cooperative milk union and state level cooperative milk marketing federation.

For the last 40-50 years, many development programmes has been taken up by Centre and State Government. But during the Ninth Plan investment in the this sector decreased significantly compared to the Eight Plan. Out of 168 Milk Unions, 34.5 percent were running in loss as of March 2000. The Government policy in the dairy sector has been to give preference to the establishment of milk processing plants linking rural milk producers to urban consumers through a network of cooperatives.

Restrictions on establishing new milk processing capacity under Milk and Milk Products Order (MMPO) has now been removed. No policy measures have been undertaken so far to give a fillip to the unorganized sector involved in the production of Indian dairy products (like ghee, paneer, chhena, khoa etc), which have tremendous potential in the export market in Asian and African countries.

The Economic Survey 2015-16 presented in the Parliament by the Union Finance Minister Arun Jaitley emphasizes that the Indian agricultural system is predominantly a mixed crop-livestock farming system, with the livestock segment supplementing farm incomes by providing employment, draught animals and manure.

India ranks first in milk production, accounting for 18.5 % of world production, achieving an annual output of 146.3 million tones during 2014-15 as compared to 137.69 million tonnes during 2013-14 recording a growth of 6.26 %. Whereas, the Food and Agriculture Organization (FAO) has reported as 3.1 % increase in world milk production from 765 million tones in 2013 to 789 million tones in 2014.

The per capita availability of milk in India has increased from 176 grams per day in 1990-91 to 322 grams per day by 2014-15. It is more than the world average of 294

grams per day during 2013. This represents a sustained growth in availability of milk and milk products for the growing population Dairying has become an important secondary source of income for millions of rural households engaged in agriculture. Out of the total annual milk production in India, Uttar Pradesh which is known as the most populous state in India contributed relatively much higher than the other state which was 24,193.90. Daman and Diu contributed only 0.82(000MT) which was the lowest among the state in India. Mizoram contribution was not much only15.30 which was below the average.

1.2. IMPORTANCE OF MILK COOPERATION

Milk is rich in many nutrients like Calcium, Vitamins, Carbohydrates, Protein, Minerals, etc that are essential for good health. It renews cells, fight diseases, build muscles, etc. Milk is processed on the basis of the maximum content of fat and solid not found (SNF). There are different types of milk depending on their fat content like standardized milk containing 4.5 percent of fat and 8.5 percent of SNF, whole milk containing 3.25 percent of milk fat and 8.25 SNF, reduced-fat milk 2 percent milk fat, low-fat milk containing only 1 percent fat milk, skimmed milk contain only about 0.1 percent and it has about half the calories of whole milk. Whole milk is best for infants and young children up to 2 years because of relatively high fat content. Skimmed milk is the best choice for adults, and is the only type of milk that should be consumed by people on strict low-fat diets.

In order to make milk more available in the market, there should be a proper strategy in the distribution and marketing of milk so that every people living in the country can easily access milk and milk products and hence become more healthy and

happy. And also the price of a product in the market is an important factor influencing the consumer demand. Hence to be marketable, a dairy product must be competitively priced. This implies that the costs involved in raw material procurement, processing, packaging, storage, marketing and distribution must be kept as low as possible. It is also necessary to integrate the production of milk by different farmers and also should be standardized at a high volume to sell in the national market.

In this filed, MULCO has been playing a crucial role, it is clear from the fact that from 1983 till today they operate for the welfare of the people(consumers) providing fresh and hygienic milk as well as milk products, facilitating the milk producers registered under them. Besides this, as a result of the perishable nature of milk dairying requires a number of services. MULCO thus generate significant employment opportunities to uneducated and educated labour in Aizawl. The main role of dairying in the economy of Aizawl is its contribution to the livelihoods of the many people engaged throughout the value chain and to the nutritional well-being of many rural communities. It has the potential to contribute more to the development goals.

This present study mainly focused on the role of MULCO (Mizoram Milk Cooperative Union Limited) with respect to their distribution and marketing in Aizawl City to identify how far it has been contributed for the betterment of the economy in elevating poverty and unemployment and also to identify their progress report in the procurement of milk.

1.3. SIGNIFICANCE AND SCOPE OF THE STUDY

Milk is one of the most important items of common vegetarian diet of Indian people. With rapid industrialization, economic growth and 250 million potential economically strong domestic consumers of milk and milk products, there is a very strong potential for future growth of the industry. It has also been considered as one of the activities aimed at alleviating the poverty and unemployment especially the rural areas in the rain-fed and drought-prone regions. The development of livestock is therefore vital importance for economic development of the region especially in the rural areas. The state Government also considered as an alternate to Jumming. Since agriculture is seasonal in character, employment becomes seasonal resulting in the failure to provide an annual regular income. Contrary to this, livestock farming and animal husbandry provides the possibilities of providing employment throughout the year in terms of milk or any of its byproducts. Being used as a medium of exchange in the past, it still occupies a place of social prestige and economic strength in the rural lives of the Mizo.

The study thus focused on the pattern of distribution and marketing of milk and other milk products of MULCO Ltd.in Aizawl city. Aizawl is the capital of the state of Mizoram in India. With a resident population of 293,416, it is the largest city in the state. It is also the centre of administration containing all the important government offices, state assembly house and civil secretariat. In Aizawl there are 2 milk processing units, MULCO , private firm KK Dairy and many more unorganized milk distributor in and around Aizawl city.

1.4. OBJECTIVES OF THE STUDY

1. To examine the role played by MULCO in the distribution and marketing of milk and of milk products.

2. To identify the various commissioning agents of milk and their roles in Milk marketing Aizawl city.

3. To study the growth rate of procurement and distribution of milk by MUCLO.

1.5. HYPOTHESIS

1. MULCO provides significant employment opportunities for uneducated persons.

2. Procurement of milk by MULCO has been significantly increasing.

1.6. METHODOLOGY

Mizoram Milk Producers' Cooperative Union Limited was chosen for the study because it is the oldest and the most stable milk processor and distributor in Aizawl. Both primary and secondary data are used in the study. Primary data are collected through preparing structure questionnaire based on the objectives of the study and personal interviews and discussion with the office bearers, customers including 30 respondents from different zone, North, East, South, West, and milk agents selecting 50 respondents which are considered as most representatives of the population(204). The secondary are collected from various source like MULCO Office, located at Tuampui, Aizawl, Mizoram statistical report, etc. Structured questionnaire based on the objectives of the study was prepared and personal interviews were also conducted.

The data so collected from different sources were analyse by using some relevant statistical tools.

1.7. CHAPTERIZATION

Chapter 1: Introduction

Chapter 2: Review of Literature

Chapter 3: An Overview of Milk Distributors' and their Role in Aizawl City.

Chapter 4: An Analysis on the performance of MULCO on Milk Marketing.

Chapter 5: Major Findings and suggestions.

CHAPTER-2

REVIEW OF LITERATURE

2.1. INTRODUCTION

Milk cooperative was established by the Government of in India in 1960 under the operation flood. Due to this project India became the largest producer of milk in the whole world. The establishment of milk cooperative in many states has a favorable impact on their growth and development of the economy. Accordingly, several research papers and studies could be seen in these areas.

Gaumnitz (1955) state that policies and standards for pricing market milk should be more definitely stated the Agriculture Marketing Agreement Act and in the state milk control laws. Much fundamental research and a great deal of education are needed concerning the relationship of price and other factors to production and consumption of milk. There is also need of objective analysis and evaluation of alternative methods of supplying fluid milk (and fluid cream) to city markets in adequate qualities at all times. Marketwise pools are essential for orderly marketing in many situations. Such pools much be protected from overloading through strict requirements for pool participation, by the use of marketing quotas, or perhaps by both of these devices.[1]

Whyte et.al. (1968) mention that through the establishment of city milk plants it was hoped that milk already produced could be collected and channeled in increasing quantities. By means of refrigeration and modern transport it was hoped that the new plants could reach far out and obtain low priced milk from remote rural areas. It was

[1] Gaumnitz E.W(1955), 'Economic Problems Associated with Milk Marketing Order'

also hoped that these plants could eliminate the exploitation of farmers by giving them fair price and benefits of modern marketing systems and could also do away with widespread adulteration and provide cheaper wholesome milk for the urban masses.[2]

Larkin et.al. (1977)[3] state that whole/separate milk rearing involves a diet based on whole milk for the first 2 months or so of life with a gradual replacement by separated milk, meal, and roughage. The method described here has been used successfully for several years by one breeder of pedigree Guernsey in the highlands of Kenya. It has its particular features but can be regarded as a guide for more general use. It is certainly not necessarily the most economical way to rear calves in all circumstances. For 4 days from birth the calf is left with its dam which is stalled, the calf freely calf is sucking colostrums. From day 4 onwards the calf is fed according to the following schedule, the quantities indicated being daily allowances given in two feeds each day. Water is added to the milk feeds in the amounts indicated, in the belief that some dilution of the high fat of Channel Island milk may be desirable to help prevent digestive upsets and the mixture I fed at body temperature. If hot water be used to dilute the milk it provides an easy way of raising the temperature of the milk back to body heat before feeding the calf.

Saxena et.al. (1978) in their study in Mehasana district of Gujarat stated that dairying has changed the village economy to such an extent that more than half of the cash income earned by milk producers in the villages comes from that occupation alone.

[2] White R.O et.al (1968),'The Planning of Milk Production in Idia', Orient Longmans, Bombay Calcutta Madras New Delhi.

[3] Larkin P.J et.al (1977), 'Milk and Beef Production in the Tropics', The English Language Book Society And Oxford University Press.

Uotila et.al.(1988)[4] mention that Sri Lanka has been actively encouraged by the government agencies concerned with livestock development from about 1977 onwards. This enthusiasm was generated by the successful achievements in neighbouring India. The Ministry of Rural Industrial Development, the department responsible for livestock development, has played a significant role in the development of milk producers' cooperatives since September 1978.

One of the weaknesses of the dairy cooperative movement in Sri Lanka, however, is the high degree of dependence on government officials for management and operational control. In the larger cooperative societies and unions, there has been a higher number of nominated government officials although the elected members are in the majority. The presence of government officials on management committees is welcomed by the members, since it leaves them with less responsibility, and undoubtedly the principal factor of the success of dairy cooperatives is their interest, enthusiasm and integrity. However, this in turn has inhibited the development of potential leaders from among the rural dairy farmers.

A fundamental shift in government policy concerning the dairy sector was made in 1985 as a further development of the World Bank-funded dairy project that aimed to privatize the collection, processing and marketing of milk. The policy change was jettisoned in 1986/87, however, and the government once again permitted support to dairy cooperatives and the formation of new ones. In actual fact, privatization of the dairy industry faced opposition and failed to make an impact since no increases in producer prices or milk production were apparent. At present, the establishment and strengthening of dairy cooperatives is being actively encouraged by all parties concerned, including donor agencies.

[4] Uotila, M et al(1988), 'Dairy Development through Cooperative Structure', www.fao.org/docrep/T3080T09,htm.

The Government of Indonesia has very rightly placed great reliance on the dairy cooperative movement as a vehicle for its ambitious dairy development programme. There are problems to be addressed, however, including: an insufficient number of dairy cattle; inefficient management; low standards of hygiene on farms; inadequate nutrition for cattle; and low consumption of milk by the population. Moreover, the government cannot maintain indefinitely the expensive policy of importing heifers in large numbers and, therefore, it must give attractive incentives for the adoption of heifer-rearing schemes by the cooperatives. At the same time, male calves should be reared for fattening in other localities on a feedlot system for the meat industry. These can be fed on agro-industrial by-products such as molasses from the sugar-cane industry and fruit-cannery waste products. Activities such as these should also be handled by the village cooperatives as they will provide additional income.

The low milk consumption by the public is a matter of concern for the health authorities. As it is not easy to change the dietary habits of adults, a concerted effort should be made with schoolchildren by expanding the current limited milk-feeding programmes in schools. Members of dairy cooperatives must be convinced of the need to retain some of the milk produced on their farms for their children. The present tendency is to sell all the milk produced to the cooperative in order to get the maximum income. The farm families need to be educated so that they understand the important role of milk in the diet of growing children.

The cooperative structure in Myanmar mainly covers the technical activities of milk collection, processing and marketing through livestock enterprises under the Ministry of Livestock Breeding and Fisheries. The cooperatives collect milk from farmers and, in return, supply them with inputs.

The government is currently encouraging farmers to act cooperatively, which, it is hoped, will lead to a farmer-operated and -controlled cooperative network in the future

The principal organization for dairy development in Nepal has been the Dairy Development Corporation (DDC) established under the Corporation Act in 1969. Most milk-producing farmers are small landholders who have been organized to form producers' associations, which channel milk to DDC-run cooling centres. Today there are 600 milk producers associations (MPAs) assisting approximately 60000 farmers in supplying milk to the DDC. Twenty MPAs have been structured to function as cooperatives through the initiative of the DDC, which has legally recognized them as being operated by farmer members. Under the new Cooperative Act, passed in 1992, the National Cooperative Development Board has been established to strengthen the cooperative movement in the country.

In order to coordinate private - and public-sector dairy development, the National Dairy Development Board (NDDB) has recently been constituted. The board will initiate intensive training of MPA farmers and committee members at the field level so that they fully understand their rights, obligations and management discipline. A progressive transfer of MPAs to cooperatives will be encouraged through necessary activities coordinated by the NDDB, which will facilitate the participation of individual milk-producing farmers in the ownership of milk-processing plants.

Since the mid-1970s attempts have been made to establish dairy cooperative societies in different parts of Pakistan, however, these attempts have not resulted in a comprehensive network of cooperatives as expected. Reasons for this are considered to be private-sector intervention and the poor infrastructure in many milkshed areas.

The same problems have also hampered the formation of village livestock associations.

So-called "farmers' committees" are currently being established in all provinces in Pakistan. These committees offer input services to farmers and collect milk from them, delivering it to the chilling centres managed by the Pakistan Dairy Association for further distribution to various milk processors. It is hoped that Pakistan's newly organized dairy industry will reduce the dominance of the traditional milk traders (middlemen) so as to increase farmers' incomes and provide urban consumers with better quality dairy products.

In developing countries in Asia and the Pacific Region, the dairy cooperative has been recognized as an important means of organizing the supply of agricultural inputs, processing and marketing agricultural produce and providing agricultural credit, among other related activities. It has proved to be a strong economic institution and a vehicle for improving the condition of the impoverished rural population. Cooperatives provide farmers with an organizational arrangement at the grassroots level to assist them in planning, decision-making and implementing schemes that involve them and their families and that are designed to raise their socioeconomic standards.

The common need of milk producers is to obtain a fair price for their milk and this is fulfilled through collective marketing. Milk is considered to be one of the most sensitive agricultural commodities, requiring special and timely care, and this can be provided conveniently as well through the collective operation of cooperative dairy societies. Apart from the collection and marketing of milk, other services, such as dairy inputs, extension services, veterinary health care, artificial-insemination services, provision of animal feed, fodder seed, planting material, fertilizers and

credit, and training and education, can also be provided through cooperatives. These would act as business associations owned and operated by members for their entire benefit.

Many countries are attempting to increase livestock and especially milk production by assisting small-scale farmers, since they are the most numerous and poorest of the population, and very often also landless. Such a policy has a social as well as a commercial purpose since while it provides rural employment, more cash income and diversification away from traditional crop production (by-products), it also enhances the utilization of potential family labour. The farmer cooperative system has proved to be an effective vehicle for livestock development in general and for dairy development in particular in rural areas.

Banerjee(1988)[5], said that Operation Flood may be considered the central event of twentieth-century dairying in India. An analysis of the lessons learned through the implementation of the programme should be useful for those involved in formulating dairy development policies and programmes for the developing nations of Asia and Africa.

The network of cooperative institutions created through the Operation Flood programme now comprises 70000 dairy cooperative societies in 170 milksheds, encompassing 8.4 million milk-producer families (Figures 1 to 3). Average milk procurement by these cooperatives has now reached some 12.3 million kg per day (Figure 4), of which 8.2 million litres are marketed as liquid milk, while the remainder is converted into products such as milk powder, butter, cheese, ghee and a wide range of traditional milk products. Milk-processing capacity of approximately 15.6 million litres per day, chilling capacity of 6.5 million litres per day and milk

[5] Banerjee, A(1988), 'Dairy System in India', www.fao.(org/AGA/FRG)EEDback/war/t3080b/t3080b07.htm

powder production capacity of 726 tonnes per day have been established through the programme.

One of the challenging aspects of dairy development in a tropical or subtropical country is the movement of milk over long distances. In Operation Flood, this has been made possible through the operation of about 140 insulated rail milk tankers, each with a capacity of 40000 litres, supplemented by another 25 rail tankers of 21000-litre capacity. Approximately 1000 other insulated road milk tankers operate throughout the country as well. This has enabled the operation of a national milk grid, balancing regional fluctuations in milk procurement and demand-and-supply gaps resulting from concentrated production of liquid milk in selected milksheds. To balance seasonal variations in milk supply and demand caused by low milk production during the summer months, a large milk powder storage capacity has been created for buffer stocking.

The investment and achievements in modernizing the Indian dairy industry have had a major impact on milk production. Annual production, which had stagnated to between 20 million and 22 million tonnes during the 1960s, has steadily increased to around 59 million tonnes (Figure 5), an annual growth rate of about 7.8 percent. Per caput availability of milk, which had declined consistently during the two decades between 1951 and 1970, dropping to 107 g at the start of Operation Flood, is now 187 g per day, despite a substantial increase in population. Had family-planning programmes achieved the same success as Operation Flood, the per caput consumption rate would be comparable to all but those of the leading dairying nations.

Commercial imports of dairy commodities were a regular feature in the 1950s and 1960s, comprising 50 to 60 percent of the dairy industry's total throughput. Today,

imports of dairy commodities are restricted to those donated by the EEC for implementing Operation Flood (Mielke, 1993) and their percentage of the total dairy throughput is negligible. All these developments have helped raise India to the rank of the second-largest producer of milk in the world, next only to the United States.

A number of programmer and policies have played a role in this success. Certainly, the introduction of modern technology, both at the farmer level and in the processing of milk and products, has been important. Similarly, establishing an urban market has provided the stability necessary to encourage farmers to invest in increased milk production. The induction of professional managers to serve farmers has reversed the usual pattern of farmers as supplicants and officials as "benefactors". Perhaps most important, however, is the cooperative structure itself. By giving farmers command over the resources they create, Operation Flood has ensured that they receive the maximum return from each rupee spent by consumers on milk and milk products, and it is this that has provided the incentive on which the growth of the dairy industry has been based.

The success of Operation Flood has resolved many difficult issues relating to development. It has demonstrated how food aid can be used to enhance domestic production if administered with care. It has also shown how technology can be harnessed so that neither the dependence on imported technology nor its capital intensity become counterproductive. Some of the dairy plants set up by NDDB during the implementation of Operation Flood are based on the latest technology and are comparable to those in advanced countries. The unique cooperative infrastructure with which NDDB works makes the adoption of technologies and the dissemination of knowledge relatively easy, and this has enabled Operation Flood to facilitate the application of modern technologies to enhance milk production.

Okwenye (1987-82)[6] in his study on Ugandan dairy industry mention that what has been achieved so far in the rehabilitation of the Ugandan dairy industry is only a beginning, adequate to serve as a basis for future sustainable development in the sector. The opening up of the sector to private participation is a welcome move but much remains to be done to strengthen farmers' initiatives in milk production and marketing and to relate extension, training, breeding policies, veterinary services and research to farmers' needs. New proposed institutions such as the Dairy Board and a restructured Dairy Corporation are yet to emerge and, in order to give legal effect to the institutional changes, the old 1967 Dairy Industry Act still needs to be amended

Rangkneka et.al.(1988) [7]his initial results of the study indicate that the sharing of various management operations varies between regions, communities and economic groups. By and large, women from rich farming families do not undertake any work directly; they hire labour for most jobs. In the middle-income group, particularly in high castes, indoor jobs such as feeding and milking are carried out by women, while outdoor jobs such as the selling of milk and taking the animals for artificial insemination or other treatments are done by men. Among the pastoralist families studied (Rabari-Bharwad), it is interesting to note that their own animals are managed only by the women, while the men are engaged in looking after other farmers' animals. Grazing is the only operation shared by the men and women.

Among the tribal families studied, women carried out all of the management operations except in one village in Udaipur, where men mostly undertook activities such as milking, bringing in fodder and breeding. Watering, calving and the administration of medicine were shared activities. The cultivation and harvesting of

[6] Okwenye, A,A(1987 to 82), 'Rehabilitation of the Dairy Industry in Uganda', www.fao(ag/AGAP/FRG)FEEDback/war/t3080b/t3080b04.htm

[7] Rangneka S et al(1988),'A Study on Women in Dairy Production', www.fao.(ag/AGAP/FRG)EEDback/war/t3080b/t3080b0m.htm

fodder and other crops was also the men's job, although fodder cultivation is not common in these underdeveloped villages.

Considerable variation was observed in job sharing. Efde (1988) studied variations in work sharing between the poor and others and between villages close to and far from city areas. She contends that in the villages close to cities most men go out to work in the city and hence women take on the major burden of livestock rearing. In a study from Bangladesh reported by Banu (1987) it is indicated that most indoor jobs of cattle management are done by women. She also points out that, in the absence of capital, women keep livestock through a share system. Livestock are an important source of income for poor rural women, in addition to being of high nutritional value

The results of the survey revealed that enormous damage and defects occur before, during and after slaughter, all contributing to the low quality of hides. It should be noted that this study only dealt with visible signs of damage, no microscopic investigation was attempted. Many of the defects observed could be prevented by a joint effort of the different responsible bodies. Based on the results of this survey, the following practical solutions are recommended:

- livestock owners should be properly trained and the veterinary extension services and relevant measures expanded and strengthened to improve the quality of hides and skins;

- the general hygiene of the slaughterhouses should be improved and the existing facilities used for line slaughtering instead of flaying on the floor; necessary managerial action must be taken with regard to disinterested and inexperienced labourers who participate in the handling and slaughtering processes.

Prasad (1991)[8] mention that the price of baby-food(Lactogen) is lower by 4 percent in Aizawl as compared to Silchar. This is because for the agency goods, the agents need not to pay taxes at Aizawl and this exemption outweighs the transport cost.

Thomas et.al.(1991[9]) stated that dairying plays and is playing a vital role in improving the economic conditions of the village poor and it would bring further improvement in their economic conditions in the near future. As identified by the National Commission on Agriculture, there is a good scope for rapid development [10][11]of milk production though rural poor by increasing availability of necessary inputs. This may serve the twin objectives of our development plans..1) Growth with social justice, and 2) enhancement of milk production.

Lianzela (1994)[12] said that the progress in cooperative movement in Mizoram was rather slow over the plan period. The role played by the cooperative societies in providing loans to the agriculturists in the region was more or less insignificant. The Cooperative Apex Bank, has given only nominal credit facilities. Cooperative movements as a whole need revitalization if their role is to be made more effective and significant.

Meeta (2003)[13] in his study on 'Small Holder Dairy Development' in Asia found that Dairy farming has a lot of potential to improve rural incomes, nutrition and women empowerment, and hence is a very critical area for investment. A well-developed industry will enable millions of farmers to capitalize on the emerging opportunities and make a significant impact on rural incomes. On the flip side, weak

[8] Prasad, R, N et al(1991),'Political and Economic Development Mizoram', K.M Mittal Publication, A 110 Garden, New Delhi 110059.

[9] Thomas,C.K., et.al(1991), 'Dairy Bovine Production', 1/1, Kalyani Publishers, New Delhi-110 002.

[12] Lianzela(1994),'Economic Development of Mizoram', Krishan Kumar Spectrum Publications, Panbazar Main Road, Guwahati 781001 Assam.

[13] Punjabi Meeta(2003),'Smallholder Dairy Development-Lesson learn in Asia',Regional Office for Asia and the Pacific.

efforts towards dairy development also can have a significant but negative impact on the dairy industry. The growth rate has been sluggish over the past few years. With an increase in demand on one hand and sluggish supply on the other, there is a likely shortfall in demand in the coming years.

Rao (2005)[14] in his study in Orissa stated that initially women were discouraged to enter a democratic organization like WDCS (Women Development Committees). Women slowly but steadily, realized the importance of coming together and expressed solidarity. Soon after starting WDCS, local cows were replaced by high yielding crossbreds. They are not averse to improved animal husbandry practices. Assured milk marketing, regular payment, supply of quality inputs at a reasonable rate, and continuous monitoring helped them to repose faith in WDCS. They are now mastering tricks of managing a business enterprise. Women are also entering politics and trying to climb the ladder. Despite increase in workload, women are happy because their status in the house and village has increased and are more demanding now. Increased incomes helped maintaining a reasonable standard of living. They are now involved in SHGs too. WDP has been successful to a large extend, in achieving its objectives. Given adequate and timely support, and congenial policy environment women could prove that they are inferior to none. These women are like sleeping giants, and all agencies should positively participate in awakening them.

Thanga et.al. (2006) [15]stated that in the line with India's Look East Policy and the Asian High Way Project, it is expected that the market scope for the products of the industrial units in the North Eastern Region will expand tremendously. To cater the

[14] Rao V.M (2005), 'Women Dairy Project', Reliance Publishing House, New Delhi.
[15] Thanga, L, T, James et al(2006), 'Success Stories: A Study of Selected Small Scale Units and NGOS in Mizoram', Department of Economics, Mizoram University, Aizawl, Mizoram.

need of this market it is necessary to produce standardized products at high volume. Therefore, production of the same/similar items by different states of the North Eastern Region needs to be integrated. At the same time, our products should be standardized to sell in the international markets.

Lalzuiliana(2006)[16] in his in depth study on 'Livestock Resource Development in Lunglei District, with special reference to cattle farming', found that the major constraints in the progress of dairy enterprise are the inadequacy of breeding technology, feeding resource, health care facility and the management of marketing. These are due to lack of efficient administrative machinery and the presence of institutions with little economic orientation.

Patnaik(2008)[17] mention that mithun rearing (for meat and plowing fields) in an area such as Farkawn, Vaphai, Lungpho, and Hmawngkawn. Hill cattle rearing(for milk and meat) in areas like Rulchawm, Saitual, Tualvung and Farkawn. The present members of a very successful cooperative society in and around Aizawl, the MULCO are beneficiaries of the NLUP.

Rao (2008)[18] in his book highligh that dairy farming business is one of the largest sub-industries of the whole agricultural process, generating revenues worth $500 billion world-wide. Involving the production of milk, butter, cheese and other milk products using livestock and milk processing technologies, dairy farm business management entails a whole deal of practices which are pertinent to the whole process of dairying as an ever-growing industry, especially considering the fact that the demand for milk products has reached an all-time high.

[16] Lalzuiliana(2006), 'Livestock Resource Development in Lunglei District: With special reference to cattle farming', Department of Economics, School Board of economics, Management and Information Sciences Mizoram University.

[17] Patnaik,K,Jagadish(2008),'Mizoram Dimensions and Perspective Society, Economy and Polity', Ashok Kumar Mettal, A/15-16, Commercial Block, Mohan Garden, New Delhi, 110059.

[18] Rao Venkateshwara P (2008), ' Dairy Farm Business Management', Biotech Books, New Delhi.

Mahindru (2009)[19] mention that milk and milk products have been the choicest item of food in the dietary of global people from time immemorial and these products are equally like by all communities in India. Several reference to the various beneficial qualities of milk and its products for health and the well being of the people are to be found in our scripture. In the medical literature of the hoary past, there is mention of various therapeutic uses of milk and milk preparation for treatment of different ailments. There was however, no follow up of the early understanding of the qualities of milk with systematic and scientific studies to enlarge the area of knowledge. Several countries stole a march over us in accumulating a vast store house of knowledge through methodical and scientific studies on the physical and chemical properties of milk. Alround exploitation of knowledge is now an acceptable feature of modern times. It ends to overwhelm both the specialist and the intelligent non-specialist, but on one thing there is unanimity of opinion that new information contains much that c[20]an be utilized with advantages, provided it is properly located.

Khiangte (2011) in her study on‘ Cooperative Movement in Mizoram: Problems and Prospects’, found that cooperatives in Mizoram have been expected to achieve a number of economic and social goals inspite of a host of problems faced by cooperative movement itself. Cooperative movement, however, do provide great hope for the people of the state particularly in the rural areas to break the hold of poverty in their life. All types and categories of cooperative may be equally successful. Therefore, there is need to determine what type of cooperative may be successful under different kinds of local conditions, and to learn whether success in

[19] Mahindru,S, N(2009),’Milk and Milk Products’, S.B Nangia, A.P.H Publishing Corporation 443V 3/7, Ansai Poad, Darya Ganj, new Delhi 110002

[20] Lalzuiliana(2006), ‘Livestock Resource Development In Lunglei District, with special reference to cattle farming’.

the sense (such as increase production) leads to better distribution of income and opportunities, i.e., in what respect it benefits the poor. And also the study reveals that the volume of working capital of cooperative societies fall short of what is needed for performing their essential functions. One solution out of this impasse is to mobilize internal resources in the form of share capital and deposits. Members of the society should also be made to deposit more of their own finances, in the form of contributions. Government funding should also be properly utilized, as also the banks loans which are provided.

According to Varsi Consultancy (2010) survey in Mission Veng in Aizawl reveal that each family in Aizawl consumes only 36 litres of milk in a month with 3% of it for drinking purpose and the rest for making dahi, paneer, lassi, sweets, ice cream et al. The survey also revealed that Aizawl's requirement of milk on daily basis is 3076 litres worth Rs.8,20,000. MULCO has been selling out 7000- 8000 litres of milk on daily basis.

Negi (2011)[21] mention that dairymen should objectively survey their operations and determine ways of inexpensively reducing wastewater inputs to nearby streams or drainage ways. After weighing the important advantages and disadvantages of available wastewater management techniques, a dairyman must make a decision, then commit to providing the attention and management necessary to make that system function. No system will take care of itself. When faced with regulatory action, a proper functioning manure and wastewater management plan becomes just as important as feeding and milking the cows.

[21] Negi Manoj(2011),'Career in Dairy Farming;, White Leaf International Chhandigarh17.

Vivekananda (2014) [22] mention the study of SWOT analysis that shows the 'strengths' and 'network, hygienic and cost-effective processing facilities and innovativeness in the market place. All that needs to be done is: to innovate, convert products into commercially exploitable ideas.

Kamboj (2014)[23] said that the breeding, feeding, housing and healthcare practices followed at Kisan Dairy are as per current scientific recommendations.The farmer is well-trained and experienced in cow management.The cows are able to realise most of their natural behavioursdue to proper housing, climatic protection and good feedingand therefore farm productivity is better with minimal healthproblems. There is a proper mechanism for dealing with old and other unwanted animals.

"There are a few areas where there is scope for further improvement, specifically with respect to proper calf housingfacilities and mechanised sanitary milking practices, which need financial investment, but the farmer plans to add these in the near future. Still, as the cows appear comfortable, well-fedand satisfied and are performing well without major health or behavioural problems, this farm could be rated as very good from a cattle welfare perspective. The farm may therefore be considered a model, which could be replicated under most Indian farming conditions to promote sustainable commercial dairy farming''.

Maheshwari (2014)[24] state that a key feature of the Indian dairy industry is that it is still predominantly unorganized. Of the total milk produced in India, only 18-20 per cent is channelized through the organized segment. Hence it is evident that the

[22] Vivekananda Nalla(2014),'Marketing Strategy for Indian Dairy Industry', https://www.linkedin.com/pulse/marketingStrategyIndiandairyindustrynallalion2V00.
[23] Kamboj, M.L D.R(2014), ' A model for dairy farmers in India', http://www.Worldanimalprotection.org.in/our-work/animals-farming/India-dairy?gclid
[24] Maheshwari Ashutosh(1014),'Indian Diary Industry is still Predominantly Unorganized', articles.economictimes.Inida times.com/2014 04 27/news/49437733 1 dairy products loose milk flavor milk.

unorganized segment has not yet participated into modern processing infrastructure in India.

A positive development is that there is a clear shift towards the share of organized segment, increasing from 13 per cent in 2005 to 20 per cent currently. This is driven by an increasing demand for packaged milk and value added products and is now attracting multinational players to India. Even on the supply side, farmers prefer organized channels due to higher price realization.

Sally (2015)[25] in his article on Economic Times mention that there is a milk glut in the country as all the extra milk produced in the winter season is flowing into dairy cooperatives because private firms exporting skimmed milk powder and casein have withdrawn from the market due to fall in global prices. Most cooperative dairies in north and central India are now procuring 20-30% more milk every day than their annualised daily average, and they are urging state governments to include milk in their mid-day.

Bairwa et.al. (2016) in their study in Chittorgarh district of Rajasthan revealed that per day net maintenance cost was found higher for crossbred cow followed by buffalo and local cow. The high maintenance cost for crossbred cow was found, with higher cost of concentrate fed to these animals. In case of buffalo, the higher cost of maintenance was found with higher cost of green fodder. The highest cost per litre was found, in case of local cow followed by buffalo and crossbred cow, which may possible due to low milk productivity of these local cows. Cost of milk per litre was found decreased with increase in herd size of milk producer across all type of animal breeds. Marketed surplus of milk was found more in the case of large herd size category of households and there was no much difference in the case of medium and

[25] Sally Makini(2015). 'Article on Operational Flood', Economic Times.

small herd size category of household. The higher amount of marketed surplus was disposed off to milk cooperatives society nearby sixty per cent of total surplus milk.

Lalrinsangpuii et.al.(2016) [26] in their study on ' Profit efficiency among small holders milk producers in Mizoram State', showed that profit efficiencies of the sampled farmers varied widely between 21 and 89 per cent with a mean of 53 per cent suggesting that an estimated 47 per cent of the profit is lost due to a combination of both technical and allocative inefficiencies. This study further observed that level of education, experience, size of the farm and number of animals influenced profit efficiency positively while profit efficiency decreased with age and non-farm income. Results found a considerable capacity to improve milk profitability in the state.

Priscilla et.al.(2016) study on Determinants of Participation of Dairy Farmers in Dairy Cooperative Societies in Manipur reveals that farmers having higher average annual milk production and more experience in dairy farming are more likely to participate in Dairy Cooperative Societies(DCS). Also, greater the distance to market, higher the transaction costs for the farmers which makes them favour participation in DCS located in their villages. Number of dependents and size of landholding adversely affected (significant at 10 percent) participation meaning that farmers with larger family size and also those with smaller landholding were more likely to participate in DCS.

Rockefeller mention that in case of the general natural of competition among milk dealers, it should be stressed that several elements exist in the fluid milk distribution industry that makes it susceptible to intense price competition, occasional price wars and other destructive practices. In addition to the basic factors that have been

[26] Lalrinsangpuii et al(201VI),'Profit Efficiency Among SmallHoders Milk Producers In Mizoram State', Indian Journals of economics and Development, vol:12, Issue:2, Page: 347 to 352.

described, the human element exists. Price cutting, once underway in a market, occasionally leads to “emotional pricing” by some individuals. Then a price reduction may become an irrational action which reflects the feeling of a distributor who says “I’ve had enough, I’ll show them”, or I’ll bring this situation to a head. “There can be no question that this element has contributed to some degenerative price battles in the dairy industry. In the past, the difficulty of maintaining price stability and avoiding destructive price competition has led dairy processors, distributors, and producers in individual markets to attempt to block entry of new firms in various ways. The sale of some types of fluid milk products and the use of new methods of distribution have not been allowed in some areas Restrictive licensing of milk dealers also has been used to limit entry in New York, Virginia and perhaps other states. Although such institutional barriers have become less prevalent and less effective since World War II, they still insulate some markets to a considerable degree from the adoption of new techniques and the entry of additional competitors.

CHAPTER-3

OVERVIEW OF MILK DISTRIBUTORS' AND THEIR ROLE IN AIZAWL CITY

3.1. BACKGROUND

Livestock has played a very important role in Mizos' life. Much before written history, Mizos' had traditionally three species of animal and birds which they used for their religious ceremonies, rituals and also for their consumption of meat. These were semi domestic mithuns, pigs and fowls. Elaborate prescriptions were made regarding sacrifice of these animals and bird and the used of their meat for religious rituals and domestic consumption. It was the major assets of the people or the wealth of Nations. A person wealth was usually measured according to the number of his mithun, since there is no monetary value during this time. Every household had fowls and pigs, but only the better off people/rich people could afford to have mithuns. Mithuns were also used to pay for the bride price in place of cash and also used as exchange in any commercial deal.

Among the livestock cattle did not occupy prime importance in the heart of Mizo's life. Its meat would be largely consumed, not much milk production and hence not commercialized. But after several years, milk is being increasingly accepted and there is a new demand for cow's milk all over the state, and open opportunities to commercialized milk . This has led to the development of cattle in Mizoram. There is also intensive development in piggery and poultry farming. All villages have a large number of this exotic species(pig). And also eggs are consumed all over Mizoram. Boiled eggs are used to welcome the guest and also when Mizos' people went out from his station for visiting they often used to carry some boiled eggs to offer the host. As against the development of cattle, piggery and poultry there has been a sharp decline in the numbers of mithuns.

Prior to the formation of the Union Territory in 1972, there was no significant impact in the field of Animal Husbandry and Veterinary in Mizoram. From 1972

onwards, Animal Husbandry, Veterinary and dairy farming was gradually improved. At the end of 2006, Mizoram has 5 Veterinary Hospitals, 35 Veterinary Dispensaries, 103 Rural Animal Health centres, 20 Artificial Insemination Centres, 7 Animal Disease Surveillance Check Posts. The Animal Husbandry and Veterinary Department have set up either pig farm or poultry or both in all the districts under the vigilance of the District AH and Vety Officers. Farm complexes at Selesih in the outskirt of Aizawl and at Thenzawl in Serchip district are functioning independently under the General Managers. In order to improve in the knowledge of veterinary science, a School of Veterinary Science has been established in Lunglei district. Moreover, a college of Veterinary Science has been established at Selesih which is functioning under the Central University.

In order to develop dairy farming, the State Government has implemented 4 (four) Dairy Development Projects which were initiated under Central Scheme of I.D.D.P. (Intensive Dairy Development Project). Government's food policy for self sufficiency in the project envisages establishment of infrastructures for collection, pasteurization, storage and distribution of the good quality milk. People's participation through Dairy Co-operative Societies is highly encouraged. Five such projects are implemented under this scheme,viz. I.D.D.P.-I&IV at Aizawl, I.D.D.P. – II at Lunglei, I.D.D.P. – III at Kolasib, and newproject I.D.D.P. – V at Champhai. Dairy Plants at Aizawl, Champhai and Kolasib havebeen handed over to the District Dairy Co-operative Union and the Diary project atLunglei is being maintained by State Government. 9750-13250 litres of milk a day is being marketed through this scheme against the plant capacity of 30,000 litres a day. In spite of the estimated availability of 13,950 tonnes of milk there is still a demand gap of 81,623 tones of milk in 2011-'12.

Inspite of all these, the present agriculture situation of Mizoram is not satisfactory in terms of gross produce. The regions production of food grains, vegetables, fruits, eggs, milk and meat could meet only about 40 percent of the state's annual consumption (Pachuau, 2009).

3.2. MILK PRODUCTION IN MIZORAM

Milking of Buffaloes and Goat are very rare and negligible in Mioram. And the milk production is usually estimated from crossbred cows and indigenous cows. Base on the Integrated Sample Survey (ISS) the total annual milk production shows increasing by each year. During the year 2013-2014 the total annual milk production was worked out to be 15305.217 tonnes which was increased by 12.22% over the previous year. And the annual milk yield by the two different breed also differs as shown by the following data. During the same year Crossbred and indigenous cow yielded 18,722 and 1,773 respectively. Crossbred milk production was much more by 16,949 than indigenous cow.

In Mizoram there are 8 districts each district has different contribution to the total annualmilk production. Among them, Aizawl district has the highest share in the annual milkproduction which was 11,698.817 while Saiha has the lowest share which was only 501.320. The detailed statistics is presented in Table 3.2

Table 3.2

:Estimated Milk Production in Mizoram (in tones)

Sl.no	Year	Cow		Total
		Crossbred	Indigenous	

1	2005-06	12,326	2,772	15,098
2	2006-07	12,666	2,638	15,304
3	2007-08	12,871	2,819	15,690
4	2008-09	13,019	2,988	16,007
5	2009-10	6,868	3,154	10,022
6	2010-11	7,712	3,119	10,831
7	2011-12	12,393	1,549	13,942
8	2012-13	12,001	1,639	13,640
9	2013-14	13,629	1,675	15,304
10	2014-15	18,722	1,773	20,495

District wise (2014-15)

1	Mamit	190.118	126.728	316.846
2	Kolasib	2587.354	240.703	2,828.057
3	Aizawl	11636.031	60.786	11,696.817
4	Champhai	1292.323	313.426	1,605.749
5	Serchhip	853.370	94.602	947.972
6	Lunglei	1610.631	428.302	2,038.933
7	Lawngtlai	250.492	309.511	560.003
8	Saiha	302.030	199.290	501.320
9	Total	18722.349	1773.348	20495.697

Source: Director, Animal and Veterinary Dept, Mizoram

According to the recommendation made by the Indian Council of Medical Research (ICMR), an individual needs 240gms of milk per day for keeping his/her health in good condition. But the per capita availability of milk per day during 2013-14, was

estimated to 36.57 gms only which shows that the activity of dairy development need to be intensified so as to increase the annual production of milk in the state.

3.3. LIVESTOCK CENSUS IN MIZORAM

According to the Livestock and Poultry census of Mizoram, there are 179.5 thousand livestock in 1982, and it increase by 364.675 thousand in 2012 census. Among the total livestock population pigs occupy the highest rate of population, dog is the second and cattle is on the third rank as per the latest 2012 census. The detail data is shown as under.

TABLE 3.3

: Livestock Census in Mizoram (1982, 1987, 1992, 1997, 2003, 2007, 2012) (000 nos)

Species	1982	1987	1992	1997	2003	2007	2012
1	2	3	4	5	6	7	8
Cattle							
Crossbred	3.04	5.28	11.02	7.54	8.80	10.69	12.812
Indigenous	45.56	45.08	84.80	25.77	26.77	24.20	25.456
Total	48.60	50.36	95.82	33.31	35.57	34.89	38.268
Buffaloes	4.33	5.60	6.51	5.37	5.73	5.83	5.028
Goats	27.54	16.97	22.70	16.04	16.98	15.71	3.283
Pigs	77.12	81.51	112.01	168.18	217.18	266.91	266.646
Horse and Ponies	1.42	2.30	2.53	2.00	2.02	1.38	0.694
Mithun	1.17	1.44	0.93	2.59	1.74	1.94	3.283
Dogs	18.44	18.93	19.42	33.75	37.02	35.30	46.833
Sheep	0.88	0.46	1.20	0.70	1.06	0.97	0.64
Total Livestock	179.5	177.57	261.12	261.94	317.30	362.93	364.675
Poultry							
Dessi	602.51	684.90	878.18	1083.43	779.88	879.42	770.683
Improved	84.37	146.91	194.39	211.06	328.02	382.08	482.446
Total	686.88	831.81	1072.57	1294	1107.90	1261.50	1253.129

Source: Livestock and Poultry Census, Mizoram, Aizawl, 2003; Directorate of Animal Husbandry and Veterinary, Mizoram, Aizawl.

3.4. MILK DISTRIBUTORS' IN AIZAWL

In Aizawl city milk distributor can be divided into three different large groups. The biggest and the most stable distributor is MULCO (Mizoram Milk Producer's

Cooperative Union Ltd., and the others are K.K Diary and Unorganised or Private Distributor cum producer. There role, function and structure are described under the following heads.

3.4.1MULCO

Mizoram Milk Producer's Cooperative Union Ltd. (MULCO) is the biggest Dairy Plant in Mizoram and also Mizoram Chief Minister Mrs Lal Thanhawla praised the MULCO as the most successful co-operative society in Mizoram. It was established under A.H and Vety Director, Government of Mizoram on 5th January 1983. As per the Assam Cooperative Act it was registered at the Registrar Co-operative Societies Mizoram on 5th June 1984. Following the pattern of Gujarat's Anand Milk Union Limited (AMUL), its main task was to provide milk in and around Aizawl and to help in the formation of Primary Co-operative Societies.

Operation Flood-II Scheme was supposed to provide financial support for this project. Inspite of this financial support, the main objective of developing the town milk supply could not be fully implemented. Organising the primary cooperative societies and recruitment and training of crore staffs was, however undertaken.

Reviewing the situation, the National Dairy Development Board (NDDB) came to the conclusion that in a small state with less population like Mizoram, a single commodity union dealing only in liquid milk had a poor chance of survival. This was because the Union viability depended on the volume of trade undertaken. A fresh project was drawn up so as to convert the present Mizoram Milk Producers' Cooperative Union into a Multi-Commodity Producer Cooperative Union Limited and the activities would include trading in vegetable/spices, sale of pork by establishing a modern slaughterhouse of 30 pigs per day capacity. Eventually, The

Mizoram Multi-Commodity Producers' Cooperative Union Limited (MULCO Ltd) was established and registered on 4.12.1991, under the Cooperative societies Act 1991

On 21st March 1995, the Diary Plant of 5000 LPD at Thuampui was handed over to MULCO from the A.H and Vety Department, Government of Mizoram after which concerted efforts were made towards the production and marketing so pasteurized milk and milk products like Rosgula, Rasmalai, Gulabjamun, Paneer, Lassi, Dahi, Ghee and Ice-cream.

But at the Annual General Meeting held on 25th June 2010, the Cooperative society reverted back to its old name Mizoram Milk Producers' Cooperative Union Ltd. In order to help focus on core activities like procurement, processing and marketing of milk.

OBJECTIVES OF MULCO

The main objectives of MULCO are to carry out activities conducive to Socio-economic development of Milk Producers' Co-operatives by organizing effectively production, procurement, processing and marketing of commodities. To facilitate the cooperative society for income generating Dairy Farming for poor beneficiaries specially women. To promote dairy farming. To train poor farmers and women beneficiaries for the successful implementation of the programme. To prove facilities for better farming, better business and better living. To carry out work of common and economic interest so as to benefit the members and thereby, ensure increase welfare in every way. And also to undertake special programme for the betterment of the weaker section of the community for the improvement of their

socio-economic conditions. In support to these objectives the Union provide input services to the farmers like:

1. One month credit facility for feed.
2. Arrangement of dairy cow loan from banks.
3. Procurement of feed for producer members.
4. Facilitate financial assistance from State Government

BOARD OF DIRECTORS

The head office of MULCO is located at Thuampui, Aizawl and maintains Dairy Plant 20000 LPD. It has 15 regular staff, 5 contract basis staff and 48 muster roll employees. The board of directors of MULCO consists of nine members. The chairman and the other four members elected from the chairman of affiliated society. The rest of the board members consist of the Registrar, Co-operative Societies Mizoram, the Director, A.H and Vety Department, Government of Mizoram, Representative of the National Dairy Secretary. The term is for 5 years. Registered Milk Producers' Cooperative Societies can only be a member at MULCO and are liable to sell milk only to the Union.

ADMINISTRATION

The day to day administration is carried on by the managing director with the following member of staff-

Table 3.4.1: Member of Staff

Sl.no	Name of Post	Number of Post
1	Managing Director	1
2	Manager	1
3	Deputy Manager	1
4	Accountant	1
5	Procurement and Marketing Supervisor	1
6	Stenographer	2
7	Senior Account Assistant	1
8	Operator	2
9	Lower Division Clerk	1
10	Bill Collector	1
11	Driver	3
	TOTAL	1

Source; MULCO LTD.

MILK PROCUREMENT SYSTEM

Primary cooperative society in different location bought milk from its members at various collection centers. The collections centers are well equipped with Bulk Milk Cooler and Milk Analyzer. After the milk has been collected and analyzed for various quality including fat and SNF(solid not found) content, the Union bought the milk from the collection centers by paying slightly higher price than that of the societys' price based on Fat and SNF content and transport it to the dairy plant to Thuampui for processing.

Milk is transported by either bulk milk tanker or by milk cans. MULCO bought milk from the society at Rs. 400.00 per Kg Fat and Rs. 267 per Kg SNF(Solid not fat). From 2015-2016, the Union starts colleting milk from Khumlun-I and Khumlung-II. There are 5 Milk collection Route in Mizoram.

Table 3.4.2

: Milk Procurement System

Route		Number of Centers
Milk Collection Route I	Thuampui to Serkhan, Silchar Road	10
Milk Collection Route II	Thuampui to Aibawk, Thenzawl Road	7
Milk Collection Route III	Thuampui to Chhingchhip, Serchhip Road	4
Milk Collection Route IV	Thuampui to Armed Veng	3
Milk Collection Route V	Thuampui to Muthi	3

Source: MULCO Ltd

The amount of milk that the Union bought milk from each societies are as follows-

Table 3.4.3:

Sl.n	Society/ Others	Milk supplied during 2014-15(liters)	Milk supplied during 2015-16(liters)	Avg. milk supplied for month(liters)	Avg. Milk supplied per day(liters)
1	Durtlang North MPCS Ltd.	1,27,205	1,16,623	9,718.5	323.95
2	Durtlang MPCS Ltd.	1,38,867	1,77,597	14,799.75	493.33
3	Durtlang Leitan MPCS Ltd.	78,557	93,566	7,797.17	259.91
4	Sihphir Venthar MPCS Ltd.	86.733	81,683	6,806.92	226.90
5	Sihphir Arpu MPCS Ltd.	78,331	72,516	6,043	201.43
6	Sihphir MPCS Ltd.	1,67,583	1,60,404	13,367	445.57
7	Lungdai ‘A’ MPCS Ltd.	1,77,704	1,78,263	14,855.25	495.18
8	Lungdai MPCS Ltd.	1,57,452	1,07,662	8,971.83	299.06
9	Serkhan MPCS Ltd.	2,58,112	2,45,642	20,470.17	682.34
10	Thuampui MPCS Ltd.	1,01,413.5	1,00,622	8,385.17	279.51
11	Chite MPCS Ltd.	43,273	40,698	3,391.5	113.05
12	Hualngohmun MPCS Ltd.	9,975	2,905	242.08	8.1
13	Mel-3 MPCS Ltd.	31,411	18,396	1,533	51.1
14	Mel-8 MPCS Ltd.	5,963	3,772	314.33	10.48
15	Tlangnuam MPCS Ltd.	77,326	98,507	8,208.92	273.63
16	Samtlang MPCS Ltd.	34,018	44,524	3,710.33	123.68

17	Armed Veng North Ltd.	9,921	1,29,841	579.54	19.32
18	Lungleng North MPCS Ltd.	40,597	22,453	1,871.08	62.37
19	Serkhan ‘A’ MPCS Ltd.	1,21,899	1,29,841	10,820.08	360.67
20	Aibawk MPCS Ltd.	51,033	11,820.08	984.75	32.83
21	Baktawng MPCS Lts.	68,045	60,012	5,001	166.7
22	Muthi MPCS Ltd.	1,78,842	45,730	3,810.83	127.03
23	Chhingchhip MPCS Ltd.	66,096	58,380.5	4,865.04	162.17
24	Zemabawk MPCS Ltd.	20,344 (w.e.f Nov’14	56,418	4,701.5	156.72
25	Kumtluang MPCS	89,176.5	64,162.5	5,346.88	178.23
26	Leitan Ramthar MPCS Ltd.	1,66,208	1,85,144	15,426`.17	514.21
27	Lungleng-I MPCS Ltd.	13,659 (w.e.f Sept’14)	20,996	1,749.67	58.32
28	Armed Veng South MPCS Ltd.	37,287	30,348.5	2,529.04	84.30
29	Buhkangkawn MPCS Ltd.	7,258	11,818	984.83	32.83
30	Chawlhhmun	18,438	33,982.5	2,831.88	94.40
31	Tlungvel	4,094.5(till Nov’14)	-	-	-
32	CBF	21,679	18,926	1,577.17	52.57
33	Hangzo Milk	5,022	-	-	-
34	Hermon Childrens	12,846	14,629	1,219.08	40.64

	Home				
35	TNT	4,110.5	6,196	516.33	17.21
37	Khumtung-1	-	1,257 (w.e.f. Sept, 15)	179.57	5.99
38	Khumtung-2	-	823(w.e.f. Sept,2015)	117.58	3.92
	TOTAL	2,509,679.5	2,323,238.5	1,93,603.21	6,457.65

Source : Mulco

MILK PROCESSING

The milk procured from different societies is processed at MULCO dairy plant twice a day (day and night shifts), in the morning they start at 8:00 AM and during night/evening they start at 5:30 PM. The bulk milk samples are subjected to various tests to determine its quality, based on which the prices are fixed taking into account the fat and SNF content. Those milk which are identified as save and hygienic for consumption are cooled in a Plate chiller at 4° C and then within 15 second they are pasteurized in HTST (High Temperature Short Time) at 72° C. When this pasteurized milk are again cooled at 4° C, it is believed that the milk are free from any diseases. The pasteurized milk is then chilled and packed for selling. Before the milk are pack the polyfilm are first sterilized using Ultra Violet Light. They usually spend 13-14 quintals of polyfim per month and the amount of money spend on this is about 2.5 lakh.

MILK MARKETING SYSTEM

The pasteurized milk from Dairy Plant are packed per 500ml and then kept in a cold storage. It is sold through commission agents at Rs. 50 per liter. These agents have a margin of Rs. 2 per liter of milk. There is a total of 10 milk parlour/sale outlet. Besides this there are 204 commissioning agents and 7 outstations in and around Aizawl. During 2015-2016, they earn Rs. 9,34,96,177.00 from liquid milk and also earn Rs. 2,03,20,088.00 from milk products.

Within the same period, MULCO supply milk to various ICDS centre which are under the Social Welfare Department and from these they have earned Rs. 26,57,000.00. They also supply to some various rural areas like Selling, Serchip, Darlawn, N.E Khawdungsei, Khanpui, Thingsulthliah and N. Vanlaiphai. And also to some government department like Civil Hospital and SAI.

Table 3.4.4

: Milk Marketed

:

Sl.no	MONTH	Marketed as fresh milk	Marketed as milk product
1	April, 2015	1,55,179.5	20,680
2	May, 2015	1,60,279.5	20,280
3	June, 2015	1,51,230	22,060
4	July, 2015	1,59,975.5	23,120
5	August, 2015	1,59,898.5	25,110
6	September, 2015	1,48,133	25,220
7	October, 2015	1,61,285.5	30,140
8	November, 2015	1,51,183	24,078
9	December, 2015	1,62.225.5	6,550
10	January, 2016	1,50,468	22,380
11	February, 2016	1,49,691	22,340
12	March, 2016	1,48,229	25,101
	TOTAL	18,57,778	2,87,059

Sourec: MULCO Ltd.

The following table 3.4.5 shows the number of vendors in different routes of Aizawl city under MULCO Ltd.

Table 3.4.5 :

: Number of vendors in different routes.

Routes	Number of Vendors
M-1	15
M-2	19
M-3	21
M-4	26
M-5	23
M-6	8
All Routes	112

Source: MULCO Ltd.

The various localities of Aizawl city covered by the different routes are as follows:

M-1: Thuampui (MULCO plant), Zemabawk, Zemabawk Kawn Veng, Field Area, Zemabawk Venglai, Zemabawk AL Road, Zemabawk Galily Veng, Zemabawk Zokhawsang, Bawngkawn, Bawngkawn SBI office Area, Near Greenwood Hospital, Bawngkawn, Laipuitlang.

M-2: Bawngkawn Chhim veng, Ramhlun North, Ramhlun South, Venglai, Electric Veng, Saron veng, Zarkawt, Laipuitlang, Chaltlang Dawrkawn.

M-3: Ramhlun North, PWD Tlang Ramhlun, Ramhlun (near RL building), Chanmari, Chanmari East, Chhinga Veng, Tuikhuahtlang, Sikulpuikawn, Upper Republic, Republic Kawipui, Republic, College Veng, ITI Veng, Mualpui, Bethlehem Vengchung.

M-4: Mac Donald Hill Zarkawt, Khatla Kawn, Khatla, Khatla near Directorate of AH and Vety, Bungkawn Vengthar, Maubawk, Nursery, Khatla South,Mission Vengthlang, Model Veng, Kawltheihuan Peng, Thakthing Damveng, Tlangnuam, Melthum, Melriat.

M-5: Chhanmari Kawn, Zarkawt, Treasury Square, Temple Square, Tuikual, Dinthar, Vaivakawn, Kanan, Chawnpui, Zotlang, Zonuam, Government Complex Luangmual, Chhangurkawn, Company Peng, Edenthar.

M-6: Civil Hospital Dawrpui, New Street and Kulikawn.

SERVICES PROVIDED TO THE MILK PRODUCERS

1. Milk procurement

a) Procuring all the surplus milk of the producers round the year, base on quality.

b) Providing technical support and training facilities to producers and field stuff.

2. Animal breeding services

a) Providing artificial insemination maintained by the Department of Animal Husbandry.

b) Providing high pedigree frozen semen.

c) The organization is maintaining breeding bull for natural services.

3. Animal health programme.

a) The organization has Veterinarians and dairy specialist to assist in providing health care and veterinary services to the animals in the villages on fixed date. Dairy specialist also assists the farmers in dairy farming.

b) Supplying vaccines for preventing Hemorrhagic Septicemia (HS) Black quarter (BG) and Foot and Mouth disease (FMD) at subsidized cost.

c) Supplying deworming medicines for calves and adult cattle.

d) Arranging veterinary first aid training to the staff and farmers.

e) Conducting mastitis control.

f) Organising Brucellosis prevention programme.

g) Organising health and fertility camp.

h) Organising training camp for milk producers on scientific management.

4. **Training camps**: Providing training for farmers on clean milk production and management of miltch animals.

5. **Quality control**: Quality control is being maintained by the technical staff of the organization to confirm the milk as per the standard.

In Mizoram, Dairy Farmers need assistance on a constant basis to enable them to have a sustainable means of livelihood. Realizing the need, the Union adopted the Dairy Venture Capital Fund Scheme since 2005-2006. This was for the establishment of 8-10 dairy cows unit. Till 31 March 2008, 140 families have availed of this loan. Target up to 1st April 2009, stands at 300 families. The scheme is being implemented through the National Bank for Agricultural Development which will serve as a nodal agency for the scheme. As part of its plans to expand its activities MULCO, decided to take up the following activities:

1. Organising women motivation Programme in the State.

2. Providing training for rural women inorder to expose them to dairy farming.

In order to achieve the above objectives a project was submitted to the Ministry of Women and Child Welfare, Government of India under the 'Support to Training an Employment Programme' (STEP) scheme. Request for financial assistance was to the tune of 162.90 lakhs i.e, ninety percent grant and ten percent contributed by MULCO.

The scheme known as 'Project on Dairying for Benefit of Women Benefeciaries in the State of Mizoram' sought to organize women beneficiaries into self help groups. Women beneficiaries will be given training in Dairy farming with technical assistance from the dairy specialist and Veterinary Doctors of the organization. The self help group will have to purchase a good crossbred jersey cow as source of their income with the assistance of the department of the Animal Husbandry, Government of Mizoram. The implementing agency of which MULCO is a member will take up a matter of making arrangement for milk marketing and also for the supply of feed, fodder and medicine. The organization will make arrangement to achievement considering the fact that MULCO was at its nascent state. By 1995-96, the primary cooperative societies had increased to 26, this is indeed a step forward. One of the main reason seems to be grant received by the Union from the Ministry of Agriculture, Department of Animal Husbandry and Dairying. Government of India under the 'Integrated Dairy Development Project', Rs. 367.99 lakhs was received by the Union and the important benefit from this project being the provision of Dairy cow subsidy, feed supply, feed transport subsidy and manpower development the local turnover also went upto Rs. 95'73'659'45/-

MULCO continue to grow steadily as the demand for milk and milk products continue to grow. The reason for this is the increased in demand by hotels and restaurants, and of the general production due to better income and standard of living (Z.Khiangte, 200 6).

On 2010, July 12, for the first time in the history of Mizoram a 'toned milk"–a product of Mizoram Multi- Commodity Producers Cooperative Union (MULCO) was launched in Aizawl by Lalriliani, president of Indian Society for Tobacco & Health (ISTH), Mizoram Chapter who is also the wife of chief minister

Lalthanhawla. Lalrinliani lauded the MULCO's genuine initiatives in bringing out "toned milk" product for the larger interests of sound health and nutrition of the people. Consultant, MULCO Ltd Rinzuala citing Prevention of Food Adulteration Act (PFA), the Toned Milk has to possess the minimum 3% fats and 8.5 % SNF (Solid Not Fat). Officials re vealing the dark side of its workers across the state said that milk producers under MULCO are struggling hard for survival against soaring prices and stiff competitors. Prices of commodities such as cattle feed and oil cake are comparatively higher in Mizoram than other states. In average, a single cow in Mizoram can produce eight litres of milk per day. After paying for cow feed, oil cake, mineral, medicines and wages of labours, a dairy farmer virtually has no profit. To make matters worse, dairy brands like Amul and Nestle are selling their ultra high temperature (UHT) milk at much cheaper prices in Mizoram due to their lesser production cost. MULCO has been making all-out efforts to rescue the dairy farmers.

PRESENT STATUS OF MULCO

Dairy plant capacity : 20000 LPD

Area of operation : Whole of Mizoram

Number of affiliated Societies : 39 Society, 1 Governemnt.

a) Functional : 30

b) Non-functional : 9

c) Total Society members : 850

d) Number of members pouring milk : 450

Authorized share capital : Rs. 20,00,000.00

Paid up share capital : Rs. 13,17,650.00

a) State Government : Rs. 5,85,000.00

b) Societies : Rs. 7,32,650.00

Audit Classification : 'B'

Business turnover : Rs. 1,188,35 lakhs

Milk sales : 18,57,778 liters

Commission Agents/Sale outlet

a) Aizawl City : 186 Sale Booths

b) Outstation : 7 Villages

c) Milk Parlour : 10 Nos

Average Daily Milk Procurement : 6,457.65 liters

Total Number of Milk Collection Centre : 31 nos

Number of Bulk Milk Cooler Installed

a) 1000 ltrs : 7 nos

b) 500 ltrs : 1 no

Dairy product sale : Rs. 2,03,20,088.00

Gross Profit (Provisional) : Rs. 97,08,113.00

Net Profit (Provisional) : Rs. 3,71,129.00

3.4.2. KK DAIRY

KK Diary is a private firm established in 2011 by Samuel. The dairy plant capacity is 1200 LPD. The firm has six employees. This firm collects milk from the society milk collector after testing fat and SNF (solid not found) and also from outside the society; the milk containing more fat is purchased higher than the other. The milk collected is then pasteurized, packed and distributed only to their dealers/retailer and reach the customers through them. At present the farm is having 60 dealers, in and around Aizawl city area. Regularly they supply around 18000 liters for a month to their dealers. These dealers earn Rs 3/- per liter which cost around Rs. 50/- at the market. They are not producing any by products, only liquid milk.

3.4.3. UNORGANISED MILK DISTRIBUTOR

The unorganized milk distributors are those who directly supply milk to the consumers or through supplier. They are the producers cum distributor. Usually small farmers has 1 to 2 cows yielding 8 liters per day, medium farmers has 4 to 5 cows and yield 15 liters per day, large farmers has 9 to 10 cows and yield 30 liters daily. They locate like a cluster in and around Aizawl city. They milk the cow twice a day, morning and evening shift. In the next morning they directly distribute to their respective regular customer to various household or supply to the milkman. They usually got paid at the end of the month. On an average one supplier usually covers around 3 or 4 locations daily. They are selling at Rs.60 per liter.

CHAPTER-4

AN ANALYSIS ON THE PERFORMANCE OF MULCO ON MILK MARKETING

4.1. INTRODUCTION

The performance of MULCO Ltd. regarding the distribution and marketing of milk and of milk products is analyzed through consumers, commissioning agents as well as through their own source.

Until recently the dairy industry in Aizawl was characterised by one major processor, the Mizoram Milk Producers' Cooperative Union Limited. During this time MULCO milk was popularly known as Vety Milk. They enjoyed a near monopoly of the Aizawl Dairy market. Now a days with the emergence of numerous small scale unorganized private distributor, private processor, outside milk product, the market has become more competitive.

The market size of MULCO turns out to be 30% inside Mizoram. Approximately, MULCO used to produce 5200 liters/day respectively. And sold around 157367 liters per year. They have also been using high temperature short time pasteurization (HTST) type of processing techniques. 94% of milk is sold through commission agents and the rest 6% is through their milk parlour/booths. In case of milk products 20% of the product is sold through their agents and 80% is through their own parlour/booth.

MULCO products have competitive market and also follow competitive price as well as cost plus profit. They are resorted to Producer-Retailer-Consumer forms of distribution channel. They are able to cover their short term credit needs like buying of raw milk,

polyfilm, electric and water bill, payment of employees etc. by selling their products. However, they usually get those medium and long term credit needs through project funds and also from Government Schemes like NLUP.

4.2. PRODUCTION OF MILK AND OTHER MILK PRODUCTS

The following Table:4.2 shows the average production trend of milk and milk product during 2012-13 to 2014-2015.

Table 4.2
: Average Milk and Milk Product Production Trend.

Product	**2012-13**	**2013-14**	**2014-15**
Milk(liters)	7791.167	11474.08	17126.67
Rosgula(pieces)	9854.167	1200	15933.33
Rasmalai(pieces)	32963.33	53533.33	75550
Gulabjamun(pieces)	5772.5	9397.5	13566.67
Dahi (liters)	2313.75	2589.167	3009.167
Paneer(kg)	322.7917	488.0833	879.1667
Ghee(200gm)	18.5833	26	1013.25
Lassi(liters)	1201.583	1621.667	1941.667
Ice Cream(100gm)	1748.917	2631	0
Dahi Cup(100gm)	855.75	14236.67	26277.08

Source: MULCO Ltd

The above table shows an increasing production trend of milk and in some other milk product for the period 2012-2013. The production of milk has increased overtime, during 2012-2013, MULCO milk production has increased from 7791.167 liters to 11474.08 liters in 2013-2014 and again rises up to 17126.67 liters. This increasing trend has also been experience in other milk products like Ramallai, Dahi, Dahi cup, Lassi, Ghee, and Paneer. They continue increaseimg over three years as shown in the figure. But for the production of Rosgula and Gulabjamin there was a fall in the production during 2013-2014, but again rise up in 2014-2015. The production of ice cream has stop from 2014 till today.

4.3. MILK PROCUREMENT

The total milk procured by MULCO from each society during 2004-2014 is shown in Table 4.3

Table 4.3
: Milk Procurement

Years	Procurement (liters)
2004	1937734
2005	2226848
2006	2250021
2007	1984958
2008	2337352
2009	2325957
2010	2596351
2011	2434039
2012	2618421
2013	2388605
2014	2511185

Source: MULCO

On the basis of table 4.3, the trend values of milk procurement by MULCO during the period of 2004 to 2014 has been calculated by means of ordinary least squares method, as shown below-

$$Y = 2327.83 + 40.2X$$
$$(t=2.875) \qquad R^2=0.45$$
$$F=8.18$$

Where Y stands for the quantity of milk procurement made by MULCO and X refers to time.

The estimated parameters have the expected signs and values which are also statistically significant at 5% level. The estimated equation shows that the milk procurement made by MULCO increases by 40.2 thousand liters per annum. So the equation has given empirical support to our hypothesis that procurement of milk by MULCO has been significantly increasing.

4.4. MILK CONSUMERS

Questionnaires were also raised to 30 household milk consumers who are residing in Aizawl city. Selecting them from each zone North, East, South, West. Here are some statistical facts relating to the opinions of the milk consumers pertaining to the product of MULCO.

Table 4.4.1

: Opinion of the consumers

Sl.no	Query			No. of Respondents	Percentage (approx)
1	Use of milk				
	a) Tea/Coffee			19	63.33

	b) Drinking			5	16.67
	c) Both			6	20.00
			Total	30	
2	Price of local milk				
	a) High			10	33.33
	b) Low			9	30.00
	c) moderate			11	36.67
			Total	30	100.00
3	Aware of milk adulteration				
	a) Yes			17	56.67
	b) No			13	43.33
			Total	30	100.00
4	Good in quality than other milk				
	a) Yes			26	86.67
	b) No			4	13.33
			Total	30	100.00
5	Type of milk consume				
	a) MULCO milk			6	20
	b) Local milk			11	36.67
	c) Outside milk			13	43.33
			Total	30	100
6	Mode of payment				
	a) Daily			23	76.67
	b) Monthly			7	23.33
			Total	30	100

Source: Sample survey

The above table 4.2.1 shows that out of 30 respondents 19 consumers that are 63.33 percent consumed milk for making tea and coffee. 16 percent of the consumers used it for drinking and the rest 20 percent consume it for both tea and coffee.

On finding out whether the respondents aware of milk adulteration, the result is that 56.67 percent of the respondents are aware of milk adulteration and only 43.33 percent of the respondents do not aware about milk adulteration.

Milk Consume(liter)	No. of respondents	Percentage

Comparing the price of local milk and outside milk product, 36 percent of the respondents think that the price of local milk is moderate, not too muck high or low, 33 percent of the respondents think that it is high and the other 30 percent of the respondent think the price of local milk is low.

The consumers were also asked about how they feel about the quality of MULCO product. 86.67 percent said that they are good in quality, and only 13.33 percent of the respondents think that they are in low quality.

Question were also raised regarding the type of milk consume or measuring the size of their market, 43.33 percent of respondents consume milk, 36.67 percent of respondents consume local milk (unorganized milk distributor, private organized distributor) and the rest 20 percent of the respondents used to consume MULCO milk.

Regarding the mode of payment, 76.67 percent of the respondents made payment on daily bases, 23.33 percent follows monthly payment pattern.

Table 4.4.2
: Milk Consumption pattern.

1/2	11	36.67
1	14	46.67
2	5	16.67
Total	30	100

Source: Sample Survey

It was observed that 36.67 percent of the respondents consume half liter of milk daily, 46.67 percent of the respondent consume 1 liter per day and the rest 16 percent of the respondent consume 2 liters per day. By taking their average, it is believed that 0.8 liters of milk per day are consumed by each household in Aizawl city.

4.5. COMMISSION AGENTS

Again in here, 50 commission agents were randomly selected from each zone North,East, South and West in Aizawl city area.

From the commission agents side the following information were taken to identify the performance of MULCO in distributing their products.

Table 4.5

: Opinion and Conditions of Commission Agents

Sln.	Query		No. of respondents	Percentage
1	Type of product sold			
	a) Milk		48	96
	b) Milk Product		2	4
		Total	50	100
2	Income per month(Rupees)			
	a) 1000		4	8
	b) 1000-5000		33	66
	c) 5000-10000		12	24
	d) 10000		1	2
		Total	50	100
3	Sufficient in supply			
	a) Yes		8	16
	b) No		42	84
		Total	50	100
4	Sustainable source for livelihood			
	a) Yes		7	14
	b) No		43	86
		Total	50	100
5	Drawback of MULCO milk			
	a) Inferior quality		7	14
	b) Inadequate packaging		9	18
	c) Lack of advertisement		2	4
	d) Can't say		32	64
		Total	50	100

Source: Sample Survey

The above table indicates that 50 commissioning agents out of 204 commissioning agents, 48 (96%) respondents sold liquid milk and 2(4%) respondents sold milk product like Dhoi, lassi, etc.

It also shows that 33(66%) respondents are with income of less than 5000. 12(24%) are between the income range of Rs 5000-1000. And only 1(2%) respondents able to earn more than 10000.

42(84%) commission agents said that they are not able to get sufficient amount of milk from MULCO to sell, that can cover all their customers demand. 8(16%) are able to cover all their regular customers demand.

43(86%) respondents said that selling MULCO milk and other milk products is not a sustainable source of livelihood in Aizawl. Only 14% out of 100 believed it as a sustainable source of livelihood.

By taking the opinion of the commission agents regarding the demerits or drawback of MULCO product 32(64%) respondents has no idea, 4(2%) respondent said the main disadvantage of MULCO is in its lack of advertisement , 9(18%) said due to their inadequate packaging and again another 7(14%) respondents said that the quality of milk is low.

CHAPTER-5

MAJOR FINDINGS AND SUGGESTIONS

5.1. FINDINGS

An in-depth study on the 'Distribution Channels and Pricing of Milk and of Milk product in Aizawl City: A case study of MULCO', following points were found through its primary and secondary data collected.

- The analysis of milk procured by MULCO Ltd. during 2004-2015 indicates that milk procurement increases by 40.2 thousands liters per annum.
- Throughout the study period there has been a gradual increase in the amount of milk and other milk products marketed by MULCO.
- At present there are 204 commission agents of MULCO Ltd in the study area. Most of them are uneducated showing that MUCLO plays a very important role in providing employment opportunities to uneducated people besides employing certain number of skilled labour which help to improve their standard of living to some extent.
- Out of the total respondents most of the commission agents (75%) are earning less than Rs. 5000 per month. Looking into the expenditure requirement of every household in Aizawl this income level is following short of the average expenditure requirement of the families engaged in the marketing of milk and of milk products.
- It is also observed that MULCO occupies a large size of market in milk marketing which is estimated at 30% (20% of milk and 10% other milk products).

5.3. SUGGESTIONS

The following suggestion are given based on the findings and observations of the study-

- Social awareness should be given regarding the importance of milk for health. Based on the opinion of the consumer, 56.67% of the respondents are not aware of milk adulteration; this necessitates conducting awareness in this field also.
- The cooperative must keep a certain amount of money for depreciation reserve fund to easily replace the worn out assets and also the government must take certain steps, so that total production and quality will no longer influence.
- Since Mizoram is a place where the dependence level of population on secondary sector is very less. The products of such manufacturing sector that are needed in milk marketing process are not totally available (like- polyfilm, food flavor, etc). All are imported from the other states. The government must intervene by setting up such manufacturing industry or must find way to easily import those materials with a low cost and less time consuming.
- MULCO Ltd. must able to double increase in production only than it will avoid deficiency in supply of milk.
- Advertisement on its product must be done to increase its sales.
- Another important recommendation is that the dairy farmer should be given more priority since they are the main source of raw milk. They should impress and motivate through our work culture. Most importantly there should be work trust between the dairy farmers and the union. The rate of milk process and sold corresponds to the amount of milk submitted by the dairy farmers.
- All the norms made by MULCO Ltd. should be strictly enforced only then its objectives will be achieved at the desired level.

5.4. CONCLUSION

Through the above findings, it can be said that the performance of MUCLO regarding distribution and marketing of milk and milk products still not efficient. Most of their agents (uneducated employed) 86% are not able to sustain their life through these activities because of deficient in supply. In order to solve this MULCO Ltd. must able to double increase its production.

86.67% of the respondents said that local milk are more in good quality than outside and also 36.67% also said that the price of local milk is moderate. This reflects that MUCLO Ltd. has the potential to potential to develop the economy through improving its existing activities.

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APPENDICES

Appendix-I

Questionnaires for MULCO

1. Name, Address of the

Dairy Unit/Distributor :

2. Types of the proprietor :

3. Form of Ownership :

4. Milk procured in quantity (Liters)

a. Producers b. Milk producers Co-operative Societies

c. Others

5. The products produced by the unit

a. Liquid Milk b. Curd

c. Ghee d. Cream

e. Paneer f. Flavoured Milk

g. Other products (Please specify)

6. What is the area of your market? .....

7. In your opinion what type of milk products do the consumers prefer?

a. Local dairy products b. Products from outside the state.

8. Do you think the dairy products from outside the state have an advantage over the local products?

Yes/No

9. What kind of advantage do you think they have? In items of

a. Price b. Quality

c. Packaging & outside appearance d. Labelling.

10. Demand of local dairy products among the consumers.

High/Average/Low

11. Have you taken any step for advertising your products?

Yes/No

12. What type of media have you adopted to popularize you products?

a. T.V. b. Newspaper

c. Magazines d. Posters

e. Signboards f. Hoarding

g. Brochures

13. Do you think that advertising helps in promoting sales?

Yes/No

14. Have you conducted market survey of your products?

Yes/No

15. Response of the consumers to such surveys.

Positive/Negative

16. Are the consumers aware of your products?

Yes/No

17. What type of market do your products have?

Monopoly/Competitive

18. Pricing policy adopted by your unit.

a. Competitive price b. Target price

c. Cost Plus price.

19. Do you provide any credit facilities to the retailers/commission agents?

Yes/No

If yes, state the maximum credit period given to retailers

One week/ Fifteen days/ One month.

20. Channel of distribution resort to

a. Producer — Retailer — Consumer

b. Producer — Middleman —Consumer

c. Producer — Authorised dealers (Stockist) — Retailers) — Consumer

d. Producer — Distributor — Wholesaler — Retailers — Consumer

e. Producers — Consumer

21. Have you employed any persons for promoting sales by house to house campaigning?

Yes/No

22. Rate of Sale:

a. Liquid Milk (In litres): Monthly -Yearly -

b. Milk powder (In kg.): Monthly -Yearly –

23. Type of Packaging : Volume & quantity available

a. Milk.....

b. Ghee.....

c. Paneer .....

d. Curd.....

e. Flavoured Milk.....

24. What is the cost of producing milk per unit pack.

25. Is the packaging materials used by your unit easily available?

Yes/No

26. From where do you procure the packaging materials?

Within the state/Outside the state.

37. Where is the labeling of your products done?

Locally/Outside the state.

38. Do you have any cold storage facilities?

Yes/No

39. What is your opinion about the availability of space for storing the finished products?

Sufficient/lnsufficient.

40. Do you face any problems in transporting your products?

Yes/No

41. Cost of transportation ;

High/Moderate/Low

42. Type of processing technique used.....

43. Production capacity.....

44. Present production per day.....

45. Is there any future plans for increasing production?

Yes/No

46. Do you frequently upgrade the technique of production?

Yes/No

48. Do you receive any financial support from the Government or any agencies?

Yes/No

If yes, state the type of support and the source

Source

a. Term Loan .....

b. Trade Credit .....

c. Loan & Advances .....

d. Advance from customers.....

e. Bank Credit .....

f. If any other (Please specify)

Questionnaires for Milk Consumers

1. Name & Address :

2. Size of the family:

(a) < 5 (less than) members (b) 5-7 members.

c) > 7 (more than) members.

3. Monthly Income

(a) < Rs. 3,000 (b) Rs. 3,000 - Rs. 5,000

(c) Rs. 5,000 - Rs. 10,000 (d) Rs. 10,000- Rs. 15,000

(e) Rs. 15,000 - Rs. 25,000 (f) Rs. 25,000 <

4. Occupation

(a) Farming

(b) Business

(c) Service (Govt/ Private)

(d) Any other

(P lease specify)

5. Quantity of liquid mild purchased (in litre).

(a) Morning.....

(b) Evening.....

(c) Both morning & evening.....

6. Price of liquid milk purchased per litre ...

7. Source of liquid milk.(V mark)

(a) Private vendors.

(b) Purabi (Milk Union)

(d) Dairy Fresh

(e) Any other (Please Specify).....

8. Mode of Payment:-

(a) Daily Payment

(b) Monthly Credit

(c) Monthly Advance

(d) Any other (Please specify).....

9. Reasons for patronizing the present liquid milk supplier.

(a) Regularly

(b) Time availability

(c) Reasonable price

(d) Quality

(e) Credit facility

(f) Door Delivery

(g) Long time association

(h) No alternative choice

(i) Children's Choice

j) Any other (please Specify).

10. Use of milk

(a) Sweet making (b) Curd making (c) Kheer making

(d) Channa/Paneer (e) Tea/Coffee etc. (f) Drinking as such

(g) Any Other (Please Specify)

11. Milk Products consumed in your family.

Brand Name Monthy

a) Milk Powder: .....

(b) Butter: ....

(c) Ghee : .....

(d) Cream : .....

(e) Other Products : .....

(Please specify : ....

12. State the reason/reasons for your preference of the various milk products?

Quality/price/taste/packing convenience.

13. Do you think locally produced milk products are better than those manufactured

outside?

Yes/No

14. What is your opinion about the price of the products of local manufacturer

compared to the outside products?

High / Low

15. Whether the local based dairy products are easily available in the market?

Yes / No.

16. Whether distance from the residence to collect.....

(a) Liquid milk -

Far / Near.

(b) Milk products -

Far / Near

17. Are you aware of milk adulteration supplied by.....

(a) Private milk vendors - Yes/No.

(b) Branded milk -Yes/No.

Questionnaires for Commission Agents

1. Name of the Retail Shop & Address :

2. Types of retail shop :

3. What type of dairy products do you sell?

a) Milk b) Milk powder

c) Paneer d) Cheese e)Curd.

4. Which type of dairy based products do you deal in?

a) Locally manufactured (MULCO)

b) Marketed from outside the state.

c) Both.

5. In which type of products is the rate of sale high?

a) Locally produced.

b) Marketed from outside.

6. In your opinion what is the main drawback of the local dairy products of Mizoram?

a) Lack of advertisement b) Unattactive labeling

c) Inadequate package d) Inferior quality.

7. How many plate do you get from MULCO per day.

8. Is it sufficient enough to cover all your customers demand (MULCO)

a) Yes b) No

If no, how many pack/plate more you required.

9. Which of the products have higher price?

a) Local b) Outside

10. Do the customers prefer a particular brand of dairy products marketed from outside?

a) Yes b)No

11. Name of the brand :

12. Which local brand of dairy products do you consider to be high in demand?

13. In which dairy products do you have a greater margin of profit?

a) Locally produced b) Marketed from outside the state.

14. Is the demand of diary product of Mizoram equivalent to its supply?

a) Yes b) No

15. Do you get any credit facility from the dairy units of Mizoram?

a) Yes b) No

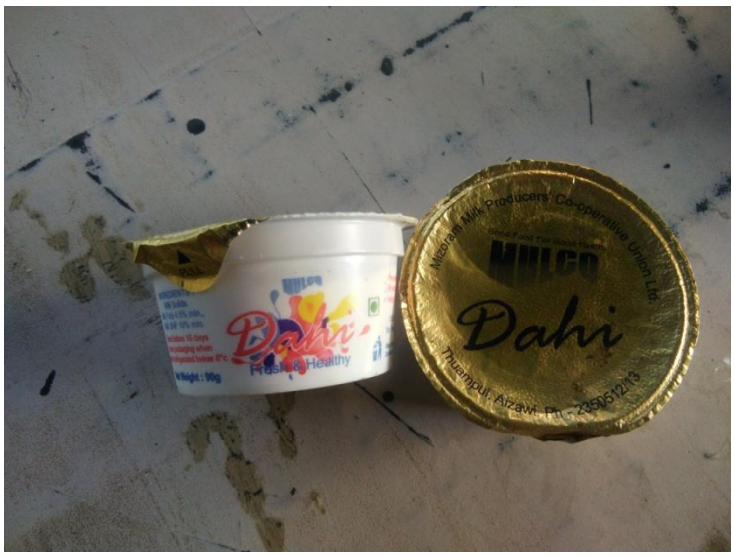
16. Is there any step taken by MULCO to boost up their sales?

a) Yes b) No

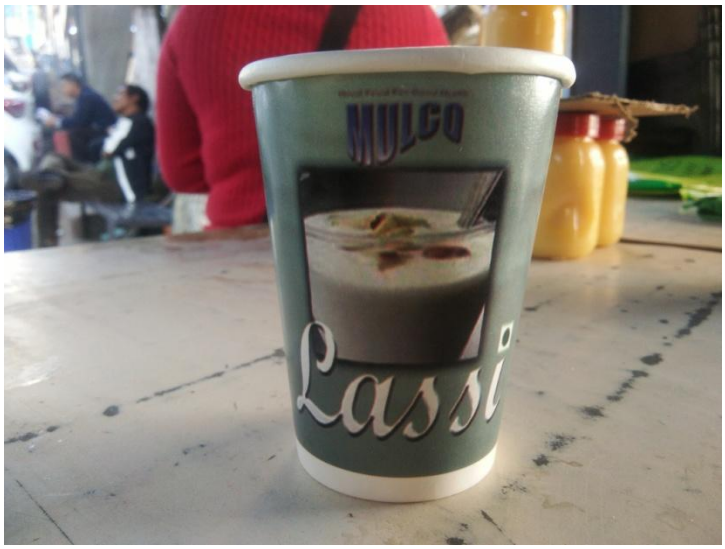
20. What type of step.....

a) Free Gifts b) Discount c) Any competition among the custome

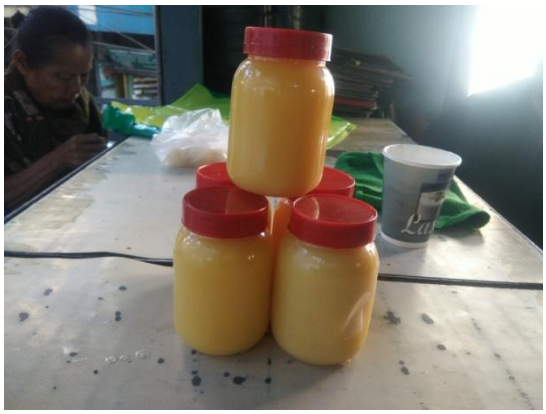
Appendix - II



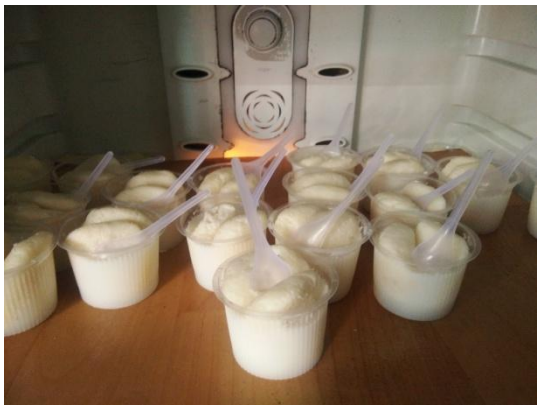
DAHI CUP



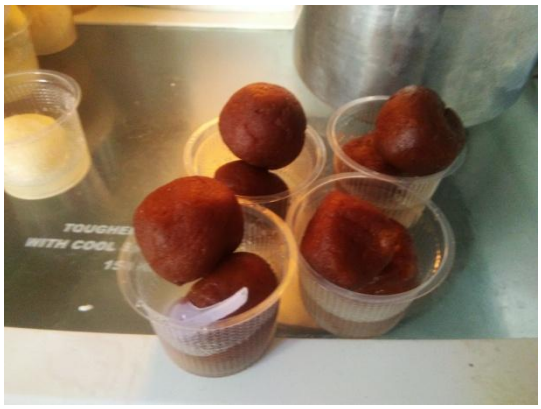
LASSI



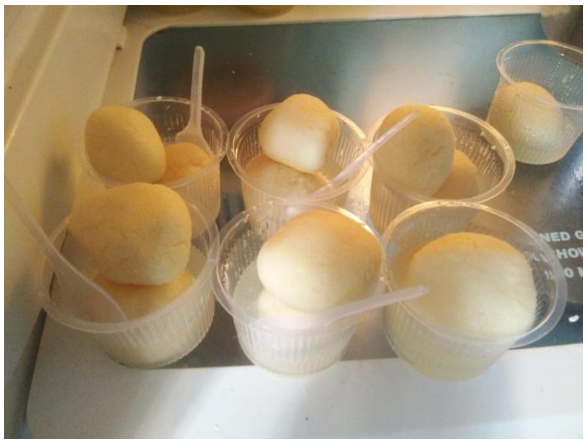
GHEE



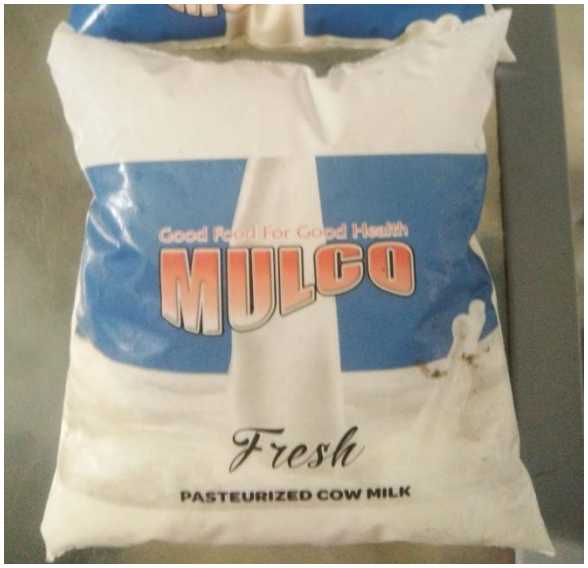
Rasmalai



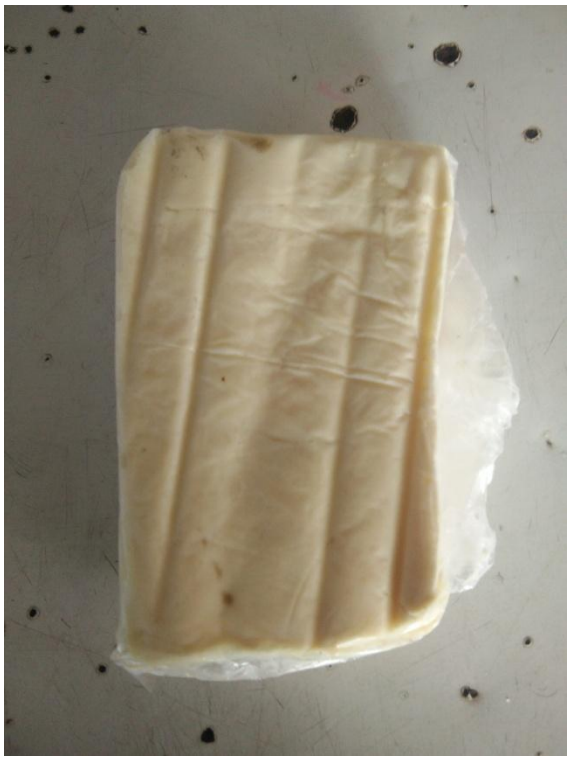
GULAB JAMUN



RASGULLA



MILK



PANEER