DAIRY MARKET TRENDS IN VAVUNIYA: IDENTIFYING POTENTIALS AND CHALLENGES IN A POST-CONFLICT SETTING

Mangaleswaran Thampoe
Vavuniya Campus of the University of Jaffna, Vavuniya, Sri Lanka
tmangales@yahoo.com

Jeyaseelan Gnanaseelan
Vavuniya Campus of the University of Jaffna, Vavuniya, Sri Lanka jeya86@hotmail.com
and

Neavis Morais
Department of Social Studies, Open University of Sri Lanka, Nawala, Sri Lanka,
nsmor@ou.ac.lk

ABSTRACT

Vavuniya is primarily an agricultural district. Milk production is an important secondary source of livelihood for the rural people. The aim of this study is to map the potentials and challenges of dairy market in Vavuniya district. This study inquires whether milk and milk based products have a good market opportunity and what challenges are faced in marketing milk and milk based products in Vavuniya. Questionnaire survey, interviews and focus group discussion were used to collect primary data from a cross section of dairy consumers, producer groups, institutional representatives and key informants. The research team obtained response from 265 households in four DS divisions. Narrative and statistical analysis methods were used to analyse the primary data. This study is significant in finding out that there exists considerable demand for fresh milk. However, the lack of availability, accessibility, and quality of local fresh milk, and locally processed milk based products have made the consumers resort to seeking more imported powdered milk and milk based products. The study also found that there is considerable willingness to buy or switch to local products when these constraints are addressed. The study concludes that it is a positive trend in developing dairy market in Vavuniya, particularly in a post-conflict setting.

Key word: Fresh milk, Dairy market, Milk based products

1. INTRODUCTION

Vavuniya is primarily an agricultural district. Milk production is an important secondary source of livelihood for the rural people. For the last three decades the northern region of Sri Lanka experienced an intensive politico- military conflict which has almost destroyed the infrastructure of all the micro and macro ventures of development. The dairy market was severely affected by the activities of both the military and the militants. The government intervention in developing the dairy sector during the conflict time was lacking. The dairy farmers in Vavuniya faced significant obstacles, mobility restrictions and economic sanctions to establish proper, regular marketing systems for dairy product. The middle of 2009 witnessed a passive post conflict situation which created enthusiasm among the developers to revive and survive the livelihood sectors including dairy

The study sought to explore the question to what extent milk is accessible to local consumers in a convenient way, and what preference people have for the fresh milk consumption– especially packaged milk. Being perishable in nature and the range of skills involved in its production and marketing, expanding the potential of dairy marketing requires a number of services that can best be provided by cooperative action. It is not surprising therefore that the cooperative movement has featured prominently in the development of the dairy industry worldwide.

1.1 Dairy farming, cooperatives and milk marketing

The main constraint that milk producers seek to overcome by acting collectively is the marketing of their product. The need to be assured of a secure market is a real one. It can be met by dairy farmers cooperatively establishing their own collection system and milk treatment facility in order to convert their perishable primary produce, which requires special and timely attention, into products with longer-keeping quality for marketing purposes.

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. The fresh milk marketing through farmer cooperative system has proved to be an effective vehicle for livelihood development in general and for dairy development in particular in rural areas (Nandakumaran et al., 2008). The common need of milk producers is to obtain a fair price for their milk and this is fulfilled through collective marketing which should be sustainable and strategically adaptable. Milk is considered to be one of the most sensitive agricultural commodities, requiring special and timely care in collecting and marketing as well. Many countries are attempting to increase livestock and especially milk production and marketing by assisting small-scale farmers, and very often also landless. In Kenya, for example, a countrywide study revealed that pasteurized milk was purchased by 78 percent of the households surveyed (Vitalis, 2003).

1.2 Sri Lankan context

Organizing milk producers into dairy cooperatives and marketing the dairy produce has been evident in Sri Lanka as far back as the 1930s. The enthusiasm for diary production and marketing was generated by the successful achievements in neighbouring India. The Ministry of Rural Industrial Development played a significant role in this regard. One of the weaknesses of the dairy cooperative movement in Sri Lanka, however, is the high degree of dependence on government institutions for management and operational control. At present, the establishment and strengthening of dairy cooperatives is being actively encouraged by all parties concerned, including donor agencies.

Sri Lanka imports around 68,000 MT of dairy commodities (Department of Custom, 2006), and dairy development is therefore seen as an instrument to replace this large volume of imported commodities. The domestic milk production only constitutes about 17 percent of the requirement and the rest was imported according to 2006 statistics. The importation bill on dairy commodities is around 17 billion rupees. This figure was expected to double or triple in future because of the doubling price of the imported milk powder due to huge demand for milk and short supply worldwide. At present annual availability of milk per person is only 40 litres, which is just 0.1 litre per day per person. There is a high potential for increasing the supply. The government policy on dairy development is aimed at producing 50% of country's milk requirement by the year 2015.

The government policy is encouraging the local milk production and fresh milk consumption. Of the total milk that is available, the volume of milk entering the formal milk market annually is around 100 million litres and the rest is channelled via informal routes and consumed domestically. Therefore, in this post-conflict situation, the opportunity for developing the dairy sector in the Vanni region including Vavuniya is potentially high.

Of the private sector agencies involved in livestock activities Nestle' Lanka Ltd**.** is a major player and is a subsidiary of Nestle'. It is the second largest milk processor next to Milco (Pvt) Ltd. and is engaged in producing a wide variety of dairy products. Kotmale Dairy Products, Lucky Lanka Dairies (Pvt) Ltd, Lanka Milk Foods (Pvt) Ltd, and Fonterra Brands (Pvt) Ltd are the other players of sizeable milk processing engagement. Also, there are several medium scale and small-scale private sector organizations and cooperatives involved in milk collection and milk processing in the country.

1.3 Vavuniya district context

In Vavuniya district, prior to 1987 there were 327,000 cattle and more than 3,000 buffaloes which were equal to 27 percent of the present national herd size. In 2001 the number has declined to 195,675 cattle and 2000 buffaloes. The present cattle population in Vavuniya represents only 16 percent of the national population. A proper estimate on cattle population was not done in the district. According to the information given by the District Animal Production and Health Department (2006), in Vavuniya Divisional secretariat division, there were 18,747 Neat cattle and 497 Buffaloes; in Vavuniya South, 8221 and 686; in Cheddikulam, 15,942 and 277 and in Vavuniya North, 3531 and 297 respectively. The following table indicates the trend in milk production in the Vanni region during the period 1982-2002. There is a lack of data after 2002.

Table 1.1: Annual Milk Production Trend (litres) in the Vanni - 1982-2002

District	1982	1998	2002
Mullaitivu	822,100	216,200	216,100
Vavuniya	317,200	239,200	235,100
Mannar	60,800	300,600	347,600
Total	**1,200,100**	**756,000**	**798,800**

Source: Department of Animal Production and Health, Vavuniya.

These figures in the table explain a fluctuating trend of milk production in the Vanni region, which is attributable to the protracted conflict. The production of milk in the region in 1982 was more than 1.2 million litres. Due to twenty five years of conflict farmers were displaced, lost or abandoned their herds, lack of access to grazing lands, the production has been declined to 66 percent of the 1982 level. However, the trend has been changing and the efforts taken during the peace period should be expected to pay the dividend.

A need assessment survey carried out by Oxfam GB had identified that dairy farming remains a secure source of secondary income for nearly 15,000 households in Vavuniya district, and found that heavy reliance on informal marketing mechanism constrained income generation. It was realized that addressing weak access to market would facilitate livelihood promotion.

1.4 Objectives of the Study

This major objective of the study is to assess the potential for enhancing milk based production activities and the potential for promoting fresh milk consumption in the district through expanding marketing. The following are the specific objectives of this study.

1. To identify dairy market trends and characteristics (assessing demand size, characteristics of consumers, price trends, quality requirements, seasonality).

2. To explore consumer demand for milk and milk based products based on different variables such as convenience, quality requirements, affordability and satisfaction.

3. To map the consumer demand patterns for milk and milk based products on a low to high priority basis.

4. To analyze consumer preference towards fresh milk versus milk powder consumption.

5. To assess the District Cooperative's capacity in milk marketing and customer service

2. CONCEPTUAL BACKGROUND

2.1 Marketing

According to Saiyed (2009), marketing means the getting together of buyers and sellers in person or any by mail or telephone, or through any other means of communication. Marketing includes all the impacts involved in the exchange process of transferring the possession and ownership of goods or services from the producer to the ultimate consumers (Sukumar, 2008). Marketing starts with consumer and ends with consumer. Therefore, today's market is called consumer market. It can be defined as, "All the individuals and households who buy goods and services for personal consumption". So, the consumer satisfaction becomes more important in the marketing functions.

The marketing programme covers producer planning or merchandising, price, promotion and distribution. In short, modern marketing begins with the customer, not with production cost, sales, technological landmarks, and it ends with the customer satisfaction and social well-being. Under the market- driven economy, buyer or customer is the boss. Marketing has been viewed as an ongoing or dynamic process involving a set of interacting activities dealing with a market offering by producers to consumers on the basis of reliable marketing anticipation. Marketing is a matching process by which a producer provides a marketing mix that meets consumer demands of a target market within the limits of society. The process is based on corporate goals and corporate capabilities. Marketing process brings together producers and consumers, the two main participants, in exchange (Saiyed, 2009)

2.2 Milk Marketing

Milk is an essential commodity in daily consumption. In Sri Lanka milk and dairy products are by-products of several thousand agriculturalists. In these days when almost all items are sold in readymade forms in packets and milk is no more exception. It can be purchased at any time from a grocery shop. It is also good from health point of view as it is purified and the cholesterol content is removed from it.

Marketing of milk in Sri Lanka is complex and varied. There are individual farmers who sell direct to processors, consumers, hotels, cafeterias and canteens. Co-operatives are organized primarily for the purpose of collecting and selling milk to either hotels or processors. The formal, or processed dairy market consists of small primary dairy co-ops, larger local co-ops, district-level dairy co-ops, dairy co-operative unions, and networks of collection points and milk chilling centres operated by co-ops or the main dairy processors. Most farmers are not members of cooperatives or farmer societies.

Unlike milk powder, the consumption of fresh milk appears to increase with income suggesting that as incomes increase over time demand could shift toward liquid milk. This presents good opportunities for smallholders who are involved in domestic dairy production. Domestic producers have a comparative advantage in the liquid milk market as reconstituted milk does not seem to be a good substitute. Awareness to increase market for such sales needs to be considered.

2.3 Importance of consumer satisfaction

The need to satisfy customer for success in any commercial enterprise is very obvious. The income of all commercial enterprise is derived from the payments received for the products and services supplied to its customers. If there is no customer, there is no income and there is no business. Then the core activity of any company is to attract and retain customers. It is therefore no surprise that Peter Drucker, the renowned management Guru, has said "to satisfy the customers are the mission and purpose of every business". So, the marketers to satisfy the consumer must very well know the behaviour of consumer. The term consumer behavior refers to the behavior that consumer displays in reaching for purchasing, using, evaluating and disposing of products and services that they accept will satisfy their needs (Sukumar, 2007).

2.4 Consumer preferences

Consumer decides what to purchase, from whom to purchase, why to purchase, from where to purchase, and how much to purchase. In order to become a successful marketer, one must know the liking or disliking of the customers. A marketer must also know the time and the quantity of goods and services, a consumer may purchase, so that he/she may store the goods or provide the services according to the likings of the consumers. In this sense, "consumer is the supreme in the market".
Preference (or taste) is a concept, used in the social sciences, particularly economics. It assumes a real or imagined "choice" between alternatives and the possibility of rank ordering of these alternatives, based on happiness, satisfaction, gratification, enjoyment, utility they provide. More generally, it can be seen as a source of motivation. So for success of any company or product promotion it is very necessary to depart its concentration towards consumer preference (Kandhahari, 2007).

3. METHODOLOGY

3.1 Methods of Data Collection

The study adopted quantitative and qualitative methodologies to assess the potentials of the dairy sector in relation to livelihood promotion of the people in Vavuniya. Structured questionnaire survey, interviews and focus group discussion were used as tools for primary data collection. Structured questionnaire was designed to obtain response from dairy consumers and intended future consumers. The questionnaire for consumer preference survey contained 16 sections. The major areas covered include household economic condition, asset base, access to financial services, fresh milk and powdered milk preferences, habits, beliefs and practices, consumption patterns, quality of milk and customer perception.

The focus group discussion guide was developed to facilitate discussion with the federation for Livestock Breeders Cooperative Societies (LBCS); Komatha, Kamathenu, Sakthi and Chettikulam LBCS, and teachers and students of the schools where fresh milk consumption was promoted on a pilot basis. Guided questionnaire designed for the FGDs was intended to gather information on their involvement in the Vavuniya dairy development, their capacity, opinion, and suggestion for the future marketing. Different structured guides were used to generate discussion among the participants. The researchers facilitated the discussion and recorded the final decisions on each of the issue. Semi-structured questionnaire was prepared for the interviews with doctors (including ayurvedic), Asst. Commissioner for Cooperative Development (ACCD)/ Department of Cooperative, and Traders.

Secondary data were collected from the literature and the records available from Oxfam GB, LBCS, Department of Co-operative, District secretariat, and powdered milk agents.

3.2 Sampling Framework

Research team obtained the list of target households using stratified sampling among the consumers and intended consumers of fresh milk. The list is available separately for the Divisional Secretariat (DS), Grama Niladari (GN) and villages selected. Field assistants visited 300 households but could only conduct the survey with 265 households. The questionnaire survey covered 88 percent of the planned samples. Since the major objective of the study was to assess the potential of dairy marketing in Vavuniya, it was decided to include mostly the urban households (Vavuniya DS division) who are not producers of milk. The survey was conducted during April – May, 2009.

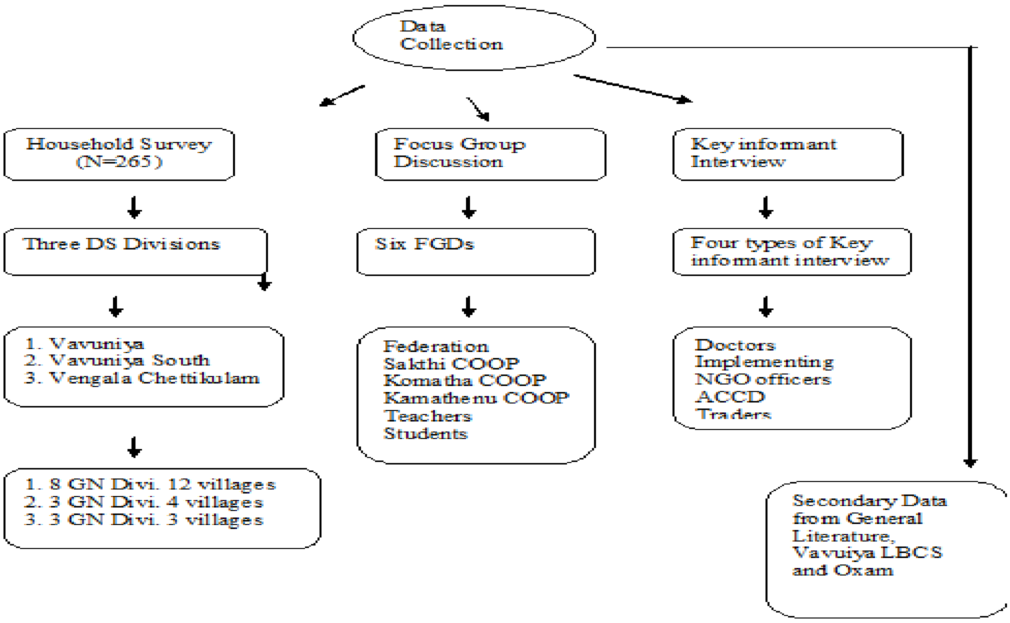

Figure 3.1 Sampling Frame

Three out of four Divisional Secretariats (DS) of Vavuniya such as Vavuniya (134 house holds), Vavuniya South (83) and Vengalachettikulam (48) were selected for this household survey. Vavuniya North Division was not included in the sample frame due to its volatile situation. There were fourteen Grama Niladari divisions selected from the above DS divisions: 8 GN out of 42 GN of VDS, 3 GN out of 20 GN of VSDS and 3GN out of 20 GN of VCDS[1]. The household survey was conducted among 265 households selected from 19 focal villages[2].

The survey has drawn the positions and attitudes at the consumer level mainly. Hence, it was decided to include the urban households and the rural households with no cattle. The questionnaire was designed to capture the attitude and perception of the consumers with regard to fresh milk consumption and marketing especially the intended new marketing venture of packaged fresh milk by the milk cooperatives.

3.3 Methods of Analysis

[1] VDS: Vavuniya Divisional Secretariat, VSDS: Vavuniya South Divisional Secretariat, VCDS: Vengalacheddikulam Divisional Secretariat.

[2] The 19 villages are Kudiyiruppu, Nedumkulam, Rampaikulam, Veerapuram, Thekkawatta, Madukantha, Thirunavatkulam, Nawagama, Soosaipillayarkulam, Katkuli, Kurumankadu, Muthaliyarkulam, Cheddikulam, Moondimurippu, Malayarparithikulam Vairavarpuliyankulam, Paddanichoor, Vavuniya Town, and Thandikkulam

The research team used Statistical Package for Social Sciences (SPSS) for the analysis of the quantitative information. The result contained descriptive statistics relating to the different sections of the structured questionnaire. For the analysis of qualitative data, the researchers developed matrix of issues and responses of the participants. Qualitative analysis was supported by content analysis of the descriptive reports generated after each Focus Group Discussion. The observations during field visits helped understand the context in which these responses were obtained.

4. ANALYSIS AND DISCUSSION

4.1 Household Profile

Household profiles of the respondents have these distinct classifications. Though Vavuniya district is a conflict affected area and is home to a large number of IDPs; the majority of the population surveyed (217 or 81.3%) are permanent residents. Next to that, the resettled comes to 6.0%, the relocated 6.0% and the IDPs 1.1%. There are others who fill up 4.9%. In terms of long term prospects as consumers of dairy products, it is advantageous to analyze consumer behaviour among the permanent residents, who have established their livelihoods with a steady income.

If the composition of a typical family is observed, 80 percent of the families have several children (three children 27.2%, four 30.9%, and five 23%), which confirms the fact that the majority households have members who need to consume nutritional food, like milk, regularly. It is also important to note that the male-female ratio in each household is more or less the same.

The respondents are engaged in diverse occupations such as Forces (10,9%), Business (11.3%), Drivers (12.5%), Pensioners (7.5%) Laborers (8.7%), Officers (8.3%), Teachers (6.0%), Other (20%). These occupations, which suggest a somewhat steady income to the households, further demonstrate the regular purchasing capacity of the consumers surveyed. The majority (95%) have the family income between the ranges of Rs. 15000-30000, which is an indication that these households belong to ‘not so poor’ category.

4.2 Household Milk Consumption

It was found that 56.6% of the children like consuming fresh milk. However, it is the adult population (79%), which shows a strong inclination towards fresh milk consumption. The elders (42.7 %) also join with the adults showing preference for fresh milk. In general, it can be said there is preference for fresh milk consumption across different age groups. It is a positive aspect in developing dairy market in Vavuniya. However, lack of availability and accessibility seems to limit fresh milk consumption among these groups. It can be noted that 62.2% opted for the imported powdered milk because of its easy availability and accessibility. According to the statistical data obtained from the Vavuniya powdered milk agents, the monthly sale of the powdered milk of all the brands is 29,318 kilograms.

4.3 Order of Preferences in buying locally produced milk

The order of preferences in buying locally produced milk reveals important findings. On condition of quality, availability and accessibility around 60% of the respondents preferred the local fresh milk in first, second and third order. Also, around 63% of the respondents preferred the local curd, 52.8% preferred local ice cream. Butter, ghee, butter milk, milk toffee and flavoured milk are not much produced to gain popularity so they all received less preference. However, preference for the flavoured milk in schools was considerably high. These preferences can be a positive sign for promoting milk based products in Vavuniya.

On the other hand, compared to the local fresh milk, the order of preference for the powdered milk was relatively less (33.1%). However, around 52% of the respondents indicated preference for the industry based curd from the South in first, second and third order. This indicates the potential for expansion of locally produced curd with quality and standards. Despite it being relatively expensive, around 62.6% of the respondents preferred the ice cream brought from other areas in first, second and third order, primarily because of its good quality. Also, around 66% of the respondents preferred the imported yoghurt in first, second and third order for the same reason of good quality. However, though there was reasonable demand for butter (38.1% in the first three orders of preference), ghee (21.2%), butter milk (12.8%), milk toffee (13.1%), majority of the respondents attached less priority for these imported items because of the higher prices.

4.4 Children consumption of local milk

The responses of the parents on children consuming the local milk illustrate that the request for milk is considerably high (63.4%). It was observed that 60.1% of parents chose the fresh milk, and 39.9% preferred the processed milk for their children. It is evident that the people are less aware of the pasteurized milk. The request from children for the imported powdered milk is also high (76.6%). Around 76.6% of the parents are able to provide imported milk to their children on request. Income capacity (10.8%) and their preference (80.3%) are the main reasons for deciding to provide imported milk. It seems the people strongly believe that the imported one is of high quality. Those who are unable to respond to their children's request stated the reasons of non-availability and inaccessibility mainly. Lack of income (48%) and lack of awareness on nutrition (52%) are also other reasons for not providing required milk for children.

4.5 Type of Milk and Milk based product (MBP) consumption

The pattern of milk and milk based product consumption among the respondents show that around 12.1% exclusively consume locally produced fresh milk and milk based products, and 25.7% consume the imported (industry based) powdered milk and milk based products solely. It is also found that around 61.8% consume both locally produced and imported milk and milk based products. These indicate that there is considerable demand for locally produced milk. A household spends Rs.660 on average for fresh and powdered milk per week, but a lesser spending (Rs.500 per week) for milk based products can also be observed.

4.6 Factors influencing type of milk and MBP

The major factors influencing in choosing the type of milk and milk based products are availability, accessibility and quality (95.7%). However, price is also an important factor in deciding the type of milk (62.3%). Since the imported milk is relatively expensive these consumers would like to have more of local milk. However, advertisement, attractive packaging, perception on taste, fat control, doctor advice and relative/friends preference are also playing an important role in the selection of imported milk (57.4%).

4.7 Local vs. Imported milk

As mentioned above, the monthly sale of the powdered milk of all the brands is 29318 kilograms and the monthly average sale of fresh milk is 30,300 liters. In terms of brands, 18400 kg of Anchor, 8120 kg of Nespray, 2400 kg of Laxpray, 178 kg of Maliban, and 120 kg of Milgro are sold monthly (see Appendix 8: Figure 1). In studying the consumption patterns in Vavuniya, when it comes to the types of imported powdered milk, 57.4% use Anchor brand. Other popular brands include Nespray (9.9%) and Nestomalt (10.6%). It can be observed that substantial number of respondents (55.8%) uses the same type of milk throughout the year; either fresh milk or imported milk . The reasons for using a particular type include availability (43.2%), preference (31.8%), accessibility (16.2%) and quality (6.8%). Several respondents stick to the same type continuously because they are familiar with a type (46.4%); non-availability of the other option (28.5%), and non- accessibility of the other type (25.2%). On the other hand, the reasons for changing the type are non-availability (59.8%), non-accessibility (28.2%), less awareness (6.8%) and changing preferences (5.2%) relating to a particular type of milk. There are 43% of the respondents who change the type periodically. These data reveal that availability, accessibility and quality play a major role in the consumer choice of milk.

4.8 Daily milk consumption

As for the number of milk intake the infants drink milk more than three times per day, the children have milk two to three times per day and the adults and the elders drink one to two times per day. Generally a household consumes milk two times per day (59%). The reasons for consuming milk include habits (73.2%), nutrition (12.5%) and health (8.3%). Some limit to one time per day or week due to lack of income (3.0%); some do not drink often because of the fear of catching slight illnesses like cold and phlegm (8%).

4.9 Seasonality and Availability

Generally milk is available both in dry season (68.7%) and rainy season (70.6%). However, in rainy season only 25.7% consume milk. Although milk is available in misty season only 49.1% consume milk citing reasons such as catching phlegm. However, in religious and socially significant special days, higher percentage of people (65.7%) consumes milk. Similar pattern of consumption can be observed with regard to curd in different seasons. Therefore, the availability and consumption patterns for both fresh milk and curd are more or less same. The market for locally produced butter is insignificant. Similarly local yoghurt is not much available and consumed. However, the survey reveals that there is a strong consumer preference (around 80%) for this milk based product if quality is ensured.

Local ghee is generally available in all seasons and consumed to some extent by about 25 percent of the respondents, except on special days in which around 40% consume locally produced ghee. Similar pattern can be observed in the case of local butter milk. This shows there is potential for expanding the market for ghee and butter milk when attention is given to improving the quality and packaging of these products.

Furthermore, local ice cream and milk toffee are also generally available and consumed to some extent in all the seasons, as shown in the following table.

Table 4.2: Seasonality and Availability of milk based products

	Dry season		Rainy season		Misty season	
	Available	Consumed	Available	Consumed	Available	Consumed
Ice cream	81.1%	60.8%	73.2%	26.4%	76.2%	37.4%
Toffee	79.6%	36.2%	77.7%	32.8%	76.6%	37.0%

The demand pattern for ice cream and toffee is similar in these seasons. However, in special days demand for these products are considerably high, for instance 59.2% for ice cream. The special days and cultural days when milk consumption is higher are New Year week and ‘Thaiponkal’ (68.1%), Temple festivals (6.1%), Christmas (3.8%), Opening ceremonies (like house warming) (3.0%), ‘Kantasasty’ fasting and ‘Navaraththiri’ (15.1%). These explain that fresh milk and certain milk based products have a steady demand in all the seasons, with increasing demand during special days. While promoting the fresh milk consumption, there is also a need to enhance market for milk based products, as many of these are by-products of milk processing and will increase when milk production increases.

4.10 Satisfaction in local and imported milk

Satisfaction in local and imported milk was measured in terms of taste, price, quality, brand, image, packaging, cleanliness and value.

While 48.7% respondents considered taste of the imported powder milk as "most satisfactory' in contrast to their preference for the local fresh milk, 57.4% responded as 'satisfactory' for the local one. This shows the respondents' positive perception about the taste of the local fresh milk. With regard to price, most of the respondents consider the imported milk as expensive; only around 6.4% are satisfied with the price. In contrast to this the price of local milk is very much affordable; 58.9% are satisfied with the price. This indicates that the price of local milk gives greater advantage for the enhancement of market for fresh milk.

Quality preference seems to play an important role in deciding the market for fresh milk. While 42.6% responded the imported powder milk as "most satisfactory' in quality, more people (46.2%) consider the quality of the local one as 'less satisfactory' and 'least satisfactory', whereas it is only 6.4% for the imported one. Thus the respondents' perception about the quality of the local fresh milk is negative. This also indicates the level of awareness about the quality of the local fresh as well as processed milk, which can be a serious concern in expanding market opportunities.

In packaging preference, 50.9% responded the imported powder milk as "most satisfactory' in contrast to their poor preference for the local fresh one; 58.1% consider the quality of the local one as 'less satisfactory' and 'least satisfactory'. In this case, the respondents' perception about the packaging of the local fresh milk is unhelpful in promoting fresh milk market. It is understandable that so far the local fresh milk has not been marketed with proper packaging.

The qualities of brand and image are also less favourable for the local fresh milk market. A considerable number of consumers opt for established brands of imported milk (48.3%), and have developed image as trusted brands; particularly Anchor. A significant number (46.8%) is very satisfied with the brand and image of imported ones. On the other hand, 61.5% consider the branding of the local one as 'less satisfactory' and 'least satisfactory', which implies a poor impression about the brand. Similarly more than 50 percent of the respondents rated the image as 'less satisfactory' and 'least satisfactory'. Therefore naturally the perception about the brand and image of the local fresh milk products do not seem to be impressive to the consumers.

Cleanliness and value are other important factors that influence the demand for fresh milk. The respondents' perception about cleanliness is rather negative. Around 53.6% consider the cleanliness of the local one as 'less satisfactory' and 'least satisfactory', and has doubts about the standard of technology used in milk and milk based products locally. Furthermore, in value preference, 57.4% responded the imported powder milk as "most satisfactory' in contrast to their preference for the local fresh one (only 12.8%). Also, 44.2% consider the value of the local one as 'less satisfactory' and 'least satisfactory', which prompts the need to promote value added products such as flavoured milk for school children.

It can be said that, excluding the price, several factors are unfavourable to the advancement of fresh milk market in Vavuniya district. This finding is based on a comparative analysis. Therefore, it need not be concluded as ‘no market’ for fresh milk and milk based products. However, it can be argued that fresh milk and milk based products face severe competition from the imported ones. While there is potential for expansion of fresh milk market, certain negative perceptions about its quality and value seem to constrain such potential.

4.11 Major factors to be rectified

Non- availability and non accessibility are two major factors to be rectified in order to improve market for fresh milk. More than 60% of the respondents (agreed by 21.5% and strongly agreed by 39.6%) consider lack of availability as a reason for not buying fresh milk. Similarly lack of access remains a major factor to be rectified (agreed by 26.8% and strongly agreed by 35.5%). However, more than 75% considered price of fresh milk cheaper than the imported milk, which is a favourable factor in the promotion of fresh milk market. On the other hand, the response on quality was mixed. While slightly more than 45% considered fresh milk as having low quality, around 22.6% stated that the quality is normal. As observed, compared to the ‘high quality’ perception for the imported milk products, the local ones are perceived below the quality expectation. This perception is largely based on factors like lack of proper packaging and processing technology of the local fresh milk and milk based products for marketing purposes.

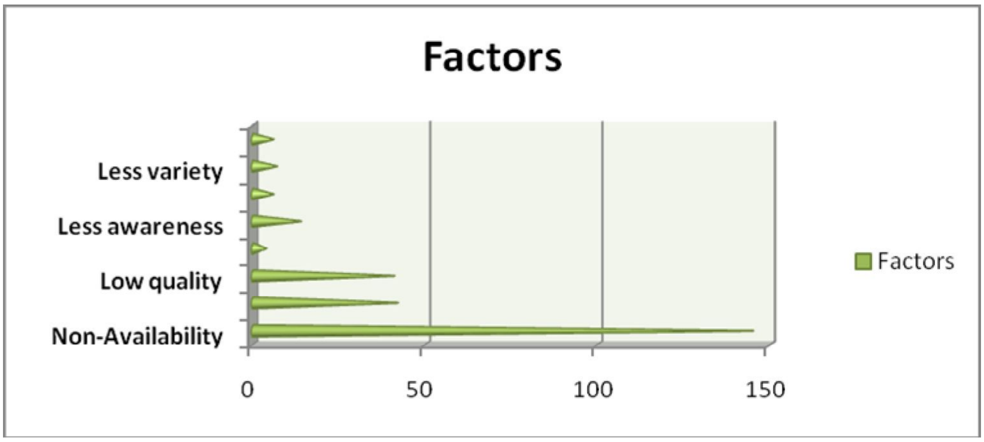

Figure 4.1: Factors to be rectified

Other factors such as lack of cleanliness, low awareness and less variety received low priority. However, compared to the ‘clean and healthy’ perception for the imported milk products, the local ones are perceived below the expectation. As compared to the publicity given to the imported milk products, the local ones are not promoted by the media both local and national. Besides, compared to the well-established distribution services of the imported milk products, the local ones are far behind as shown by the statistics. Also, compared to the diversity of the imported milk products available in the market, the local production lacks varieties (‘agreed’ by 22.6% and ‘strongly agreed’ by

31.3%). On the other hand, a significant number of people considered traditional beliefs (58.1%) and habits (47.9%) as normal behaviour, although these factors appear to play influential role in fresh milk consumption.

4.12 Marketing Strategies

An important expectation from the consumers is that the products must be of good quality and available in varieties (73.6%). Other preferences include attractive packaging (30.3%) and flavoured (16.4%). Price remains an important factor in deciding consumption (50.6%), and around 85% said it should be affordable. It can be observed that 49.4% did not consider price as an important variable that determines milk purchase. An important understanding is that, as per 77% of the respondents, there is a need for greater awareness creation about the locally produced milk and milk based products. It seems lack of awareness of these products has shifted the preference towards imported milk. Suggested strategies for creating awareness include advertisement in local media (61%), leaflet (5.4%), free issue at the promotion stage (8.2%), buying in coupon system (4.9%), and door & mobile delivery (20.5%). Increasing the number of outlets (79.1%), establishing milk parlours (3.0%), appointing sales persons (11.7%) and wide spreading the retail selling (6.08%) are also notable factors. As for the selling point, most of the respondents (71.5%) would like to buy from LBCS, direct from cattle farmers, milk collectors, retail shops, super markets, food parlours and pharmacy. Around 17.5% prefers door delivery and mobile services. However, around 40.8% seemed indifferent to the issue of selling point.

4.13 Quantity preference in packaged milk and MBP

As for the quantities of fresh milk, there is higher preference for 1000 ml (47.2%) and 500 ml (34.5%) packages, than preference for 2000 ml (8.9%) and 250 ml (7.2%) packages. On the other hand, preferred quantity for the locally produced milk based products was 250 ml (91.0%). Other quantities 500 ml (7.46%) and 2000 ml (1.5%) received very low preference. This indicates the need to offer locally produced milk based products in small quantities.

4.14 Advantages in consuming local milk products

There is agreement that local varieties are nutritious (74.7%) and healthy and low cost (23.3%). Though not significant, it was also observed that 1.9% came out with an economic idea that the monetary flow can be retained within the district by consuming locally produced milk. On the other hand, while more than 50% said there was no disadvantage in consuming local products, around 27% felt fresh milk could cause illnesses like cold and cholesterol. Also, some people (1.5%) thought that consumption of milk among children negatively affected solid food intake. With the assurance of recognized trade mark, good quality and with less possibility of adulteration 90% of the respondents said they would buy pasteurized milk. This indicates that pasteurized milk can be promoted, when there is assurance for quality, cleanliness and timely delivery.

4.15 Promoting fresh milk consumption in the district

It was observed that nearly 50% of the people do not seem to receive any information regarding the advantages of consuming fresh milk. Of the other 50% who appear to receive information, around 68% receive advice from NGOs, cooperatives and schools. This shows there is lack of awareness among the local people about the advantages of consuming fresh milk and milk based products. A considerable percentage (41%) felt that rigorous promotional programmes are necessary to promote milk consumption in the district. Also, many respondents (36%) felt the need to strengthen local institutions that are engaged in milk production and marketing in this politically less stable situation. There was also suggestion for improving cattle farming at local/household level (5.3%), and for establishing more milk collection centers (3.4%). This shows the need for simultaneous interventions in creating awareness at local level, supporting milk production and also strengthening institutions at district level, in order to promote fresh milk market.

5. FINDINGS AND RECOMMENDATIONS

Based on the analysis and discussion the research team has arrived at the below mentioned findings, recommendations and conclusion.

5.1 Summary of findings

In overall the survey finds out that majority of the households prefer to consume fresh milk. Its demand size is considerably high; but there is lack of availability and accessibility of local fresh or locally processed milk. The existing demand is a positive trend in developing dairy market in Vavuniya. Specific findings are as follows.

- *Characteristics of consumers*: adults and children consume more milk regularly compared to elders. It can be noted that women take decisions mostly with regard to what type of milk to be consumed in the household across different occupations.

- *The dairy market trends and characteristics*: the consumers like to have fresh milk in general and they consider it as beneficial in improving health and nutrition. However, consumption for powdered milk (63%) is higher than fresh milk due to lack of accessibility and availability of fresh milk.

- *Preference for quality and convenience***:** considerable number of the households would like to have fresh milk if it is offered in good quality. The consumers expect that they should have the convenience in buying fresh milk. However there are negative attitudinal positions regarding quality, reliability, taste and hygienic standards of fresh milk. Also, considerable number of the households would like to have the local curd, yoghurt and flavoured milk if they are available and accessible.

- *Availability, accessibility and Pricing of fresh milk***:** These factors strongly influence the consumers in choosing the type of milk and milk based products. Accordingly, non- availability and non-accessibility are two major factors to be rectified in order to improve market for fresh milk. Price of fresh milk is significantly lower than powdered milk. The responses reveal that a substantial number of households are satisfied with the price and it is one of the reasons that determine fresh milk consumption. This trend shows a potential to expand fresh milk market among low income households.

- *Other factors:* advertisement, packaging, taste, fat control, doctor advice and relative/friends preference also influence the demand.

- *Seasonality:* generally milk is available in all seasons. However, for instance availability during dry seasons is low due to lack of water and fodder; hence a relatively low supply of milk. There is usually a high demand during special days. On the other hand, there would be more supply during rainy season; however the consumption seems to be low due to fear of illness such as phlegm.

- *Promotion of local products:* Consumers are inclined to buying locally produced milk and milk based products in par with imported milk and milk based products. However, production of butter, ghee, butter milk, milk toffee and flavoured milk is very low in the locality; as a result, preference for these products is also low. The preference shown for fresh milk, curd, ice cream and yoghurt can be considered a positive indication for promoting particular types of milk based products at initial stages. Especially introducing pasteurized milk for daily use and flavoured milk for school children can be considered an avenue to develop fresh milk market.

- *Awareness for hygienic aspects:* there is a reasonably high awareness on the need to look for hygienic aspects and standards of processed milk. Lack of trust on local product particularly in terms of its quality and hygienic standard seems to be a major barrier in promoting fresh milk consumption. People need awareness on the standards of locally processed and packaged milk. Lack of effort to promote local products through the existing community network and institutions also was a drawback.

- *Perception on Imported and Local Milk***:** Most of the households consume both locally produced and imported milk and milk based products. There is strong belief that imported milk is of superior quality. Product differentiation offers choice, availability and convenience to preserve. Comparatively, fresh milk falls far below these expectations and qualities. Parents understand the importance of fresh milk for health and nutrition. However, there are certain societal beliefs, such as local fresh milk causes phlegm, which prevent parents to offer fresh milk for their children regularly. Fear about cholesterol also prevents elders consuming fresh milk on a regular basis.

- *Satisfaction in the local fresh milk:* in terms of taste, price, quality, brand, image, packaging, cleanliness and value, excluding the price, and, to some extent, taste, the other factors are unfavourable to the advancement of fresh milk market in Vavuniya district. However, it need not be concluded as ‘no market’ for fresh milk and milk based products. The local products face severe competition from the imported ones. While there is potential for expansion of fresh milk market, certain negative perceptions about its quality and value seem to constrain such potential.

- *Need for commercialization of fresh milk marketing by local institutions***:** An average household spends about Rs 300 per week for fresh and powdered milk, which shows that there is demand for milk. However, low consumption of fresh milk is mostly due to the absence of proper marketing arrangements, for instance, lack of reliable distribution mechanism. It needs to be remedied. The studies including this one on dairy development indicate the need for commercialization of marketing by local institutions (federation and village cooperatives).

- *Production level*: Evidences regarding the trend in the supply of milk show that there are difficulties in maintaining production level and ensuring constant supply of milk for marketing institutions. For instance, substantial reduction in the supply of milk from some cooperatives is an indication to give equal emphasis on the supply in order to ensure an efficient supply chain.

- *Marketing Service:* Consumers feel that compared to the well-established distribution services relating to marketing of imported milk products, the service of the local institutions are far behind. Also, many consumers expect good quality, diversity, attractive packaging, flavoured and reasonably priced products. There is readiness among the consumers to change their existing consumption patterns when marketing services for fresh milk improve.

- *The capacity of the cooperatives:* The capacity of the existing cooperatives is found in varying degrees. Some cooperatives are at the infant stage, which need continued support from external agencies. Some have achieved reasonable capacity in terms of milk production and collection. However, their institutional capacity is still weak which threatens their very existence. The federation has just been formed and has made linkages with other agencies both governmental and non-governmental.

5.2 Conclusion

It can be concluded that fresh milk and milk based products have a good market in Vavuniya. In order to exploit this potential one must have to meet the needs of the consumers. The factors considered by consumers before purchasing milk are freshness, taste, thickness, quality, availability, accessibility and affordability. While price is a favourable factor, there are several factors such as packaging, quality, brand, image, cleanliness and value, which are unfavourable. Therefore, improvement of the marketing programme on these lines can promote consumption of locally processed/fresh milk, which can provide certain competitive advantage in terms of costs and diversity.

5.3 Recommendations

5.3.1 Improving consumer demand

- Improving quality, availability and accessibility of fresh milk are important factors. There is a need to adopt modern technology in processing packaged milk and milk based products. Secondly, there is a need to obtain certification of standards (SLS, ISO or HACCP). Pasteurization can be a better way to overcome such difficulty. This processing will give confidence to consumers.

- Affordable pricing and targeting the population of lower and lower middle economic strata can help expand the market.

- Promotion strategies such as brand development, better packaging with instructions, advertising in local media, leaflet propaganda and buying in coupon system are some relevant measures the local cooperatives may adopt.

- Distribution strategies, such as installing an efficient reliable delivery system are to be introduced. Private participation in processing, distribution, and sale of milk and milk based products is essential to ensure uninterrupted delivery.

- It is important to commercialize marketing activities in order to ensure reliable delivery system. Therefore, it is essential to invite private sector participation which will promote profit oriented operations.

- Sales strategies such as increasing outlets, establishing milk parlors, appointing sales persons and expanding retail selling and ensuring availability in the locality are some of the mostly preferred options. Such things require investments in infrastructure development. The federation and the local cooperatives may have to focus on institutional development while outsourcing marketing activities.

- There is a considerable preference for drinking milk in general and drinking fresh milk in particular among children. Targeting children, especially school children when introducing flavoured milk and warm milk at milk booths and school canteens would be a feasible option.

- Marketing the locally processed milk, curd and flavoured milk at the initial stage is favourable. However, producing and marketing the local yoghurt and ice cream using processing and packaging technology at the initial stage is not viable because, it is expensive and may not give the expected turn over. The majority consumer population belongs to the lower economic status. Though they are preferred by the middle and upper middle class, they resort to the imported products due to their perception of high quality.

- There is a need for preparation of strategic planning for the cooperatives and federation. Organizational management has to be carried out by appointed management officers, who are accountable to the board. Present arrangements where the board has undertaken the management has led to internal conflicts and inefficiency. Furthermore, there is a need to introduce proper computerized accounting and auditing system.

- Educating customers (awareness creations) on the importance of dairy foods for health and nutrition plays vital role in growth and development of the dairy market. Therefore, awareness programmes can be conducted to the public, which will help alleviate certain negative perceptions identified in this study.

5.3.2 Improving supply conditions

There is a need to ensure steady supply of milk in order to establish a credible marketing system. There have been evidences of poor collection at the primary level which can affect the viability of dairy business. Supply system needs to be constantly monitored and new sources of milk supply needs to be identified in order to meet the growing demand as a result of promotion activities. It is also essential to strengthen intensive farming system at the household level, which can be a reliable source of supply.

5.3.3 Institutional development/strengthening (capacity development)

- There is a need to establish a strong constitution for each institution. This will improve institutional status as legal entities and will pave the way for standardized operations.
- There is a need to develop well in advance a plan for marketing the packaged milk and develop proper management system (HRM, Computerization)
- External support is necessary in developing human resources and infrastructure.

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