

CHAPTER – IV

MILK MARKETING

4.1 Introduction

Philip Kotler has defined Marketing as a ‘Social and managerial process by which individuals and groups obtain what they need and want through creating and exchanging products and value with others’ (Kotler *et al.* 2005). According to the FAO manual, marketing is ‘the performance of all business activities involved in the flow of goods and services from the producer to the consumer.’ The process of flow of goods takes place with a number of market activities and intermediaries functioning in it as their business for the highest possible profit. The number of players in between producers and consumers has an effect on consumer price as well as farm gate price.

Generally, buying and selling of agriculture and animal husbandry or animal agriculture output is known as agricultural marketing. In India, irrespective of geographical area and production systems, agricultural marketing mechanism is understood to be the means to reach out to the consumers at the lowest level.

In the milk production business, facilities of proper marketing chain are the most important infrastructure. The Indian dairy history reveals that before the formation of Kaira District Cooperative Milk Producers Union Limited (KDCMPUL), India had to import milk. The formation and success of KDCMPUL and such other cooperatives and cooperative unions infrastructurally developed the Indian dairy sector to such an extent that, today; India is the highest milk producing and exporting nation. The basic behind the development of this sector had been the remunerative price to the producer farmers.

In the case of milk marketing, the additional problems encountered are its high perishable nature compounded with fluctuation in demand. On the other hand, in the unorganised marketing chain, the maintenance of quality to the expectation level is very hard. The milk marketing structure in India varies according to the availability of resources for marketing as per the spatial location

in different states, the model of farming, facilities from government, ethos and enthusiasm of farmers and traders in regards to maintenance of quality *etc.*

The cooperatives and cooperative unions are organisational infrastructures and the facilities for processing, preserving and maintenance of cold chain *etc.* are a physical infrastructure of milk marketing. In Assam, the dairy infrastructure for processing *etc.* had been developed and run by the Department of Dairy Development, Assam. The discussion of milk marketing in this chapter starts with the genesis of cooperatives, and continues with the enactment of cooperative law in India, beginning of *Amul*, necessity of cooperatives for dairy marketing, Government effort for dairy cooperatives in Assam, beginning of SJDUSS, beginning of dairy development department and its support service facilities for milk marketing, milk marketing in Assam informal and formal milk marketing and how the formal market players share the market price with producer farmer, relations and differences between West Assam Milk Union Limited and SJDUSS in regards to milk prices and reaches conclusion after comparing the basic ethos of study area milk cooperative, SJDUSS with largest milk marketing cooperative Anand Milk Union Limited (AMUL).

4.2 Genesis of cooperatives

4.2.1 The Rochdale pioneers

Shivajirao G. Patil, Chairman of 'High Power Committee on Cooperatives' opines 'The Rochdale Pioneers demonstrated the cooperative ability not only to help the survival of the people but also of indirectly forcing the market to behave'. 'The cooperative route is a dignified way of growth for all; it is particularly so for the marginalised segments of the country, offering the small man as it does the chance to enter a "world of bigness" (GOI, Report of the High Powered Committee on Cooperatives, 2009). This has been tested successfully way back in the nineteenth century when 'Rochdale Pioneers' not only successfully revitalised their members but also generated the principles of cooperatives, with which the modern day cooperatives are running. The Rochdale, with the total of twenty-eight members comprising among them almost impoverished weavers who started a shop in Toad Lane in 1844; a shop that became the first successful co-operative in the world; a co-operative that defined

the principles for all later co-operatives to follow (Brett, 1994). George Jacob Holyoake discussing the ‘Rochdale Pioneers’ stated, ‘A co-operative society commences in persuasion, proceeds by consent, seeks success by common efforts, incurs risks, and shares losses, intending that all its members shall proportionately share whatever benefits are secured. The equality sought is not mad equality of “Equal division of unequal earnings,”¹ but an equitable award of gains proportionate to work done. (Holyoake, 1906)’ He assessed that the Rochdale was persuaded by the thought of ‘Owenism’², first pioneered by those 28 members who had provided their common consent out of their necessity; so, they were ready to share losses, put the healthiest effort in it for sharing benefit equally. This accrued the benefits not only to Rochdale but also set the principle of cooperatives for centuries.

Before and after the Rochdale Pioneer there were numbers of instances of cooperative effort. However, the importance of Rochdale lies in the context of our nation as well as its philosophic role in the formation and operation of the International Cooperative Alliance (ICA). Rochdale through its journey selflessly acted on the evolution of evaluated philosophy displayed at the Rochdale Pioneers Museum in England. The words displayed reads as,

‘The co-operative ideal is as old as human society. It is the idea of conflict and competition as a principle of economic progress that is new. The development of the idea of co-operation in the 19th century can best be understood as an attempt to make explicit a principle that is inherent in the constitution of society, but which has been forgotten in the turmoil and disintegration of rapid economic progress.’

The Rochdale had begun in necessity, provides the philosophic lead in forming the International Co-operative Alliance (ICA). The ICA is a ‘non-profit

¹ Ebenezer Elliott wrote the best description of what communism is not; Elliott repeated it amid the charming hedgerows, where he wrote his song of “The Wonders of the Lane”:

“What is a Communist? One who hath yearnings
For equal division of unequal earnings,
Idler or bungler, or both, he is willing
To fork out his penny and pocket your shilling.”

²Owenism is the utopian socialist philosophy of 19th-century social reformer Robert Owen and his followers and successors, who are known as Owenites. Owenism aimed for radical reform of society and is considered a forerunner of the cooperative movement (Garrett, 1972)

international association established in 1895 to advance the co-operative social enterprise model' is the apex organisation for co-operatives worldwide and as on January 2015 'representing 284 cooperative federations and organisations across 95 countries' of the world (International Co-operative Alliance, 2015) is the custodian of the Co-operative Values and Principles at international level.

4.2.2 Enactment of cooperative law in India (1904)

Even before formal cooperative structures came into being through the passing of a law, the practice of the concept of cooperation and cooperative activities were prevalent in several parts of India. Village communities collectively creating permanent assets like village tanks or village forests called *Devarai* or *Vanarai* or collecting small contributions in cash at regular intervals to lend to members of the group *viz.*, *Dhikuti*, working together alternately during the season of cultivation known as *Pal Mela* (in Assam) *etc.* and similar others are a few examples of cooperation. 'Taking cognizance of these developments and to provide a legal basis for cooperative societies, the Edward Law Committee with Mr. Nicholson as one of the members was appointed by the Government to examine and recommend a course of action. The Cooperative Societies Bill, based on the recommendations of this Committee, was enacted on 25th March 1904'.(GOI, Report of the High Powered Committee on Cooperatives, 2009)

4.2.3 The beginning of Amul

The beginning of *Amul* was a revolution against corruption initiated by the middleman. In 1929, the Polsons dairy was established by a private concern at Anand and bestowed with monopoly power for milk collection from Anand, by the then provincial Bombay Government. The Polsons, used to pay the price as low as possible, reaping the highest possible benefit out of farmers toil. Verghese Kurien stated the reason behind the formation of the first dairy cooperative in Gujrat in the words 'In the mid-1940s when the milk producers in Kaira, asked for a share of the profits, they were denied even a modest increase. The milk producers went on strike, refusing to supply milk to Polsons. The Kaira milk cooperatives began as a response to put an end to this exploitation.' (Kurien, Verghese, 2004)

'The first dairy cooperative in Gujarat was the result of a farmers' meeting in Samarkha village (Kaira district, Gujarat) on 4th January 1946, called by Morarji Desai on the advice of Sardar Vallabhbhai Patel, to fight rapacious milk contractors. It was Sardar's vision to organize farmers, to have them gain control over production, procurement and marketing by entrusting the task of managing these to qualified professionals, thereby eliminating the middlemen. In the pursuance of Sardar Vallabhbhai Patel, Tribhuvandas Patel was selected Chairman of the committee. Later in 1949-50 'Young Kurien, volunteered to help Shri Tribhuvandas Patel, the Chairman of Kaira District Cooperative Milk Producers Union Limited (KDCMPUL), to set up a processing plant. At that time, only two village milk cooperatives were involved, representing only a handful of farmers.' (Kurien, Verghese, 2004). Later H M Dalaya, who studied dairy engineering at Michigan State University with Kurien, is the one who provided *Amul* with the technical backbone.

4.2.4 The necessity of dairy cooperatives

In India, landholdings are already so fragmented that farming in the industrial pattern still seems like a far-flung idea. The few persons owning land in the required shape are not willing to enter into animal agriculture for producing milk. In such a situation, milk production is the business of marginal and landless farmers. In Assam too in dairy cattle farming the similar situation exist. The average operational land holding in India has been observed and the average size of land holdings was 1.15 hectare in 2010-11. In the same year, marginal and small holder's average land holding sizes were 0.39 hectare and 1.42 hectare only. (Table 4.1).

Table 4.1 Number and Area of Operational Land Holdings by Size - all Groups in India 2010-11

Size Class (in hectare)	Total No. of Operational Holding (ha)	Total Area Operated (ha)	Average size (ha)
Marginal (Less than 1 hectare)	92826	35908	0.39
Small (1.0 to 2 hectare)	24779	35244	1.42
Semi-Medium (2.0 to 4 hectare)	13896	37705	2.71
Medium (4.0 to 10 hectare)	5875	33828	5.76
Large (10.0 hectare and above)	973	16907	17.38
All Holdings	138348	159592	1.15

The table (Table 4.2) shows that in Assam, the average land holding size was below 1 hectare and marginal land holding size was only 0.27274 hectare.

Table 4.2 Number and Area of Operational Land Holdings by Size - all Groups in Assam and Morigaon 2010-11

Size Class (in hect.)	Assam			Morigaon			
	Total No. of Operational Holding	Total Area Operated (ha)	Average size (ha)	Total No. of Operational Holding	Total Area Operated (ha)	Average size (ha)	
	1	2	3	4	5	6	7
Below 0.5	1279535	385255.42	0.30109018	55239	15066	0.27274	
(0.5-1.0)	551580	389541.03	0.70622762	13472	10418	0.77331	
Marginal	1831115	774796.45	0.42312823	68711	25484	0.37089	
(1.0-2.0)	496574	687156.19	1.38379414	19086	27416	1.43645	
Small	496574	687156.19	1.38379414	19086	27416	1.43645	
(2.0-3.0)	203596	480948.66	2.36226969	6979	16320	2.33844	
(3.0-4.0)	99932	337033.83	3.37263169	2946	9794	3.32451	
Semi	303528	817982.49	2.69491609	9925	26114	2.63113	
(4.0-5.0)	48949	214768.17	4.38759055	1422	6183	4.3481	
(5.0-7.5)	31280	184189.82	5.88842136	837	4739	5.66189	

Size Class (in hect.)	Total No. of Operational Holding	Total Area Operated (ha)	Average size (ha)	Total No. of Operational Holding	Total Area Operated (ha)	Average size (ha)
	Assam			Morigaon		
(7.5-10.0)	4640	38414.24	8.27893103	124	1016	8.19355
Medium	84869	437372.23	5.1534981	2383	11938	5.00965
(10.0-20.0)	1861	24567.5	13.2012359	28	337	12.0357
(20.0 & Above)	2276	257195.09	113.003115	10	628	62.8
Large	4137	281762.59	68.1079502	38	965	25.3947
All Classes	2720223	2999069.9	1.10250886	100143	91917	0.91786

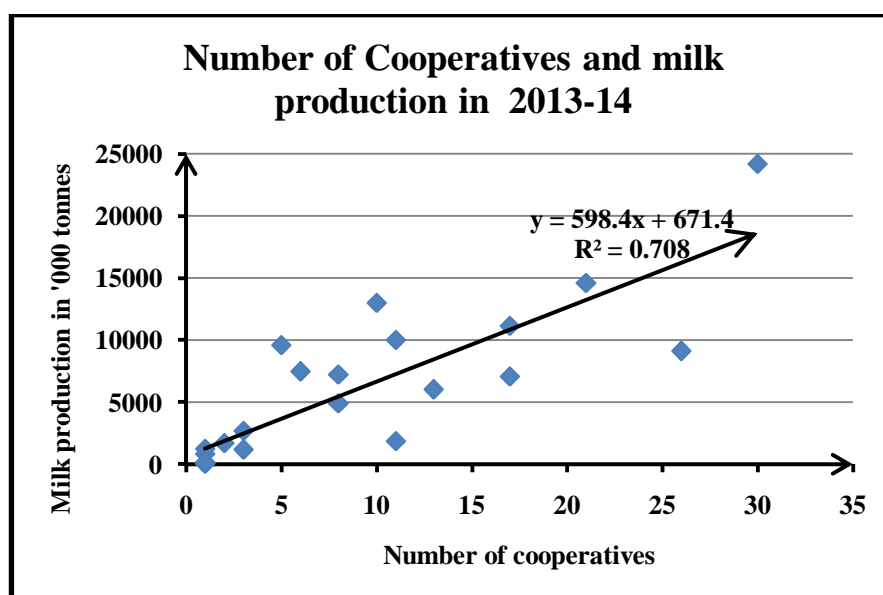
Source: Department of Agriculture, Cooperation & Farmers Welfare [Agriculture Census 2010-11 (Phase-1)].

In the Survey area, operational land holding found to be less than 0.5 hectares. The average size of land holding is coming down continuously. For keeping milk cattle at least in fencing system, needs not less than half a hectare of open land and another half a hectare for fodder cultivation. Earlier the cattle were kept in ranching system in which the rancher popularly known as a grazier in Northeast India had normally been making use of forest land and grazing reserves. But after the high growth of population in the post, independent era land becoming more and scarcer along with the legitimacy of environmental consciousness compelled them to settle down in one place. As such, the conventionally perpetuated cattle farmers hardly have sufficient land to take up the industrial type of cattle farming. Therefore, the convention of *stall feed system* of cattle farming came up in this part of our country. This calls for continuous look after the farms leading no spare time for other innovations like searching, bargaining and transacting in the market twice a day since milking is also to be done twice a day. However, until the period of Grow More food Campaign of pre-independent Assam, Stall Feed system of cattle rearing had not begun. After the Grow More Food Campaign, the Village Grazing Reserves (VGR) and Professional Grazing Reserves (PGR) continuously went on shrinking. This led Grazier to rethink for their survival, and slowly the Stall Fed system crept in Northeast India. Once the Stall Feed system had begun, the necessity of a

cooperative organisation to help farmers, particularly in the marketing of milk and its products become inevitable.

Active cooperatives in the field of milk marketing always ensure remunerative price for the farmers. This increases enthusiasm among the farmers to produce more. It has been observed that the states with strong dairy cooperative structures are producing more milk than that of the state with weak cooperative structure. There are highest 30 nos. of cooperatives in Uttar Pradesh procuring, processing and marketing milk and the state have also produced highest volume amounting to 24193.9 thousand tonnes of milk in the year 2014(Table 4.5). Similarly, Gujrat, Maharastra, Rajasthan, Tamil Nadu and Karnataka have more numbers of cooperatives and producing more milk. The milk productions of different states and the number of active cooperatives are shown in table 4.5. The volumes of milk produced when regressed with the number of cooperatives generate a trend line (figure 4.1) showing the general trend that the volumes of production increase as the number of dairy cooperatives increase. Moreover, it is obvious that not only for the better marketing of farmer's milk production but also to produce more milk dairy cooperatives are essential institutions.

Figure 4.1 Number of Cooperatives and milk production in India, 2013-14



4.3 A push forward by the government of Assam and formation of milk cooperatives

The Government of Assam introduced the dairy development scheme in the State during the last part of the Second Five Year Plan in 1961. Under the scheme, a survey was conducted on various milk pockets and milk shed areas in the state. The target was to procure pure and fresh milk for distributing among the intending consumers of Guwahati town and later to all the important towns in the State. Under the scheme, many Cooperative Societies of milk producers were formed. The Dairy Development Scheme in the State started functioning in 1963 (Amlan Baruah, 1999). 'During Chinese aggression in 1962 the "National Emergency Production Scheme" was launched for coordinating and developing the activities of milk production. Immediately after, in 1963 the first milk supply scheme, *i.e.* "Guwahati Town Milk Supply Scheme" came into operation. At first, the Milk procured was supplied to army personnel, but within a period of one year when the procurement raised supplying milk to the consumers of Guwahati was started from the last quarter in 1964. 'The scheme was supported by the producers of Bhoi area (now under Meghalaya) followed by the producers of Sitajakhala (Jagiroad) and Mikir Hills (Karbi Anglong)' (Shodhganga, 2009). The primary objective was to supply milk to the consumers on 'no profit no loss' basis and to provide an incentive to breeders for increasing production by advancing loans to purchase milch cattle, feed, and equipment and to encourage them for better breeding, feeding and management of cattle. In this process, numbers of primary milk producers' cooperative societies were formed in the then United Khasi Jaintia Hills district. The formations of those societies were mostly encouraged by great expertise viz Dr. J.M. Bujarbaruah, Pulin Baruah, Nandalal Upadhaya along with local people like Bhimlall Lamsal, Jagannath Bawri (Shillong), Kantu Prasad Rijal alias Dumre Mahajan (Umsaw), Bhanu Bhakta Subedi (Nayabanglow), Homlal Lamsal (Mawhati), Kalkatte alias Bal Bahadur Chhetry (Ralla), Madhusudan Bhandari (Kyrdem), Dhaneswer Tiwari (Umrung), U Klemshon Myllemngap (Ralla) *etc.* Their efforts fruition in the 1970s and formed twelve nos of milk cooperatives. These cooperatives 'had united to form the *BhoiArea Milk Producers' Cooperative Union Ltd.* with Bhimlall Lamsal (Jaissi) as President and Captain Dhan Bahadur Thapa as Secretary. Here it is worth

mentioning that in the History of Dairy Development in the NER the *Bhoi Area Milk Producers' Cooperative Union Ltd.* was the first union to be formed democratically having a characteristic resemblance to ANAND³ (Upadhaya, Bishnu Prasad, 2017). With the division of the state of Assam, the Dairy Development Department of the state itself deprived of heretofore benefit of that organisational exercise. However, the momentum had been kept going on. 'In 1970-71, the Scheme of Creamery Centre at Guwahati, in North Cachar Hills, and milk supply schemes for towns of Dibrugarh and Tezpur were taken up' (Amlan Baruah, 1999). Initially 'collection of milk under the Gauhati Town Milk Supply Scheme was done from Nayabunglow (presently known as Umsning), Barapani, Lalcherai (present Mowlen) areas (all now under Meghalaya) and Jagiroad, Amlighat, Mayang, Manaha, Kacharigaon, Nelly, Bhakatgaon areas of Nagaon (all now in Morigaon) district and Sipajhar and Garukhuti of Darrang district. The Government of Assam for the first time had taken the initiative for dairy development in 1961. The Scheme of Dairy Development started functioning in the State in the year 1963; under it 'The following chilling plants had been installed at different parts of the State before 1980' (Government of Assam, 1999).

³Researcher is grateful to C M Adhikari (Nayabanglow), Krishna Prasad Rijal (Dumre) Son of Late Kantu Prasa Dumre (Umsning), Keshab Koirala (Habang), Late Dilu Subedi (Umroi), Ganesh Gewali (Jagiroad), Chudamani Sharma (Dudhnai), Nandalal Upadhaya (Jagiroad) and Indra Prasad Upadhaya (Amlighat) who during discussion helped with practical Knowledge and information they have.

Table 4.3 Milk chilling plants in Assam before 1980

Name of Chilling Plant	Capacity (LPD)	Distribution
Nayabunglow	10000	Guwahati TMSS
Jagiroad	6000	Guwahati TMSS
Sipajhar	2000	Guwahati TMSS
Boko	1000	Guwahati TMSS
Bokakhat	2000	Jorhat TMSS
Joysagar	2000	Jorhat TMSS
Biswanath Chariali	2500	Tezpur TMSS
Lakhowal	2500	Dibrugarh TMSS

Source: Assam State Gazetteer 1999.

The impact of those facilities still found in the areas of Jagiroad in Morigaon District and Biswanath Chariali in Biswanath District.

The infrastructures are shown in table 4.3, and the milk processing plant at Khanapara is the outcome of the milk revolution started during China aggression. Later the Nayabunglow Chilling Plant had gone from the state as this became the part of Meghalaya. But the cattle culture of Nayabunglow and surrounding areas have been gradually transferred to the peri-urban areas of Guwahati city. In this regard, Jugal Saikia found in his study ‘Economics of Informal Milk Producing Units in Guwahati city’ that 92.3 percent of entrepreneurs are migrants from Meghalaya state’ (Saikia, 2009).

4.3.1 Directorate of Dairy Development

At present, the dairy development is running under the Directorate of Dairy Development. This directorate runs with the spatial arrangement of its organs in three broad parts *viz.* zonal office, Dairy development office and Town Milk Supply Scheme (TMSS).

4.3.1.1 Zonal Office

The Dairy Development Department has four zones to look after the dairy scenario in the state they are a) Nalbari zone, b) Tezpur zone, c) Jorhat zone, and Silchar zone, each zone under the Zonal Deputy Director.

4.3.1.2 Dairy Development office

There are three dairy development offices one each at Goalpara and Nagaon under the control of the Dairy Development Officer. On the other hand, one Dairy Development office at Diphu is at present controlled by Assistant Director, Dairy Extension Services.

4.3.1.3 Town Milk Supply Scheme

There are nine Town Milk Supply Schemes in Assam. The TMSS Khanapara, Guwahati and TMSS Kokrajhar are under the control of Superintendent, Town Milk Supply Scheme and Council Head of Department of Dairy Development, BTAD. All the remaining TMSS at Jorhat, Dibrugarh, North Lakhimpur, Tezpur, Silchar, Umrangshoo and Manja each are headed by Assistant Dairy Development Officer posted there.

Under the offices mentioned above the government of Assam has created three types of infrastructure namely i) Milk Processing Plants, ii) Milk Chilling plants and iii) Bulk Milk Cooling Center.

- i. **Milk Processing Plant:** An establishment with equipment and machinery where milk or milk products are procured, handled, processed, pasteurized, packaged, stored, aseptically processed, or prepared for distribution or sell them at bulk or retail is Milk Processing Plant. There are ten such processing plants, one each at Khanapara, Jorhat, Nagaon, Bokakhat, Lahowal, Lakhimpur, Tezpur, Silchar, Umrangshoo and Manza under the Dairy Developed Department Government of Assam.
- ii. **Milk Chilling plants:** The process with which the temperature of fresh milk is brought down to 4⁰ Centigrade is known as milk chilling, and the plants equipped for the purpose are known as chilling plants. The process by minimization of acidification or souring minimizes the spoilage of milk. The chilling retards souring process and provide ease and ample time for supplying it to the plants for processing and pasteurisation. Thus, it is a midway process between production and processing or product manufacturing. The Government of Assam

through the department after the 1960s till date had installed such Chilling plants in areas of Jagiroad, Joysagar, Tinsukia, Dholla, Biswanath Chariali, Dhekiajuli, Kharupetia, Sariahtali (Nalbari), Sorbhog, Dudhnoi, Hailakandi and Karimganj.

- iii. **Bulk Milk Cooling Center:** In the countries where large farming system prevails, it is simply a milk storage tank for dairy farming with an ice-based cooling facility with the help of electric refrigerating compressor. In India and in Assam where the dairying is the business of marginal and landless farmer with small holding keeping a bulk cooling tank by a general farmer is not only beyond imagination but is not cost viable too. Therefore, for the benefit of the dairy farmers of the state the government installs Bulk Milk Cooling Center. In Assam, the government through its Dairy Development Department has installed Bulk Milk Cooling centre one each at Kakopathar, Chabua, Hojai, Bhurbandha, Abhayapuri, Goalpara, Kalain, Lala (Hailakandhi), Badarpur, in the district of Tinsukia, Dibrugarh, Hojai, Morigaon, Bongaigaon, Goalpara, Cachar Hailakandi and Karimganj respectively; two nos. in Nagaon at Kathiatali and Vellohuri; three in Barpeta at Nityananda, Howly, and Kolgachiya; three in the district of Dhubri at Chapor, Bilashipara, and Mancachar.

The fact is that the processing plants at Nagaon, Bokakhat, Umrangshoo and Manza are running somehow. The Sarbhog and Kathiatali units are being utilized by WAMUL. All other plants those installed by the Government has been remaining defunct since long years. *Amul* is reconstituting milk somewhere in Guwahati in a private plant and distributing mostly around Guwahati city and other places in Assam.

At Nazira, Sundarpukhuri Milk Cooperative Society has installed 'Milk Processing Plant, Nazira' at Chanbasa, 3 km away from Nazira Town with the cooperation of Deputy Commissioner, Sivasagar and all MLA of Sivasagar and the District Rural Development Agency. The capacity of the plant is 5,000 LPD which is expandable up to 7,500 LPD. The Registered Trade Mark for the product

is "KARENG." The plant is in farmers hand under the cooperative society since the year 2014.

One Processing plant is under construction at Amlighat, Morigaon, Assam. It is a new venture of *Sitajakhala Dugdha Utpadak Samabai Samiti Ltd.* This Cooperative Society after the long experience of sixty years of marketing of raw milk around an average of 15000 LPD has finally decided to install own milk processing plant. It is observed that this processing plant has a bright future since the cooperative need not depend on other parties for raw milk, unlike the Milk Processing Plants that were installed by the Dairy Development Department. The Cooperative has envisioned for a long way and preparing for a modular model of plant with a capacity of 5000 LPD at present extendable up to 25000 LPD in future. The Trade Mark to be registered for the product of this cooperative is *Sitajakhala*.

There are a few other private Milk Processing Plants, viz., Kamrupa Dairy at Khetri, Kamrup, was started in 2009, Dairy Fresh, Prithivi Dairy Private Ltd. and Nandini Dairy also have their respective plants in the state but hardly have any practical impact on dairy business.

4.3.2 The beginning of SJDUSS

The practice of raising livestock for milk was prevalence at Bamungaon (Amlighat) and surrounding area of Morigaon district since the 1930s, but the business was totally unorganised in nature. After independence, when demand for milk in the market had begun to rise, some middlemen paved the way for lucrative profit leading farmers towards more and more distress. That led some socially conscious persons to think in an organised manner so as to be able to fight against the wealthier trader, known as *Paikari*. At the initial stage, 17 cattle Graziers whose only source of livelihood was cattle farming joined their hands to form "*Sitajakhala*" a milk producer co-operative society in the year 1958. Thus, in the necessity of maintaining the sustainability of livelihood, SJDUSS came into inception in the year 1958 and registered *vide* no 67/58-59 at Amlighat, Morigaon, Assam. At the initial stage, the cooperative worked as a negotiating mediator between milk producing farmers and *Paikaris*, the milk trader. Later in the 70s, it had started functioning fully, performing milk business replacing the private

traders. Thus, formed in necessity, SJDUSS enters into the scenario of milk marketing in Assam.

4.3.3 Milk marketing in India

The milk marketing chain in India is running with a mixture of the formal and informal channel of marketing. Traditional milk marketing in India is dominated by private traders. The farmers too are compelled to sell their output to whosoever is within their reach and excess and provides a better price or can persuade them better benefit at present or future in perpetuity. However, the market stability is concerned the cooperatives in our country have the highest impact on the market mechanism for milk; although the traditional milk marketing has the highest market share.

In studies by FAO, the milk marketing system in India has shown that there are at least 8 different marketing channels (Table 4.3). When a producer sells his output directly to consumers, the possibility of middlemen does not exist, and the farmer gets whole the market price as his share. This kind of marketing chain is not suitable for the professional dairy farmer; because of this, the farmer has to spend more time selling products. However, it can be observed that higher the number of intermediaries higher would be the consumer price and least would be the producer's share. On the other hand, more the private parties as intermediaries lesser would be the benefit of producer as well as the consumer in terms of price or quality or both. This was the reason why the beginning of *Amul* was called a 'revolution against corruption initiated by the middleman'. That is more powerful the formal milk marketing channel more would be the benefit for both producers and consumers. Here it is to be noted that, more the farmer's organisations are handy with institutions of marketing channels higher would be the farm gate price and better would be the quality for consumers. This is the reason for higher production in the states where cooperative milk marketing channels are strong. Uttar Pradesh has the highest number of cooperative union/units involved in production, procurement; processing and marketing of milk as on December 2014 also have the highest productions of milk. Gujarat fourth in regards to the number of dairy cooperatives similarly holds the same fourth position in milk production also. We may not find one to one such matching if we consider the case of all

states in India; however, a close look provides evidence of a correlation between the number of cooperatives and total milk production (Table 4.5 and Figure 4.2)

4.3.4 Milk Marketing Channels in India

The marketing channels for any product is very much important infrastructure for achieving the required goal in the in production as well as the distributional aspect of income of the output and quality product for the consumer. All over India, the informal channels of milk marketing are strong enough. The lack of sufficient and remunerative formal institutional channels where milk producer can rely upon is the reasons behind the continuation of informal milk marketing. Milk being the commodity of daily necessity as well as cultural in the context of the Indian cultural sphere, therefore in general people want to have fresh farm milk as far as possible. This creates a large space for informal milk trader. A few other important factors for not picking up of formal milk marketing are the cost of processing, leading higher price in comparison to non-processed milk and the ignorance of consumer regarding the benefits of processed milk as well as dangers of non-processed milk.

On the other hand, the milk marketing channels have an impact ranging from farm gate price to the quality to the consumer. In the case of the informal state of marketing with the unpackaged product, the higher the numbers of intermediaries lower would be the quality to reach consumer as well as lower the price for the producer.

In the field of the milk marketing, the marketing system where the quality of milk finds the consumer's glass without compromising the maximisation of the welfare of the producer farmer is a cooperative system, by the farmer, of the farmer and for the farmer. Cooperative can play the role of milk transporter, processor, trader and retailer accordingly following the call of the situation for the benefit of producer farmer. FAO Studies observes eight types of milk marketing chain in India (Table 4.4). When a producer sells milk to the consumers directly, it eliminates the need for intermediaries. The second chain is formed from the producer to the hawker to the consumer and generates one intermediary. The number of intermediaries increases according to the process of marketing.

Majority of milk producers in India found to be resource poor, and the perishability of the produce itself necessitates the intermediaries

Table 4.4 Milk Marketing Channels in India

Marketing Channel	Number of intermediaries
Producer-consumer	0
Producer-milk hawker-consumer	1
Producer-processor-consumer	1
Producer-processor- retailer-consumer	2
Producer-dairy coop -processor- retailer- consumer	3
Producer- transporter-processor - retailer-consumer	3
Producer-milk trader-processor-retailer-consumer	3
Producer-dairy coop-transporter-processor-retailer-consumer	4

Source: FAO, Rome

4.3.4.1 Cooperative system, the strongest player of milk marketing

In India, it has been observed that the states having more dairy cooperatives with their own processing facilities have a higher level of output. It is already being mentioned that small, marginal and landless farmer has higher opportunity cost will arise on their farm if they have to market the output of their own. Cooperative system had been the instrument which was able to break the vicious circle of Polson cobweb not only free the farmers of greater Bombay but also gifted the nation the *Amul*, NDDB and last but not the least placed India as a highest milk producing country in the world. Therefore, the *Amul/Anand model* became the common phrase among policymakers of almost all of the states in India. The following data (Table 4.5) that was tabled by the Minister for Agriculture Shri Radha Mohan Singh on 10th March 2015 at Lok Sabha shows the state-wise number of dairy cooperative union/units involved in the production, procurement, processing and marketing of milk in Indian scenario as an indicator of proper dairy marketing. The basis of this table began with the involvement of cooperatives in production and completed with the word marketing indicating that for the development of dairy sector it is necessary to look after the tedious production activities to generate sustainability for lucrative processing and

marketing. Farmers owned cooperatives if powered with the socio politico's integrity and honest leadership like Tribhuvandas Kishibhai Patel⁴, Verghese Kurien and H M Dalaya⁵, certainly fosters *Amul* and paves employment generation as well as keeping livelihood security far from danger. It has been observed that the involvement of farmer's cooperative in the process of production, processing and marketing can keep the farm gate price high, optimal consumers price and best quality for consumers. The cooperatives are robust in generating a win-win situation for producer farmer and consumer both. Observing its activities and dealing during the last few years, this fact has been found in SJDUSS, the leading cooperative society in our study area; with an ability to keep adhere producer farmers during last 60 years.

Table 4.5 State-wise number of dairy cooperative union/units involved in procurement, processing and marketing of milk as on December 2014 and milk production

Sl. No	Name of the State/UTs	No. of Dairy Cooperatives	Milk production in '000 tonnes
1	Uttar Pradesh	30	24193.9
2	Maharashtra	26	9089.03
3	Rajasthan	21	14573.05
4	Gujarat	17	11112.18
5	Tamil Nadu	17	7049.19
6	Karnataka	13	5997.03
7	Odisha	11	1861.19
8	Punjab	11	10011.1
9	Andhra Pradesh	10	13007.07
10	Bihar	8	7197.06
11	West Bengal	8	4906.21

⁴Tribhuvandas Kishibhai Patel(1903-1994) was the founder Chairman of Kaira District Cooperative Milk Producers' Union Ltd., Anand.

⁵H M Dalaya, a close associate of Kurien and the real technical backbone of Kaira District Cooperative Milk Union.

Sl. No	Name of the State/UTs	No. of Dairy Cooperatives	Milk production in '000 tonnes
12	Haryana	6	7441.67
13	Madhya Pradesh	5	9599.2
14	Himachal Pradesh	3	1150.81
15	Kerala	3	2654.7
16	Jharkhand	2	1699.83
17	Assam	1	814.52
18	Chhattisgarh	1	1208.61
19	Goa	1	67.81
20	Nagaland	1	80.61
21	Pondicherry	1	47.25
22	Sikkim	1	45.99
23	Tripura	1	129.7

Source: AHS Unit OM No.26-1-4/2013/ParlM/AHS dated 04.03.2015

It is evidently clear from the researches throughout the world by FAO, ILRI, USDA and other universally accepted that dairy development is fully dependent upon the marketing system of milk. The marketing system must be under the control of the producers. In this regard, Verghese Kurien states that primarily 'Amul was its success in combining the native wisdom of our farmers, and the skills and knowledge of professional managers. By forging this partnership, Amul placed the instruments of development into the hands of the people' (Kurien, 2004). By partnership, he implied a relationship of mutual trust, faith and respect between professional managers and producer farmers.

Regarding business and marketing, cooperatives need to be active enough. 'Cooperatives should also be like 'business enterprises' and should also function as a 'business enterprise'. If any cooperative forgets this, then failure is certain and such cooperative institutions will reach the verge of downfall. So, it should always be kept in mind that the aim of milk cooperatives should not be profit

maximisation for a higher dividend, like other trade institutions, but should be the maximisation of the 'price paid' to the producers.' (Kurien, 2005) This vision of Verghese Kurien is the *mantra* on which Kaira District Cooperative Milk Producers Limited (KDCMPL) reached the peak of success leading the formation of Gujarat Cooperative Milk Marketing Federation (GCMMF). Therefore, in this study attention has been paid to studying how the institutional adherence effect the income level of a farmer and its impact on employment avenues in the next subsection.

4.3.5 Milk marketing in Assam

The milk marketing channels in NER and Assam are not similar to India level. In other milk producing states of India the strong infrastructure of milk marketing, the three tiers cooperative structure is highly active. In Assam, according to the International Livestock Research Institute, 97 percent of milk marketing is controlled by traditional milk market agents' (Kumar *et al.* 2010). The organised marketing and processing of milk in Assam remains insignificant. 'Formal milk Pasteurisation and dairy product processing channels, both under co-operative and private sectors, account for hardly 3 percent of the total locally marketed milk.'

According to ILRI research, 'no dairy development is possible in Assam unless it addresses the problems facing the traditional dairy sector.' That is until dairy plan 'strengthen the predominant existing dairy system and help it to evolve into a system that blends modern practices with the best traditional practices' rather than development plan 'that focuses mostly on pasteurized milk' (ILRI Annual Report, 2007). Till today the government of Assam did not trust for facilitating high tech processing plant in the hand of the farmer. Therefore Government has installed milk processing plants in different areas in Assam under its department and took venture to run them with a view to fruition the objective 'to supply milk to the consumers on 'no profit no loss' basis and to provide incentive for breeders for increased production by advancing loans for purchase of milk stock, feed, and equipments and to promote measure for better breeding feeding and management of cattle'. (Amlan Baruah, 1999)

4.3.6 Milk Marketing Channels in Assam

Before entering into the study of formal and informal milk marketing in Assam, it is necessary to look into the definitions of Informal and Formal Sector, milk marketing.

4.3.7 Informal sector and milk marketing

Informal sector (IS) first introduced by Hart in the year 1971, with ‘a presentation on “Informal income opportunities and urban employment in Ghana” in Institute of Development Studies (IDS) in September at a conference co-organized by Rita Cruise O’Brien and Richard Jolly on urban employment in Africa’ (Naik, 2009). Hart viewed that IS is the product of lack of capacity of the Formal sector to provide employment to all the unemployed masses. When unemployment aggravates, large-scale migration takes place from rural to urban areas. Where these unemployed masses begin different types of production and business activities in and around the urban places they reside and become self-employed. (Hart, 1976). In a similar fashion in the study of ‘Economics of Informal milk Producing units in Guwahati city’ assumes that the dairy sector around Guwahati city is an Informal sector (Saikia, 2009). However, the 15th International Conference of Labour Statisticians Resolution (ILO 2000) defined *informal sector enterprises* on the basis of some criteria, and the last one reads ‘engaged in non-agricultural activities, including secondary nonagricultural activities of enterprises in the agricultural sector’⁶. The harmonised definition of the informal sector resulted from recommendations of Third Meeting of the International Expert Group on Informal Sector Statistics can be spelt as ‘private unincorporated enterprises (excluding quasi-corporations), which produce at least some of their goods or services for sale or barter, have less than five paid employees, are not registered, and are engaged in non-agricultural activities (including professional or technical activities)’ (Expert Group on Informal Sector, 1999). The milk production activity in India is regarded as an agricultural activity. Therefore, the sector itself does not form the part of the Informal Sector. However, the milk marketing activity of vendors, *Paikaris* and itinerant milk traders without any legal registration comes under the informal Sector. That is, the

⁶http://www.ilo.org/public/libdoc/ilo/2002/102B09_137_engl.pdf

marketing of non-reconstituted milk in Assam is dominated by the informal sector.

Processing and marketing of milk are always lucrative and easier when there is a big gap between demand and supply. It also provides easy passage for reconstituted milk. WAMUL also markets standardised reconstituted milk to fulfill market demand. The comparative cost condition of the milk production in Assam is higher than that of states north-west to it. Our survey data shows that the production cost at present is not less than ₹ 36.21. During this study once in a discussion, the WAMUL Chairman said, “Where do in India farmers get more than ₹ 25 for a litre of milk?” This clears the point that formal processors are ever ready to import milk for marketing rather than procuring locally as a production cost in Assam is much higher for the same.

Table 4.6 Requirement and Availability Milk in Assam

(in million litres)				
Year	Requirement	Availability	Shortage	Shortage (%)
2011-12	2338	838	1500	179
2012-13	2395	845	1550	183
2013-14	2423	857	1566	183
2014-15	2452	873	1579	181
2015-16	2480	888	1592	179

Source: Economic Survey, Assam 2016-17

In Assam, till 2017 WAMUL was the only milk processing sector player. The demand for milk in the different towns in the state and Guwahati city itself were much higher than that of milk produced locally. The total requirement of milk in Assam had been far above its availability. The data worked out from the economic survey, Assam 2016-17 show that the shortage of milk in Assam has been observed 1500, 1550, 1566, 1579 and 1592 million litres in the year 2011-12, 2012-13, 2013-14, 2014-15 and 2015-16 respectively (Table 4.6). Therefore, to meet up the demand it is inevitable to market reconstituted standardised milk. However, large sections of consumers in the state, particularly in Guwahati city like to have non reconstituted milk. The only sources of non-reconstituted or fresh

milk are the local farmer. On the other hand, 99 percent of the dairy farmers hardly have any time for going to the market to sell their own milk. Secondly, the milk price offered to the farmers by the formal processing sector has been substantially less than that of the prevailing price in the market. This has been encouraging informal milk marketing in Assam.

Informal milk marketing in Guwahati has begun just after independence. During the Chinese aggression, the government had taken steps to the formal procurement of milk and supplying it, for fulfilling the necessity of Indian Army. This gave rise to a large gap between demand and supply of milk in different towns of the state. The situation had given rise to the practice of adulteration. Even till date many itinerant traders and *paikaris*, even formal players like *Amul* found to be selling SMP made milk in the name of fresh milk. This was revealed by the customers in Guwahati city when visited to interact with the milk consumers after supplying *Zero Water* milk⁷ to them.

4.3.8 Formal milk marketing

The formal milk marketing in the state of Assam has been very weak since long. During the 70s, when TMSS had been good, and some cooperatives formed in the state were supplying milk to it. It had succumbed to the over bureaucratisation. The decisions to be taken in regards to the milk which has self-life less than eight hours if not processed needs immediate action. The Directorate of Dairy Development, assumed to run the affairs of milk business in the state needs not only months to clear a file but even years also. Therefore, the milk marketing once dreamt by the government of Assam failed. At present WAMUL has been working well in the milk marketing field. It has been the only institution with a processing plant and procuring a little of the production in Assam. *Amul* has also entered the market in Assam with its liquid milk. The *amul* to date does not have any procurement centre in the state. Hence, it does not have any use value for the farmers of Assam. Neither can it contribute to raising the income level in the state. Above these, in the state, various packaged milk and milk product brands are there in the market. But our interest is to study milk market

⁷ To control the quality of milk procured SJDUSS Amlighat has been applying the method of scanning milk for added water contention and accepting the milk with 0Percent water. SJDUSS has been supplying same milk in the Guwahati city during last three years.

channels having relations with an impact on the milk-producing farmers of the state.

The very first stage of milk marketing starts with the selling of milk to the neighbors of the farmer, where the consumers purchase at the farm itself. This kind of marketing involves no intermediaries. Secondly, the milk producer farmer gives the remaining milk to the itinerant traders as a time-saving measure. Here the itinerant trader or hawker is the intermediary player. Thirdly, in Assam, the direct flow of milk from producers to formal processors is almost absent. Some of the small informal processors, processing milk for the production of sweets, *paneer* (cottage cheese), curd, *Mawa* (milk boiled and got dried to get a solid form with minimal moisture) *etc.* purchase milk for the purpose of retailing the product. Hence, this type of chain also involves single intermediaries. Fourthly, some informal processor and hotelier procure milk from farmers directly and some from farmers cooperatives. One of the typical situations found in milk marketing in Assam is that milk once procured by formal cooperative reverts back again to the informal sector. Till date, a part of raw milk procured by SJDUSS regularly goes in the hands of the local private trader. During 2012 to 2017, even the WAMUL had been receiving milk from SJDUSS indirectly through mediating player. However, the player of the game had run the business managing in the name of some MPI, which hardly have any legal entity.

In Assam, all the milk marketing channels that prevail in India can be observed (Table 4.7). It is also observed that as the number of intermediaries increases the benefit to the farmer decreases. On the other hand, more the involvement of private players less would be the quality to the consumers. This has been observed during our study in the market with *Zero Water* milk⁸.

Table 4.7 Milk Marketing Channels in Assam

Sl. No.	Channels	Number of intermediaries
1	Producer-consumer	0
2	Producer-milk hawker-consumer	1

⁸ Milk free from external addition of water is the concept of zero water. This has been implemented by SJDUSS through the cooperative during this study.

3	Producer-informal processor-consumer	1
4	Producer-processor- retailer-consumer	2
5	Producer-dairy co-operative -processor- retailer-consumer	3
6	Producer-milk transporter-processor - retailer-consumer	3
7	Producer-dairy coop - milk transporter/trader-processor-retailer- consumer	4

Source: Food and Agricultural Organisation, Rome

Among the established players except for SJDUSS, no formal player in the field of milk marketing deals in 100 percent of the milk produced in the state. WAMUL procures only a part of locally produced milk and imports large volume from out of the state in the form of Skimmed Milk Powder (SMP), Butteroil and even liquid milk.

4.4 The market price of milk shared with farmers

The milk price shared with farmers by the different formal milk marketing players in the state indicates whether the state of affairs of milk marketing was in favour of milk-producing farmers. Higher the producers' shares in consumer rupee better the state of affairs in favour of producing farmers. Review of literature shows that producers' share in consumers price fluctuates around 70 percent for the milk marketed through formal cooperative channels. Evidence could be reiterated from study of 'Economic Analysis of Production and Marketing of Milk in Tamil Nadu' where Producers' share was '65.96 percent of consumers price' (Edhayavarman, 2011) and the 'producers' share in consumer rupee was about 58 percent in Bihar (Singh, *et al.* 2012) marketing their milk through co-operatives.

Table 4.8 Producers share on consumer's rupee by formal milk marketing players of Assam

Year	Average market price	Average Price paid to Producers by		
		TMSS [#]	WAMUL	SJDUSS
2013-14	42	33 (78.57)	30.6 (72.86)	33.83 (80.55)

2014-15	45	36 (80.00)	38 (84.44)	34.96 (77.69)
2015-16	45	33.66 (74.8)	35 (77.78)	37.67 (83.71)
2016-17	47	40 (85.10)	37.8 (80.43)	42.39 (90.19)
2017-18*	50	NA (--)	35.5 (71.00)	42.5 (85.00)

Source: Records of SJDUSS

Figures in parenthesis show the percentage of the market price paid to the producer.

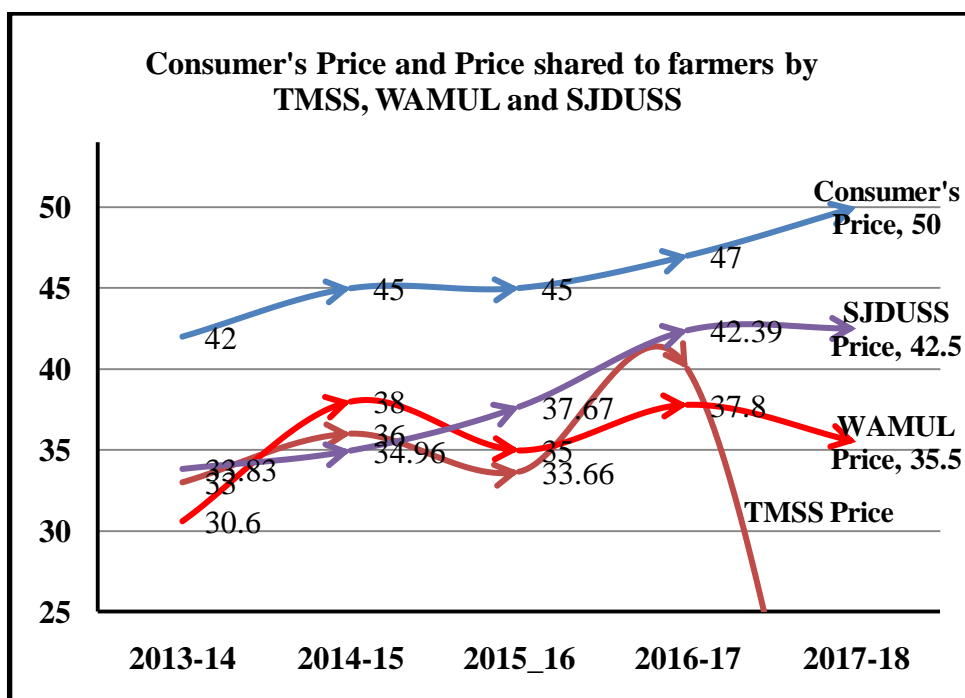
*Provisional estimates, over the proceeds up to March 2018

TMSS referred to is TMSS Guwahati, remained defunct since 2016-17.

The average market price is the consumer's price. TMSS, WAMUL and SJDUSS are three major formal players of the state in the milk marketing scenario. Among these SJDUSS, do not possess modern processing plant. Guwahati city is the main milk and milk product market of all. In last five years, it was found that SJDUSS had been returning higher share as producer's price out of the consumer's price in the market in comparisons to TMSS and WAMUL except in the year 2014-15. In the year 2014-15, SJDUSS returned 77.69 percent of consumer's price to its producers. The cooperative had returned highest by 90.19 percent in the year 2016-17. (Table 4.8, Figure 4.2)

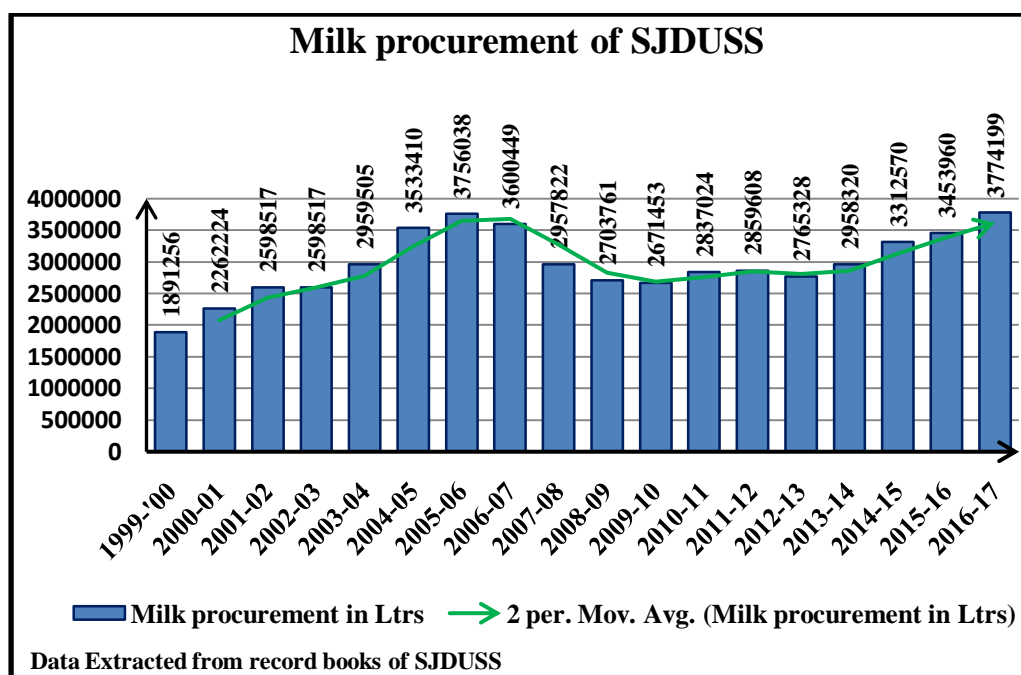
In comparisons to other parts of India, TMSS and WAMUL also found returning a higher percentage of consumer's price to producers. TMSS had last returned 85.10 percent of the market price as producer's share, beforehand it succumb due to the too small scale of business. On the other hand, WAMUL had been returning 72.86 percent, 84.44 percent, 77.78 percent, 80.43 percent, and 71.00 percent in the years 2013-14, 2014-15, 2015-16, 2016-17, and 2017-18 respectively. (Table 4.8, Figure 4.2).

Figure 4.2 Consumer's Price and price shared to farmers by TMSS, WAMUL and SJDUSS



It is already mentioned in the previous part of our discussion that the cooperative system is the strongest player in milk marketing. The SJDUSS as a farmers' cooperative in the last 60 years has been procuring milk from its member farmers for the purpose of providing easy, stable and remunerative marketing for them. It has been successfully serving purpose envisaged during its formation. The following figure (4.3) depicts the year wise volume of milk that SJDUSS deals in since 1999-2000 to 2016-17. During 2017-18, the cooperative has a procurement target of 4,000,000 (forty lakh) litres. During the period of 1st April '17 to 31st December '17, the procurement already crossed 35,00,000 (thirty-five lakh) litres. As such the cooperative would be able to procure over 47,00,000 (forty-seven lakh) litres of milk in the year 2017-18.

Figure 4.3 Milk procurement and marketing of SJDUSS



4.4.1 Milk marketing of SJDUSS

SJDUSS, from the beginning, has been dealing in whole raw milk marketing. The cooperative had been selling milk of the quality what it receives from its farmer in the last sixty years.

In its early stages, the Samiti had acted as an arbitrator between the farmers and the milk traders, due to lack of capital as well as a dearth of knowledgeable persons. After running in this way until 1970, the scenario changed a little. However, the milk marketing system of SJDUSS is still under evolution. Until 2015 there was not any other product making unit except cream separation. In the year 2015 for the first time, the benefit of product making was tested for its viability and profitability at its Amlighatcentre with the product *paneer* (the cottage cheese) and *rasagulla*⁹. Slowly demands for its products are rising for its quality. At present, the cooperative is able to utilize 9 percent of its procurement (Table4.9) through product making. In the case of milk, SJDUSS in its history has been dealing in whole milk only.

⁹A kind of Indian sweet, prepared by boiling the small balls in sugar syrup made out of moister solid acquired by sieving of instantly coagulated milk at the temperature more than 65⁰centigrade.

To compete with the situation and viewing for providing remunerative price to its producer farmers SJDUSS has been adopting various different strategies. From an observation of the marketing undertaken by the *Samiti*, we find that it can be divided into two distinct parts -

- a. Direct marketing, and
- b. Indirect marketing

4.4.2 Direct marketing

That part of the milk business is regarded as direct marketing in which the cooperative has direct relationship with the consumers of milk and milk product. The cooperative sells 31 percent of its raw milk procured directly to the consumer in the form of whole milk. The cooperative is also able to convert over 9 percent of procurement to value-added product and sell it directly to the consumer. It was found that the cooperative in an average sales over 39 percent of its procurement through direct marketing. Inspecting the records of SJDUSS, the gross revenue returned from the product found to be ₹ 61.92 per litre of milk used, and the direct marketing of whole milk accrues ₹ 54.00 per litre. In Guwahati city, the cooperative has been paying commission to some agents for supervising the milk marketing field and required information thereof. The cost of such commissions sums to the average of ₹0.35 per litres on the volume of milk sold in Guwahati city. The scenario of direct marketing through product making is very much encouraging from the point of revenue earning. On the other hand, the direct marketing of milk provides avenues for one man/day employment per 100 litres of milk. In this system of milk marketing, the office bearers ought to be careful to the utmost level so as the quality dispatched remains intact until it reached to the consumer. Therefore, during the interaction on marketing with the Board of Directors, it was suggested that the cooperative should introduce packaged pouch so as the dispatched quality reaches to the destined customers.

Table 4.9 Milk marketing of SJDUSS

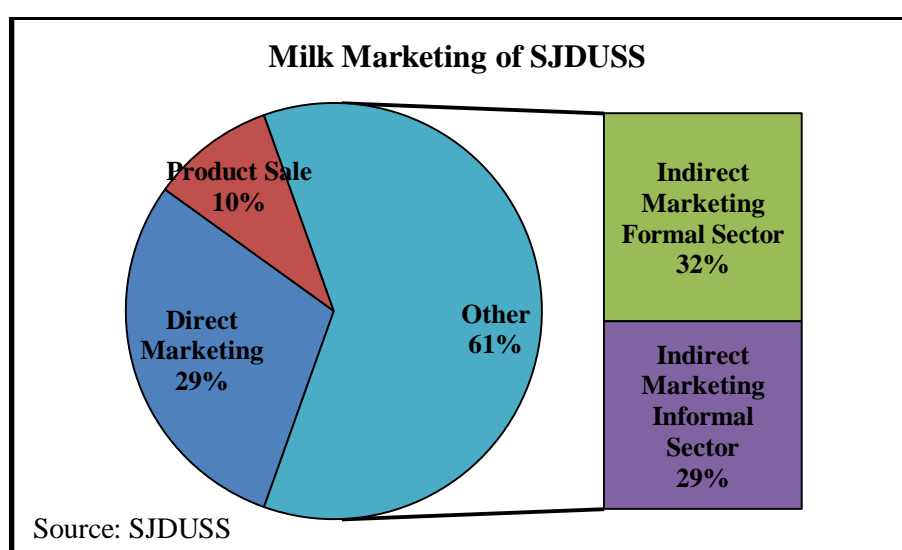
Milk in litres

Direct Marketing	Product Sale	Indirect Marketing		Total
		Formal Sector	Informal Sector	
4600	1500	5000	4500	15600
(29.49)	(9.61)	(32.05)	(28.84)	(100)

Source: SJDUSS

Figures in parenthesis show the percentage of total

Figure 4.4 Milk marketing of SJDUSS



4.4.3 Indirect marketing

Indirect marketing of SJDUSS composed of whole milk only. The indirect marketing is composed of selling of milk to the formal parastatal institution and informal private traders of different distances around middle and lower Assam. In this segment of marketing whether by policy or by compulsion SJDUSS has been adopting discriminating price policy. At present, it is found that the cooperative is supplying milk to different private parties at different prices. It is supplying milk to the parties who deal in milk in Nagaon town, Guwahati city, Morigaon town and Rangia at the rate ₹ 48.00, ₹ 48.00, ₹ 49.00 and ₹ 45.00 per litre respectively. The indirect marketing of milk generates less scope of employment avenues in the hands of the cooperative. On the other hand, the cooperative is supplying 31

percent of its procurement to the formal parastatal institution at an average price of ₹ 35.57, which is less than its procurement price by about ₹ 7.00 per litre.

Here the question arises that how the cooperative (SJDUSS) has been able to provide relatively higher net price to the farmers when it is incurring a loss. The cooperative sells 29.49% of its procurement directly, sells 9.61% of milk after value addition; it sells 28.84% to the informal player of the market (Table 4.9). SJDUSS earns a profit on these three categories of marketing; whereas, it bears loss only from the milk sells to the formal and parastatal institution. That is the cooperative sells more than 67% of milk in profit. The value addition provides gross profit to cooperative almost ₹ 20.00 per litre of milk used in product making. From selling milk to the informal players it earns gross profit around at the rate of ₹ 6.00 and from direct marketing of milk, the cooperative accrues almost ₹ 7.00 per litre. With the help of this strategical marketing and its no profit no loss philosophy the cooperative it has been able to provide remunerative to its farmer members.

4.5 The new Development in the marketing of SJDUSS

With the direct marketing of milk by Sitajakhala, it is tried to pick into the fact behind the ILRI research team result that 97 percent of the marketing of milk produced in Assam is in the hands of traditional traders. Here it is to be noted that SJDUSS had not entered the Guwahati market before 2015. After looking at the quality of milk sold by numbers of traditional milk trader, it was considered that city dwellers perhaps hardly have quality milk. *The essence of fresh milk may prove to be a new experience for the city consumers, particularly the new generation consumers.* With this thought, SJDUSS determined to enter into the Guwahati city to reap the benefits of a large market. It was not an easy task to establish itself in the large market, with big commercial houses the cooperative a farmers' organisation comparatively unknown player, an underdog in the fray. Therefore, it was thought that something extra should be there for the consumer. All the big players in the field of milk marketing have meagre or no local procurement. They are bound to sell reconstituted milk, 100 percent fresh milk by

them is merely an impossible job. On the other hand, the traditional milk trader had all the reasons to create barriers for entrance, since the unadulterated milk sold by the cooperative might endanger the existing market scenario, as they hardly sell milk free from adulteration. Therefore, a few milk scanner machines were bought. The society redefined the quality of milk with *Zero Water* concept, and it had begun to procure only the milk with zero added water, providing the flat rate to the farmers irrespective of the content of butterfat and Solid Non Fat (SNF) therein. This has increased the faith and enthusiasm among the farmer over the egalitarianism of the cooperative, since no farmer in the area rear bovine other than cows. However, a few exceptions were found, and a few farmers have begun to pour their milk to WAMUL showing dissatisfaction on *Zero Water* concept for persuaded by the vested interest of their own.

4.5.1 Quality matters a lot in marketing

With *Zero Water* milk, SJDUSS has knocked the milk market of Guwahati city from 3rd September 2015 selling only 26 litres of milk on the first day. For the purpose to increase its market share, neither any hoarding nor any media advertising has been adopted. The organisation believes their milk is, ‘Original and of a kind not seen before in Guwahati city’ and one to one verbal communicative advertisement through the consumer (word-of-mouth advertising). The strategy suggested was of Reverse marketing. It has been observed during odds that customers come forward to defend the milk selling of the cooperative. It is also found that numbers of customers tried to increase the consumers for SJDUSS product so as cooperative continuously supply its milk in their locality. As such, it is confirmed that quality matters a lot.

4.5.2 The feedback of marketing and Food safety

For the reaffirmation and to find the possibility of further market expansion data have been collected from 100 milk customers of SJDUSS in Guwahati city supplying questionnaires to them. The feedback from the customer results in the following findings:

Table 4.10 City dwellers' response over SJDUSS milk

Customers Purchase SJDUSS milk for	Number of customers
------------------------------------	---------------------

Quality	93
Timely Availability	2
Price	0
Need	5
Total	100

Source survey data

Out of the 100 responses, 93 percent of the consumers informed that they are purchasing SJDUSS milk for its quality (Table 4.10). 31 percent of the same set of customers said that the quality supplied is excellent and 64 percent reported the quality has been better in comparison to the other brand and hope that the quality shall remain intact in future. However, 1 percent of consumers reveal that quality is inferior, 4 percent judged the quality similar to the quality of other brands (Table 4.11). On another question querying on what basis the consumers are assigning the quality of milk, it is found that 50percent customers attribute taste and 25 percent customers attribute *malai* (butterfat)contention for judging the quality of milk. Whereas, 25 percent of consumers are found to be confident enough on SJDUSS milk that it is free from adulterations.

Table 4.11 Consumers' view upon the quality of SJDUSS milk

Consumers' view	Number of customers
Excellent	31
Better	64
Similar	4
Inferior	1
Total	100

Source: survey data

At last, it was enquired whether they would accept if SJDUSS supplies milk in the pouch. The answer 'no' registered 60 percent and 'yes', 40 percent. (Table 4.12)

Table 4.12 Customers' response to pasteurised packaged milk

Response	Nos. of customer
Yes	40
No	60
Total	100

Source: survey data

After the feedback result, a few group discussions were held to know, why the milk consumers of Guwahati city hesitate to accept milk in the pouch. During discussions, it was revealed by a class of customers that they believe that processors sometime can add external fat. They also believe that after processing the natural fragrance and flavour of milk may not remain intact.

It is upon the cooperative to make the consumers believe that pasteurising and pouching of non-reconstituted milk do not change both the fragrance and flavour but provides longer life and makes it healthier for human consumption. If the government of the state strictly adheres itself with the International Food Standard (IFS) Certification and Food Safety and Standards Act, 2006; the pasteurising and packaging of milk becomes inevitable for cooperatives to keep secured and save the livelihood of its member farmers.

On 14th November 2017, as was suggested SJDUSS launches its pasteurised packaged milk Brand *Gonand*¹⁰, '*the milk of Assam*' with a target to reach out the requirement of busy and needy customers, containing whole cow milk, as it is milked, only pasteurised and packaged at government processing plant, Bebejia, Nagaon; paying processing charges @ ₹ 6.00 per litre. At present, it is not a business of profit for the cooperative. It is believed that it would help, milk cooperatives as well as consumers of our state to be accustomed to food safety norms. In future, not only milk exporting countries of the world but also even some of the milk abundant state of our country itself may exert pressure to our central government to strictly implement the Food Safety Act 2006.

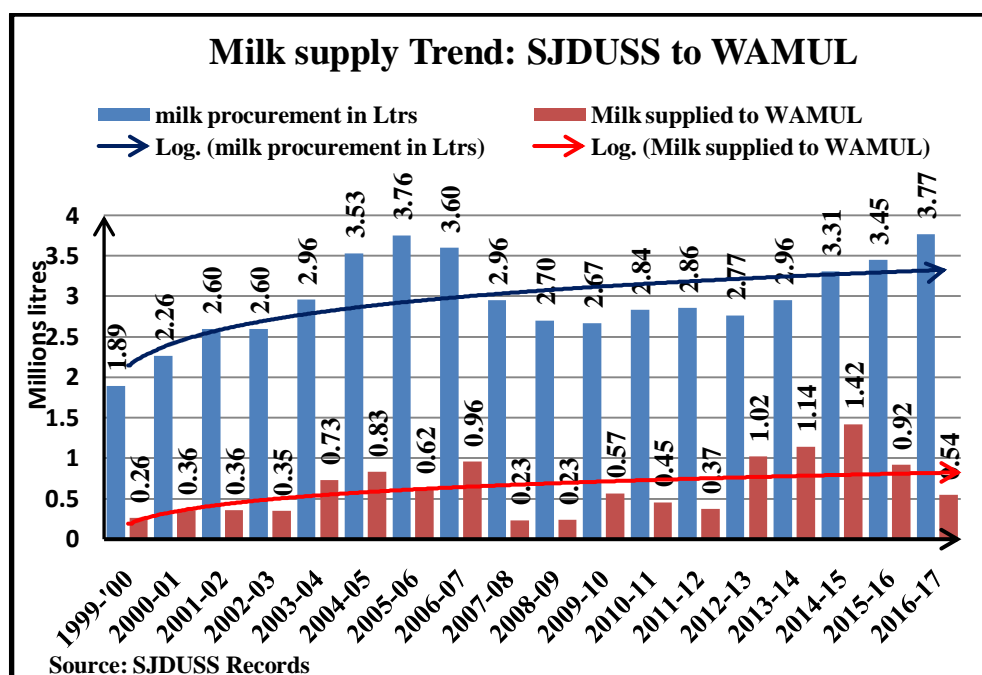
¹⁰ The cooperative has later in 2018 changed the brand name to *Sitajakhala*.

4.5.3 The SJDUSS and WAMUL, the Relation and Difference

In the above discussion, it has been observed that almost one-third volume of milk procured by SJDUSS is to be supplied to WAMUL at the losses up to over ₹ 7.00 per litre. During the discussion it also comes to light that since 1972, so long the TMSS Guwahati was running, the cooperative had supplied milk to it, since inception receiving price less than that had been paid to its producer farmer. In the history of SJDUSS, the cooperative always had received prices less than that of its procurement price for the milk supplied to government patronised institutions, whether it was TMSS or WAMUL. Even at present, the price paid to SJDUSS by WAMUL is below the production cost as calculated from our survey data. In such a situation any dairy cooperatives if remain fully dependent for marketing, upon such institution cannot ensure sustainability because of inability crept in for 'ensuring deserving and remunerative returns to its members' (Upadhaya & Devi, 2017) for their produce. On the other hand, even the farmer's price set at the level of production cost can hardly survive the farming due to lack of incentive for managing the family itself. This has been the reason of dilapidation of many dairy cooperatives formed in Assam during '70s and '80s due to a continuous decline in the activities of member farmers.

The milk procurement and the volume of milk supplied to WAMUL by SJDUSS, and the difference between the price paid by SJDUSS to its farmer and price received from WAMUL is worth studying for the knowledge about the milk marketing in Assam. The (Figure 4.5) shows the milk supply trend of SJDUSS to WAMUL. The figure clearly depicts that the milk supply is continuous and volume of supply varies in between 7.82 percent to 42.82 percent of the total procurement of SJDUSS during last two decades. SJDUSS has to supply its additional procurement over its own raw milk marketing.

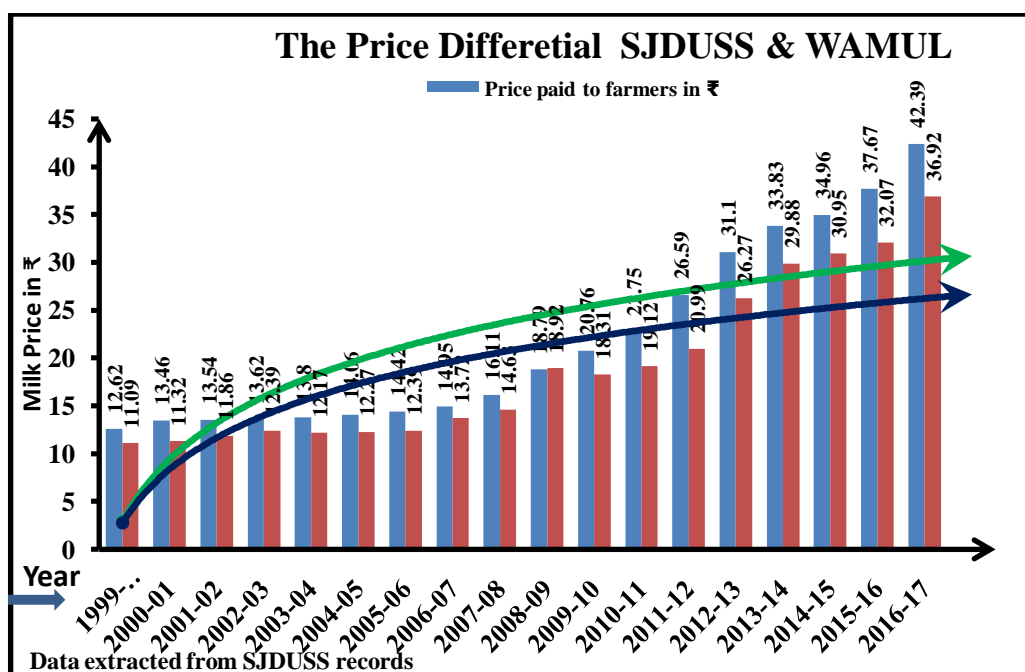
Figure 4.5 Milk supply Trend: SJDUSS to WAMUL



4.5.4 The Price Differential, SJDUSS & WAMUL

SJDUSS a DCS was established beforehand the dairy development department, still waiting for its own full-fledged milk processing plant. Therefore, it has the compulsion to supply its extra procurements to other processing units. Before the establishment of WAMUL, it had been supplying its extra procurements to TMSS Guwahati. After the establishment of WAMUL, although the government of Assam has created separate directorate for dairy development, state of affairs gone wrong somewhere along with the Letter of Credit (LOC) scam during the period of Operation Flood III and at present almost all the dairy plants under this directorate have been lying defunct. Therefore, SJDUSS is bound to supply milk to WAMUL that too at a price lower than the procurement price. As such SJDUSS has supplied milk to government patronised institutions from 1971-72 to till date in losses except in the year 2008-09 with a margin of ₹0.13 (Figure 4.6).

Figure 4.6 The Price Differential SJDUSS&WAMUL

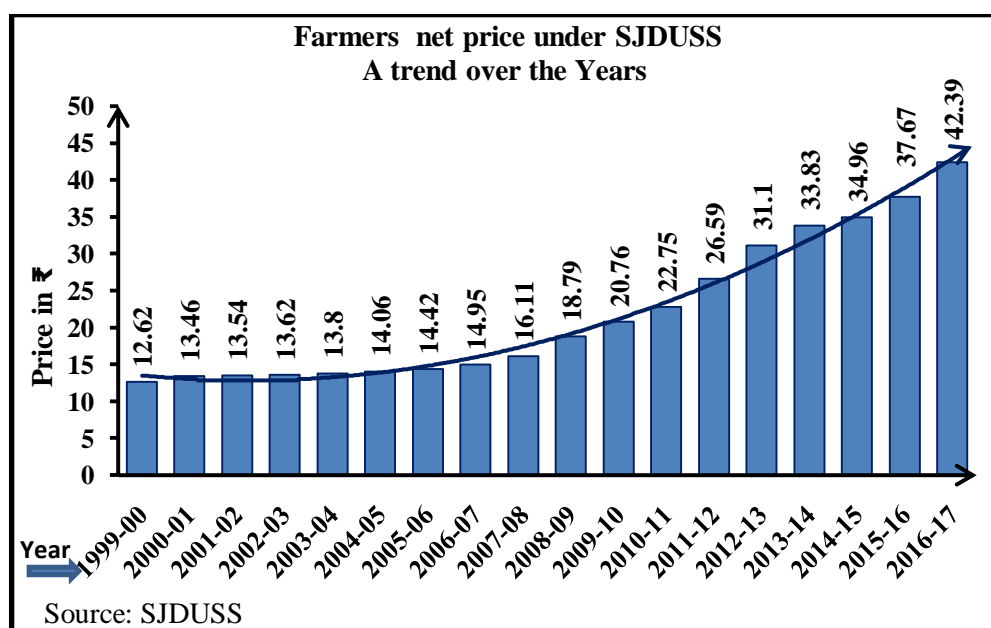


4.5.5 Pricing policy of SJDUSS: the saviour of farmers and cooperative itself

Researchers have remarked inept procurement pricing as one of the reasons behind Institutional Failure of Formal Milk Processing Sector in Assam (Sirohi, Kumar, & Stall, 2009). In such an atmosphere when the price of milk does not remain remunerative to the farmer, any institution it is difficult to keep its primary member adhere to it. This has been found that it is fully known to the management of SJDUSS since long. Therefore, they have been conscious enough in keeping farmer's price remunerative. SJDUSS as a cooperative adopting and adhering to the principle of *no profit no loss* kept the price paid to the farmers as a dynamic variable. SJDUSS determines the price to be paid to its farmers for the milk supplied to, on its board meeting. The board if profit exists increases the procurement price time to time with utmost care that, the price once increased does not necessitate decreasing in future. The cooperative also distributes accumulated profits to its farmer as incentives for production at the end of each year, on the basis of milk supplied by them during the period in which profits had been earned. That is, the farmer's net price at the end of the year always has been more than the price paid during the period of business. This has been the reason

for cohesion between the farmers and the cooperative. The net price paid by SJDUSS to its farmer for their supply of milk since 1999-2000 has been presented in figure (Figure 4.7). In the figure bars and the trend line, shows that the price paid to farmers by SJDUSS has been a dynamic variable, increasing with the time. The profit earned by the cooperative has been distributed among the producer farmers. The cooperative at the end of each year apportions a part of its total profit for encouraging the dairy farmers to produce more. This provisioned part of the profit is distributed among the farmers according to their volume of milk supplied to the cooperative society during the financial year. This is the most important characteristic factor for sustainability of dairy cooperatives as well as farmers. Here the farmer's net price is the sum of price received and the production incentive received by the farmer for at the end of each financial year.

Figure 4.7 Farmer's net price under SJDUSS



The pricing policy of SJDUSS has the accent of Kurien philosophy. This states that a dairy cooperative should forward like a business house in the business for profit but not to swell the dividend but for the better price of farm produce which leads to the ultimate development of the masses resulting in the development of the nation ultimately. Therefore, to bring the philosophy to fruition, SJDUSS has not distributed any dividend to the passive shareholder. If any person remains passive for more than two years at a stretch, he/she may

withdraw his share capital. Further, only those farmer pouring milk to the cooperative are allowed to hold shares. The shares are limited in number, and the number is determined by the General Council, subject to the approval of the Cooperative Department. Therefore, any benefit or profit accrued goes to the account of real farmers only. Therefore in the last sixty years, the farmers, particularly smallholders with dairy cattle farming as their primary source of income are satisfied and are in the sense of ‘feel good’ with the cooperative.

4.6 SJDUSS and Anand, Comparison

The comparison between SJDUSS and *Anand* do not bear any logic in common parlance. It is felt important to study that SJDUSS was formed just after twelve years of formation of *Amul*, unlike other dairy cooperatives in Assam, has been running till today but unable to rise if compared to; for the adversaries or exclusion is the subject matter. Secondly, almost all the time the policy makers reiterate the ANAND model and stress about the replication of the Anand model. Therefore it bears more meaning for comparison of presently running oldest dairy cooperative of India with the oldest dairy cooperative that is running till date in Assam.

4.6.1 Background of *Amul* and SJDUSS

In 1929, a private dairy named Polsons was established at Anand. It procured milk for Bombay Milk Supply Scheme from the producers of Anand through some middlemen. After processing, the Polsons sent milk to the market in Bombay and profited immensely but refused even to a modest increase in price. This provoked the milk producers went on strike. Observing the problematic situation Sardar Vallabhbhai Patel advised Morarji Desai to call a farmers’ meeting for finding out the solution. On 4th January 1946, a cooperative was formed for fighting excessively greedy and grasping milk contractors. ‘It was Sardar’s vision to organize farmers, to have them gain control over production, procurement and marketing by entrusting the task of managing these to qualified professionals, thereby eliminating the middlemen. Tribhuvandas Patel was selected by Sardar Vallabhbhai Patel for the task of "making the Kaira farmers happy and organize them into a cooperative unit"' (Kurien, Verghese, 2004).

Thus, the famous Kaira District Cooperative Milk Producers' Union Limited (KDCMPUL), at present popularly known as *Amul* came into existence in necessity. According to necessity, Tribhuvandas Patel managed Verghese Kurien as co crusader, and Kurien convinced H.M. Dalaya, MS from the University of Michigan in dairy engineering, to come to Anand “just for a few days” but passed his life in *Amul* as the technocratic backbone of India’s milk revolution.

Similarly, within our study area Practice of cattle farming for milk was prevalence in the area ever since the pre-independence period. The business of milk was totally unorganized in nature. The milk production was procured at a nominal price by some private trader and marketed in the adjacent Guwahati city at a much higher price. After independence, when demand for milk in the market began to rise, these middlemen paved the way for lucrative profit leading farmers towards more and more distress. This awakened some socially conscious persons to go in an organized way. At initial stage 17 nos. of members, whose only source of livelihood was cattle farming with their meager production of 120 LPD joined their hands to form “*Sitajakhala*” a milk producers' co-operative society, with Sri. Chabilal Sharma (Regmi) as the founder president for the purpose of put an end to the exploitation. Later, since the year 1961, the society came under the stewardship of Late Nandalal Upadhyaya, who left a comfortable job of a school teacher in Jagiroad High School to lead the society.

Thus, the geneses behind the inception are almost identical and differ only in the scale of business.

The operational structure of SJDUSS is known to be successful as the longest-running dairy cooperative in the context of Assam. But, this has not been able to climb up like *Amul*. Therefore, the *Anand model* and operational structure of the SJDUSS are worth discussing.

4.6.2 The Anand (*Amul*) Model

The example of the best cooperative, which has been able to reach the peak of success is Anand, *i.e.* Kaira district cooperative milk producers union limited. Efforts to replicate it in any place of India and abroad, are not new. But here naturally the question arises, what is the Anand model? Under what type of

environment and situation did the Patel-Kurien-Dalaya trio materialise the ascent of Anand to success? The answer to these questions can be found in the study of the basic structure of the *Amul* model. In Kurien's words,

'The basic structure of the *Amul* model is the milk producers' cooperative society at the village level. Membership in these cooperatives is open to all who need the cooperative's services and who are willing to accept the responsibilities of being a member. Decisions are taken on the basis of one member exercising one vote. No privilege accrues to capital, and the economic returns, whether profit or loss, are divided among the members in proportion to patronage'. (Kurien, Verghese, 2004)

In simple words, the salient features of the *Anand model* can be mentioned as follows (Singh, 2006):

1. A single commodity approach.
2. Decentralised decision making and producers elected leadership.
3. A three-tier organizational structure.
4. The employment of professionals.
5. Accountability of these professionals to milk producers.
6. Provision of providing technical inputs.
7. Integration of production, procurement, processing and marketing functions.
8. Regular audit.
9. Contribution to the development of the village.

On a minute study of the aforementioned features, one can observe that the *Amul* model provides full scope for farmers to control their own cooperative. Farmers elect only those people to the governing body, who take their interests seriously. The governing body then selects the salaried employees with the same awareness, so that the responsibility of interests of the farmers can be properly carried out. In Kurien's words,

‘The primary milk producers democratically govern this entire federal cooperative structure to ensure that the higher tier organizations are geared to serve the purpose of the lower levels, and the gains at all levels flow ultimately back to the milk producers in a significant measure’.

Whether the cooperative is a primary village cooperative or a district cooperative union or state federation, its structure and governance should be necessarily democratic. These unions and societies have such an organisational structure where producers themselves prepare the financial plan for milk and keep an eye on its working so that the producers can get full benefits of the plan. (Kurien, Verghese, 2004)

The basic structure of the *Amul* model begins at the primary milk collection cooperative society of rural areas. Then, District cooperative unions are formed comprising of many such societies, and a state cooperative federation is formed by such district unions. This is called the three-tier structure. On the other hand, the main function of the dairy cooperative is forward as well as backward marketing in favour of the milk-producing farmer. The business of dairy cooperatives is also commercially divided into three tiers, *i.e.* Collection, Processing and Marketing. The work of production depends mainly on the personal interest of the farmer members.

4.6.3 The operational structure of SJDUSS

SJDUSS is a unitary DCS operating from the village Amlighat, district Morigaon in the state of Assam. It was formed democratically in necessity way back in the year 1958. Since the beginning, it has been operating on the basic philosophy of *no profit no loss*. Its operational area comprises two Community Blocks in the district of Morigaon and Kamrup (M).

The Hierarchy of SJDUSS can be divided into four classes:

- i. General Council, comprising of all the active general members.
- ii. The Board of Directors
- ii. Office Staff with Secretary as Chief Executive.

- i. Field worker.

4.6.3.1 The General Council of SJDUSS

The General Council consists of all the general members of SJDUSS. This council generally sits once in a year. In certain case, if the Board of Directors feels necessary, regarding the decision on vital issues with far-reaching implication, the Secretary of the Samiti calls General Council meeting or extended Executive on the basis of the importance of the issue. In this council, every legitimate member always has an equal say. In the history of SJDUSS till date, all the General Council had elected the members to the Board of Directors unanimously.

4.6.3.2 The Board of Directors (BOD)

The BOD consists of fifteen director members elected directly by the General Council members. The Chairman, Vice Chairman and Executive Chairman are elected by the director members on the simple majority rule from and among themselves. In the history of SJDUSS, the director members have always been elected unanimously in the General Council, although there is a provision for contesting for the same. This signifies the unity and trust among the members. When the Samiti feels it necessary to have some more members in the BOD, the General Council entrusts the right to nominate them as advisors or invitee member or both on the BOD. On behalf of the BOD, the Chairman nominates them after a brief discussion with the elected BOD members.

4.6.3.3 Office Staff

Secretary is the Chief Executive of the office. Overall responsibility of looking after day to day matter of business and managing regularity of all affairs lies on the soldier of the Secretary. He has every right to deploy each employee when requires as per their grade wherever dim fit. Each of the office bearers is accountable to the Secretary; Secretary is accountable to the BOD and BOD in turn accountable to the General Council.

4.6.3.4 Field worker

The duty of Procurement and distribution of milk as well as the cattle feed maintaining proper quality, quantity and price as per directives from the office lies on the Field workers.

The BOD also forms sub-committees to vigil over the activities of all level of workers so as no irregularities crept in.

4.6.3.5 Other basic information of SJDUSS

Briefing on the basic structure of the present Chairman of SJDUSS revealed 'The basic Hierarchical structure may be changed in future as necessary, by bringing the proposal in the General Council meeting'. Further, he adds that the BOD has to implement the proposal adopted by the general council. This shows that the BOD of SJDUSS is fully accountable to the General Council and the cooperative itself possess pro-farmer philosophy as in *Amul*.

The basic particular of information and activities of SJDUSS reflects that SJDUSS has been deeply following the principles laid down by the International Cooperative Alliance (ICA) for the full satisfaction of its farmer members.

a. Business Activities: Among the business activities, the procurement and sale of milk and milk products are the prime approaches of the business. All other businesses that the cooperative has been undertaking are a supplementary requirement for augmenting the production and productivity of its farmer. Therefore the cooperative procures ingredients of feed and prepares balanced cattle feed and sells at fair prices to farmers. At present SJDUSS has started silage making as a pilot project of its own in *Sitalage* brand so as the problem of fodder shortage can be arrested in the Mayong block and operational area in particular and the state of Assam in general.

The cooperative has been maintaining its procurements of over 15500 litres of milk from its 12 numbers of collection centres located at different places in Mayong block in Morigaon district and Dimoria block in Kamrup Metropolitan.(Table 4.13)

Table 4.13 Centre wise procurement of milk By SJDUSS

Sl no.	Centre	Approximate procurement LPD*		Total
		Morning	Evening	
1	Amlighat -A	789	488	1277
2	Amlighat -B	3526	2656	6182
3	Amlighat-C	802	491	1293
4	Hawlabheti	605	461	1066
5	Udmari	345	261	606
6	Matiparbat	53	38	91
7	Killing valley	505	372	877
8	Jagiroad	206	150	356
9	Topatuli	508	447	955
10	Khetri	821	509	1330
11	Paliguri	826	600	1426
12	Dharbam	106	62	168
	Total	9092	6535	15627

SOURCE: SJDUSS

*approximate daily Average of March 2018

Among the centre of procurements, centres Amlighat-A, Amlighat-B and Amlighat-C covers sample villages Bamungaon and Raumari, the centre Killing valley is located at the middle of the sample village Barkhal, Hawlabheti covers the Hatiamukh sample village, the sample village Udmari and Matiparbat also have procurement centres of SJDUSS at their respective location.

The cooperative procures milk from its registered farmer twice daily, in the morning and in the evening and the milk collected is entered in the personal record book of the respective farmer. There are cattle feed Storehouses for each procurement centres; farmers can purchase cattle feed and feed supplements at fair prices and can avail of credit for ten days. At the end of ten days, the cooperative

transfers value of milk supplied by the farmers during the last ten days to their respective bank accounts.

b. Financial activities: The cooperative as far as possible make its every transaction through banks. This cooperative regularly helps farmers to get a loan from commercial banks and subsidies *etc.* from Government agencies and different financial institutions when they are in need, which ensures the growth of production as well as the welfare of dairy farmers. During the lean period, the cooperative provides necessary Short Term advance according to the records of the financial credibility of the farmer. The cooperative retain ₹ 0.50 per litre of milk from the farmer and at the end of the year purchases LIC policies or others on the advice of the farmer concerned.

The cooperative regularly holds its General Council meeting before the month of June every year and provides its balance sheet to its entire farmer members in the presence of an official representative from the Department of Cooperation, Government of Assam.

c. Welfare Activities: SJDUSS since 2013 has been maintaining routine De-worming, Vaccinations, and trying to systematize the maintenance of pedigree information for the benefit of farmers. It is also adopting Breeding Policy for high pedigree, with time to time induction of better progeny and Artificial Insemination (AI) with an aim to increase average milk Yield per cow from the present level of 8 LPD to 15 LPD and more. The cooperative, time to time organises various workshops, training programmes and seminar on the modern way of cattle farming for the benefit of members as well as other farmers of the region.

d. Education: According to the principle of the International Cooperative Alliance, education is one of the important basic elements that cooperatives have to follow. According to this rule, it is necessary to organise a systematic training and education programme for staff management and other user members of cooperatives. In regards to education, SJDUSS is found to be quite positive. Going further ahead, it had played a major role in establishing Jagiroad College, Sitajakhala H.S School and numbers of other lower primary and upper primary schools. The cooperative also found to be providing financial assistance for the

improvement of sports, Culture and other socio-educational Institutions. It also annually provides financial assistance to poor and talented students of the locality. At recent the cooperative is also envisaging for a permanent agricultural training centre for entrepreneurship development, specializing in animal agriculture in Private Public Partnership (PPP) mode.

e. Achievement: The cooperative was able to receive the coveted biennial award “Cooperative Excellence Award-2006” from National Cooperation Development Corporation

The cooperative in addition has taken an action plan with a view to generating twenty thousand employments within the year 2020. This has been planned as ‘Vision 2020 Sitajakhala’. The basic objectives of ‘Vision 2020 Sitajakhala’ by SJDUSS could be depicted as follows:

1. Associating further 10000 farmer’s families directly and other 20000 families indirectly in dairy farming with a target to produce milk more than 50000 LPD in middle Assam within 2021.
2. Launching “*Sitajakhala*” as an indigenous brand of Assam with pasteurised milk and milk products, so as a maximum of benefits from milk marketing could be provided to the producer.
3. Reaching new areas of middle Assam to motivate young unemployed youths to adopt dairy farming as a viable source of livelihood and creating small dairy cooperative societies in new areas to make farmers self-reliant.
4. Transforming its expertise acquired through the challenges it faced in the long journey of cooperation as an opportunity to address the chronic problem of unemployment in the state of Assam.

4.6.3.6 Outline of similarities and dissimilarities between *Amul* & SJDUSS

Outline of similarities and dissimilarities between *Amul* & SJDUSS can be made only on the ethos of the *Amul* model and the basic principle of cooperatives put forward by the International Cooperative Alliance as well as the architecture of the *Amul* model.

The genesis of *Amul* itself was comprised of the bliss of big personalities of India. However, farmers of SJDUSS have been still waiting for an opportunity to find the path for its ascent.

The *Anand* or *Amul* model was based on the single commodity approach, *i.e.* milk. SJDUSS also has been running during the last sixty years with single commodity milk. Moreover, other activities, *e.g.* the provision and facilities of veterinary care, facilities of cattle feed for the farmers, providing short-term advances and other have been devoted to increasing the production and productivity of milk. However, in the scale and area of operation, any line of comparison cannot be drawn between *Amul* and SJDUSS.

Decentralised decision making and producers elected leadership signifies the member control over the institution. SJDUSS till now is a unitary institution and has single Board of Directors, and there has been a provision of electing at least one member by the farmers on the basis of areas of their procurement centre in the open General Council meeting. It has already stated that in the history of SJDUSS till date all the General Council had elected the members to the Board of Directors unanimously. However, as a unitary institution, a three-tier organisational structure is absent in SJDUSS.

SJDUSS till date being a low scale low tech institution in the field of milk procurement, processing, value addition and its business lacks the employment of high tech professionals. However, the statement of 'Vision 2020 Sitajakhala' indicates that this cooperative necessarily have to employ professionals very soon.

SJDUSS, as observed in comparison to the *Amul* model, is fully accountable to its milk producers to date. This is evident by the percentage of market price percolated as producer's price and regular yearly audit. Further, it has been observed SJDUSS distributes its profit to the producing farmer on the basis of the volume of milk they poured during the year. Since its inception, it had not distributed any dividend, among the non-user members. With the erection of its own processing plant SJDUSS has started to acquire technical inputs so as the integration of production, procurement; processing and marketing functions could be achieved.

In regards to social development, it is stated above that SJDUSS had contributed a lot to the development of villages paving the way for better education for all in the Mayong Block, in the district of Morigaon.

4.7 Conclusion

The discussion in this chapter clears that the activity of dairy farming by the rural poor cannot sustain without pro-farmer, pro-poor marketing facility. In a marketing institution or organisation so long as farmers remain decision taker rather than a part of decision maker farmers may not be fully benefited by the system. Therefore, the farmer's cooperatives are an inevitable part of dairy farming, fulfilling the purpose of milk marketing particularly for the smallholders. This is true not only in our state but also in each and every underdeveloped region with a large number of smallholders. Thus, dairy cooperatives in a practical sense are synonyms of milk marketing organisations. It is proved by the dimensional growth of *Amul*.

Farmers cooperatives, that are formed in necessity by the public and structured in the top-up model has the certainty of longevity. The cooperative formed by the system, administrative or other and implemented in a top-down model with a less 'say' of user members hardly achieves the desired goal. They sooner or later suffer losses in it or become an unprofitable entity to its user members. A cooperative becomes an unprofitable entity to its user members when the management of the organisation for the sake of showing profit pays continuously less and less for the produce of its farmer member rather than controlling other factors. That is as the farmer control on the institution goes down it may become less and less useful for the producer farmer and falls in dilapidation of members. The most important of the elements of milk marketing as stated by Kurien was divide profit 'among the members in proportion to patronage' (Kurien, Verghese, 2004) and it has been observed that this can be achieved only through milk marketing through the cooperatives, by the farmers, for the farmers and of the farmers.

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