

# DAIRY COOPERATIVES IN INDIA: AN OVERVIEW

Dr. D. Joel Edwinraj, M.Tamila Dr. J. Balamurugan

, Associate Professor and Head, Department of Cooperation TBML College (Affiliated Bharathidhsan University), Porayar - 609 307, Tamil Nadu.

Corresponding Author: M.Tamila, <sup>1</sup>Research Scholar, Department of Cooperation TBML College (Affiliated Bharathidhsan University), Porayar - 609 307, Tamil Nadu.

, Assistant Professor, School of Commerce and Management Studies, St.Peter Institute Deemed to be University, Chennai, Tamil Nadu.

## ABSTRACT

In the emerging business settings, dairy cooperative society is vital in enabling the livelihood development at grassroots level. The dairy cooperative society has been procuring vast quantity of the milk from the farmers which corroborated in the study that 60 percent of milk has procured by the dairy cooperatives in the study area. The study results have highlighted that dairy cooperative society has been procuring the milk at reasonable cost and also providing adequate support in marketing of the value addition production of dairy so as it paved the way to get regular flow of income to the farmers which has made possibilities to improve the standard of living of the rural community. In this scenario, the present research study is an attempt to understand the dairy cooperatives developments in India.

**Key Words:** Dairy Cooperatives, Cooperatives Development, Milk Products, Intensive Dairy Development Programme and National Agriculture Development Programme

## INTRODUCTION

In the contemporary business era, India is one of the significant countries in producing the milk and its by-products. The milk production of India was 20 million tons in 1960 which has increased as 121.50 million tons in 2011 and also it is noted that the per capita

availability (281g/day in 2011) has crossed to the requirement of 280g/ day. In India, Tamil Nadu State was placed ninth positions in overall milk production in the last decade.

In Tamil Nadu, there is a decline in milk production since milk producing animals rearing is limited particularly country animal rearing trends becomes rare so as in many districts of Tamil Nadu is able to produce less milk. In order to increase the milk production, the dairy cooperative society has taken up stringent actions such as creating awareness on rearing country animals, maintenance of pedigree records for crossbred animals, adoption carbonizations techniques and administering smart mineral mixtures to cattle, value added health conscious dairy products are the key strategies which has employed to implement the Intensive Dairy Development Programme, Strengthening Infrastructure for Quality and Clean Milk Production, Assistance to Cooperatives and National Agriculture Development Programme for effectively scale up the milk supply and demand.

### **Milk Procurement Process**

The dairy cooperative society has been procuring the milk from farmers who rear cattle in the villages and also procures milk from vendors.

### **OBJECTIVES OF DAIRY COOPERATIVES IN INDIA**

- To bring the unorganized dairy sector into the fold of organized sector
- To improve the input activities and animal health care for increasing milk production
- To encourage liquid milk availability
- To tap the milk potential of the State and to ensure stable growth in procurement andMarketing
- To ensure quality of milk and milk products as per the statutory specification
- To supervise and regulate the dairy activities

### **Dairy Cooperatives in India- An Overview**

The annual milk production of India has more than tripled in the last three decades, rising from 21 million tons in 1968 to an anticipated 80 million metric tons in 2001. This rapid growth and modernization is largely credited to the contribution of dairy cooperatives under the Operation Flood (OF) Project, assisted by many multi-lateral agencies including the European Union, the World Bank, Food and Agriculture Organization (FAO) and World Food Program. (WFP). Even though, the impressive growth in milk

production in the last three decades, productivity of dairy animals' remains very low and milk-marketing systems primitive.

At present, more than 80 percent of the milk produced in the country is marketed by unorganized sectors and less than 20 percent by the organized sector. The organized sector involves Government and Co-operatives; the unorganized sector involves Private Organizations. The role of dairy cooperatives in procurement of milk and providing necessary services to the dairy farmers make them distinct among the other channels of milk marketing. The dairy farmers selling the milk to the dairy cooperatives get fair prices of their product. These centres also provide financial security and pay the money to the dairy farmers at certain intervals. Thus, the dairy farmers get a consolidated amount from the dairy cooperatives. The major constraint with this channel is delay in payments by the dairy cooperatives. The poor households are unable to wait for longer periods to get the payments and thereby prefer to transact their marketable surplus through other channels.

The important role played by dairy farming in the sustenance of landless and poor people in the village economy is quite evident. Marketing of milk through organized sector involves Government and Co-operatives agencies while the unorganized sector involves the private organizations. Major part of milk is marketed through the unorganized sector and the organized sector has a very low share. The Government of India has started the "operation flood" programme for the proper enumeration of milk and milk products (George S., 1987). Further, various programs were undertaken for the formation of dairy co-operatives. The dairy co-operatives in India have three tier of structure which consists of state level federations, district milk unions and dairy co-operative societies at the village level respectively. As a result, dairy co-operative societies have been formed to meet local demand for milk and eradicate the existing malpractices in the milk marketing. A substantial amount of money has been spent on the formation of dairy co-operatives to provide the infrastructure for dairy co-operatives. The evolution of dairy co-operatives has fuelled empowerment of rural people and promotes rural development.

### **Performance of Dairy Cooperative Development Activities**

Performance of Dairy Cooperative Development Activities namely, Milk Procurement and Marketing through Dairy Cooperatives and Per Capita Availability and Production of

Milk in India.

It is understood from the Table.1 that in 2003-04, average daily cooperative milk marketing stood at 14.87 million litres; annual growth has averaged about 4.2%. In 2008-09, average daily cooperative milk marketing increased to 200.4 lakh litres; annual growth has averaged about 6.1% compounded over the last five years. During April to November 2011, the average milk procurement by dairy cooperatives was more than 262 lakh kg per day (provisional) compared to around 251 lakh kg per day during the same period in 2010, registering an increase of 4.4 per cent. The cooperatives marketed an average of above 229 lakh litres of milk per day (provisional) against the average of about 219 lakh litres per day during the corresponding period in 2010 registering a rise of about 4.6 per cent.

**TABLE. 1**  
**MILK PROCUREMENT AND MARKETING THROUGH DAIRY**  
**COOPERATIVES**

Sl. No	Name of the States	DCS Organized *(no.)	Farmer Members *(‘000)	Rural Milk Procurement (‘000Kg/Day)	Liquid Milk Sale* (000 L/Day)
1.	Andhra Pradesh	4964	846	1371	1565
2.	Assam	145	4	5	22
3.	Bihar	9425	523	1090	464
4.	Chattisgarh	757	31	25	34
5.	Delhi	N.A	N.A	N.A	3050
6.	Goa	178	19	38	69
7.	Gujarat	14347	2907	9158	3237
8.	Haryana	7019	313	511	362
9.	Himachal Pradesh	803	33	60	24
10.	Jharkhand	53	1	5	253
11.	Karnataka	12273	2091	3742	2661
12.	Kerala	3666	851	688	1092
13.	Madhya Pradesh	6216	271	588	495
14.	Maharashtra	22378	1845	3034	2017
15.	Nagaland	49	2	2	3
16.	Orissa	3256	187	276	290

17.	Pondicherry	103	36	35	93
18.	Punjab	7069	386	1037	802
19.	Rajasthan	16290	670	1629	1505
20.	Sikkim	287	10	18	17
21.	Tamil Nadu	10079	2176	2097	989
22.	Tripura	84	6	2	14
23.	Uttar Pradesh	21793	977	504	380
24.	West Bengal	3012	213	273	41
<b>Total</b>		<b>144246</b>	<b>14461</b>	<b>26188</b>	<b>21989</b>

Source: Economic Survey, Ministry of Finance Government of India.

**TABLE. 2**

**PER CAPITAL AVAILABILITY AND PRODUCTION OF MILK IN INDIA**

Sl. No	Year	Per Capita Availability of Milk (G/Day)	Production of Milk (Million Tons)
1.	2001-02	222	80.9
2.	2002-03	234	85.9
3.	2003-04	237	89.4
4.	2004-05	240	92.2
5.	2005-06	244	99.1
6.	2006-07	246	100.9
7.	2007-08	252	104.8
8.	2008-09	258	108.5
9.	2009-10	263	112.5
10.	2010-11	281	121.8
11.	2011-12	<b>290</b>	126.0

Source: Economic Survey, Ministry of Finance Government of India.

It is observed from the Table.2 s that per capita availability of milk (G/Day) upward trend 222 and 290 during the year from 2001-02 to 2011-12 and production of milk (million tons) increasing trend 80.9 and 126 respectively.

**TABLE. 3**

**CURRENT MILK-PROCESSING CAPACITY**

Sl. No	Sectors	Number of Plants	Capacity (106 liters/day)
1.	Cooperative	218	32.47
2.	Private	366	30.26
3.	Government	39	3.87
<b>Total</b>		<b>623</b>	<b>66.60</b>

Source: Economic Survey, Ministry of Finance Government of India.

The Operation Flood, launched in 1970, introduced co-operatives into the dairy sector with the objectives of increasing milk production, augmenting rural income and providing fair prices for consumers.

It was started to effectively utilize donated milk products from abroad for domestic dairy development. These surpluses were used to speed up Indian dairy development by taking various actions such as donated milk products were used to reconstitute milk and therefore provide the major cities' liquid-milk schemes with enough milk to obtain a commanding share of their markets and the funds realized from the reconstitution and sale of donated products were used to resettle city-kept milk animals and permit their progeny to multiply to increase organized milk production, procurement, and processing and to stabilize the major liquid-milk schemes' position in their markets.

### **Earlier Studies on Dairy Cooperative Society**

**Ministry of Fisheries (2022)** reported that the evolution of the dairy sector in India and the stellar role played by dairy cooperatives since the launch of Operation Flood form an integral part of the country's remarkable growth story after Independence. At present, India is the largest producer of milk in the world, contributing 23% of global milk production.

**Raghav (2021)** study emphasized that dairy farming is an allied activity to agriculture in India. The dairy sector generates a regular income to the farming households throughout the year. Since milk is the second-largest agricultural commodity contributing to Gross Value Added (GVA), dairy farming is considered a major productive activity next only to rice. Despite this, the dairy industry in India is facing several constraints as it is scattered over the entire country in innumerable micro-units in a much-disorganized form. With the help of cooperative movement and active functioning of dairy cooperatives under milk production

unions, the Indian dairy industry is now showing a significantly positive transformation leading to its fast growth to meet the challenges ahead. It is also noticeable that the dairy activity further empowers women as entrepreneurs. However, greater emphasis is needed in the areas of milk production, processing, and marketing research. The study is concluded that dairy cooperative is playing a major role in organizing the scattered dairy units in the study area by enrolling them as members. The dairy cooperatives are effectively providing the necessary input and technical services to their members and are ensuring their support for them to grow socially and economically. Further, the dissemination of knowledge and technology utilizing appropriate extension activities shall bring more non-members to immediately join the Dairy cooperatives as members to reap the benefits.

**Nizamuddin Khan and Ashish Kumar (2014)** study found that Dairy farming is an important activity of rural people in India. It has an important role in the sustenance of landless and poor people in the village economy. The Government of India has started dairy co-operative societies to enable proper remuneration of milk and milk products to people. Dairy co-operative societies are joint ventures of the Government and the local people for the daily collection of milk from dairy farmers. These co-operatives are not only an important channel for milk collection from grassroots level but also supply the collected milk to other parts of the state ensuring regular supply to the urban consumers.

**Deepti Gour (2013)** study emphasized that Dairying has been a part and parcel of Indian culture and civilization from the ancient times. The need for dairy development in countries like India arise due to several considerations such as low per capita availability of milk, prevalence of unemployment, increasing living conditions of rural people, and achieving self-sufficiency in milk production. Dairying is one of the most effective instruments for supplementing farmer's income and generating employment in the rural sector.

**Seilan (2011)** study indicated that cooperatives have ushered in milk revolution in the country. The dairy industry has made India proud in recent times. India is the leading producer of milk in the world. Dairy cooperatives are the backbone of Indian dairy industry and have excelled in their areas of cooperatives. The strength of India's dairy cooperatives lies in the domestic market. It can easily sustain itself on this for times to come provided the government provides suitable protection from subsidized imports. Income levels in urban India are going

up and households spend 68 percent of their income on self-consumption. This is an important source of strength for the domestic dairy cooperatives. The biggest strength of dairy cooperatives is their labour intensiveness. Cost effectiveness is another important factor. Dairy cooperatives have effectively used the toil of farmers to develop self-reliance. It is unique. The future is indeed bright for dairy cooperatives. The author suggested that Government needs to support dairy cooperatives survive in the new economic order by coming up with policy prescriptions aimed at generating enough surpluses at low cost, and also maintain due quality standards. Instead of introducing policies that dismantle cooperative dairying, the government can maximize welfare of millions of farmers by strengthening the cooperative.

**Deepa (2012)** study indicated that butter making life is better. The author observed that it is not for food that gets better with butter but history too. When independent India, the milk production was very low and imports of milk powder as it was a necessity. Operation Flood, a scheme introduced by Dr. Varghese Kurien with the aim of flooding the country with dairy products was a grand success. This was one of the world's largest dairy development schemes to be undertaken with funding from World Food Program (WFP), European Economic Community (EEC) and the World Bank.

**Dobson (2006)** study found that milk production in China rose by 25% per year from 2000 to 2006. The author has identified the enabling factors of milk production which are income growth, pressures to improve efficiency of milk production, pressures to improve quality of milk and potential demand for dairy products in rural areas.

**Rajendran and Mohanty (2004)** study revealed that Operation Flood and dairy cooperatives emerged in India as the largest rural employment scheme which enables the modernization of the dairy sector to a level from where it can take off to meet not only the country's demand for milk and its by-products and also gain the global market opportunities.

#### **OBJECTIVES OF THE STUDY**

1. To study the socio-economic profile of dairy farmers in the study area
2. To understand the enabling factors to sell the milk to the dairy cooperative society
3. To examine the problem faced by the respondents



## RESEARCH METHODOLOGY

The study is confined to the Chennai District of Tamil Nadu. For the study purpose, the simple random sample method has employed to select the 100 sample respondents who are the active member of the dairy cooperative society

## ANALYSIS AND DISCUSSION

### Profile of Dairy Cooperative Member

In any research study, it is inevitable to analyze the characteristics of the respondents. This would give a clear picture of the background; in turn, it will help in framing appropriate policy implications. Hence, basic details about members of dairy cooperatives were collected analyzed and presented in the following.

**TABLE. 4**

### DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR GENDER

S. No	Particulars	Number	Percent
1	Male	88	88.00
2	Female	12	12.00
<b>Total</b>		<b>100</b>	<b>100.0</b>

Note:  $\chi^2 = 2.181$  significant at 0.112

Source: Compute primary data.

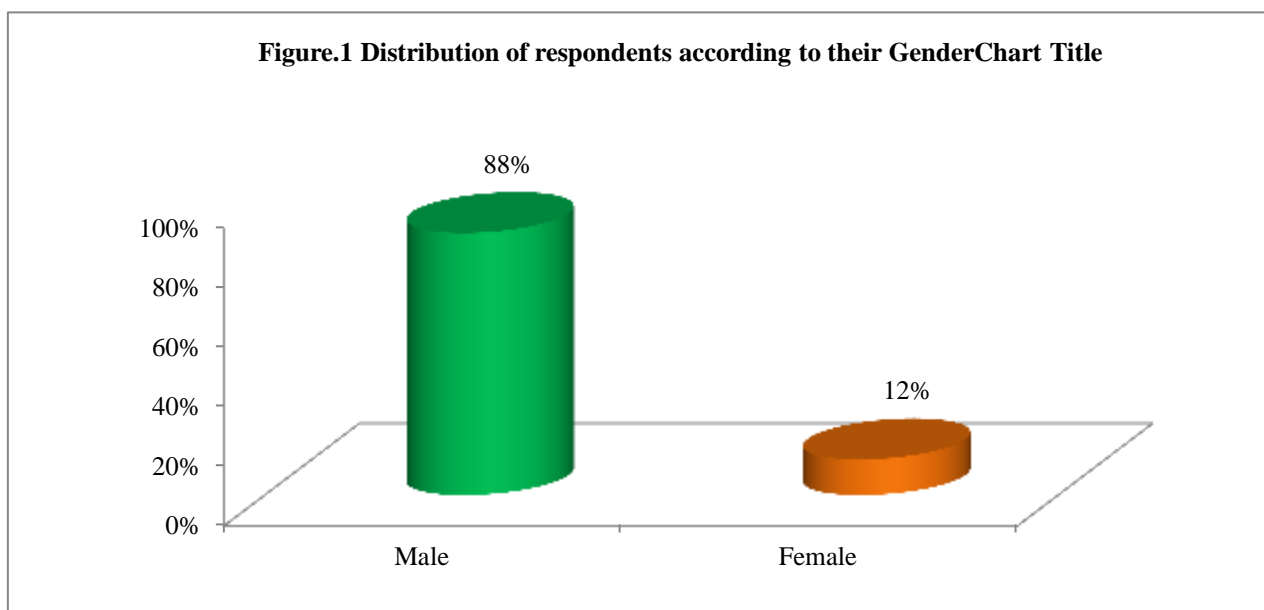


Figure. 1

The available data Table.4 shows that of the total respondents, the majority [88%] of the

respondents are male, followed by the female [37%]. The chi-square value [ $\chi^2 = 2.181$  significant at 0.112] of gender revealed that it is highly associated with dairy cooperative society by male and female for their livelihood development.

**TABLE. 5**  
**DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR AGE**

S. No	Particulars	Number	Percent
1	Below 30 years	20	20.00
2	Between 31-40	47	47.00
3	Between 41-50	18	18.00
4	Above 50	15	15.00
<b>Total</b>		<b>100</b>	<b>100.0</b>

Source: Compute primary data.

Table.5 indicates that on age of respondents irrespective of categories shows that significant proportion [47%] of respondents is belonged to the age group of 31-40 years category. It is noticed that a small level [20%] of respondents are belonged to the age group of below 30 years category, followed by 18 percent of the respondents are belonged to the age group of between 41-50 years category and 13 per cent of the respondents are belonged to the age category of above 50 years in the study area.

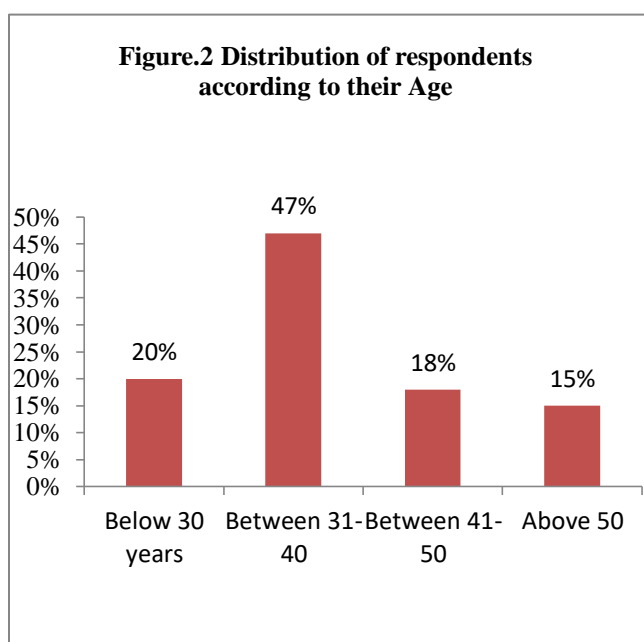


Figure. 2

**TABLE. 6**  
**DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR RELIGION STATUS**

S. No	Particulars	Number	Percent
1	Hindu	69	69.00
2	Christian	23	23.00
3	Muslim	08	08.00
<b>Total</b>		<b>100</b>	<b>100.0</b>

Source: Compute primary data.

It is observed from Table.6 that among the total respondents, majority [69%] of the respondents are belonged to the worship of Hindus, followed by [23%] Christian and Muslims [8%].

**TABLE. 7**  
**DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR COMMUNITY**

S. No	Particulars	Number	Percent
1	BC	48	48.00
2	MBC	21	21.00
3	SC	16	16.00
4	ST	15	15.00
<b>Total</b>		<b>100</b>	<b>100.0</b>

Source: Compute primary data.

Table.7 reveals that of the total respondents, 48 percent of the respondents are belonged to the category of Backward Community [BC], followed by [21%] Most Backward Community, Scheduled Caste [16%] and Scheduled Tribe [15%].

**TABLE. 8**  
**DISTRIBUTION OF RESPONDENTS ACCORDING TO EDUCATION STATUS**

S. No	Particulars	Number	Percent
1	Illiterate	32	32.00
2	Primary and Secondary	18	18.00
3	High School	25	25.00
4	Higher Secondary School	10	10.00
5	UG and PG	15	15.00
<b>Total</b>		<b>100</b>	<b>100.0</b>

Source: Compute primary data.

Above Table.8 indicates that a considerable level [32%] of the respondents have found as illiterate. It is noted that 25 per cent of the respondents are found to be high schooling educational qualification, followed by [18%] primary and secondary, UG and PG [15%] and [10%] higher secondary schooling educational qualification.

**TABLE. 9**

**DISTRIBUTION OF RESPONDENTS ACCORDING TO MONTHLY INCOME STATUS**

S. No	Particulars	Number	Percent
1	Below Rs. 25,000	72	72.00
2	Between Rs. 25,000-50,000	16	16.00
3	Above Rs. 50,000	12	12.00
<b>Total</b>		<b>100</b>	<b>100.0</b>
$\chi^2 = 0.248$ significant at 0.225			

Source: Compute primary data.

Table.9 shows that majority [72%] of the respondents are earned their monthly income below Rs.25,000, whereas a small portion [16%] are earned the monthly income between Rs. 25,000-50,000 and 12 per cent of the respondents are earned above Rs.50,000. It is noticed that chi-square value [ $\chi^2 = 0.248$  significant at 0.225] is highly associated with the regular flow of income which is the positive factor to involve in dairy cooperative activities by its members.

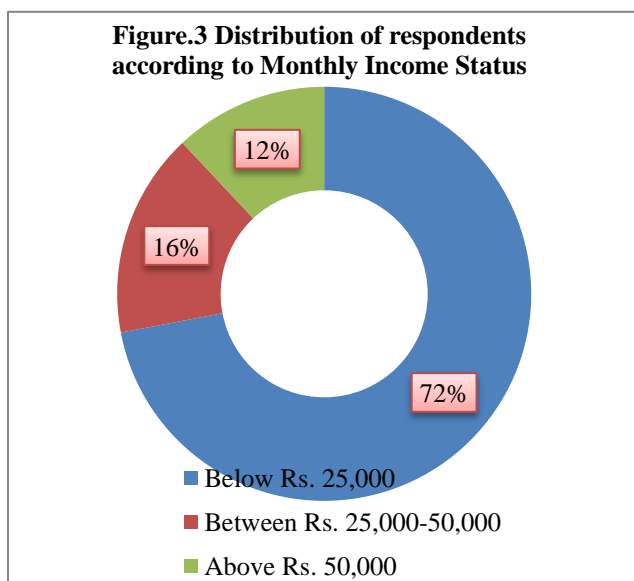


Figure. 3

**TABLE. 10**

**DISTRIBUTION OF RESPONDENTS ACCORDING TO SELL OF MILK TO DAIRY COOPERATIVE SOCIETY**

S. No	Particulars	Number	Percent
1	No Transport Cost	38	38.00
2	Low Price Difference with other agencies	22	22.00
3	No Commission Charges	19	19.00
4	Easy Method of Sale	21	21.00
<b>Total</b>		<b>100</b>	<b>100.0</b>

Source: Compute primary data.

The available data [in Table.10] reveals that considerable proportion [381%] of the respondents sold their milk to the dairy cooperative society for the reason of transport cost cut-down, followed by [22%] low margin of price variation, easy to sell the milk [21%] and no commission [19%]. Hence, the study is confined that most of the milk producers are selling their milk to the dairy cooperative society for the convenience of transaction which has made them to have good relationship with cooperative society.

### **CONSTRAINTS OF RESPONDENTS IN SELLING THEIR MILK TO THE DAIRY COOPERATIVE SOCIETY**

**TABLE. 11**  
**DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR PROBLEMS**  
**[MULTIPLE RESPONSES]**

<b>S. No</b>	<b>Particulars</b>	<b>Eigen Ranking</b>	<b>Percent</b>
1	Delayed Payment	I	97.00
2	Low Milk Price	II	95.00
3	Timing and Point of Milk Collection	III	86.00
4	Lack of Storage facility at Home	IV	77.00
5	Competition with Producers	V	50.00

Source: Compute primary data.

Table.11 provides the Eigen ranking system results that the majority [97%] of the respondents expressed that the milk producers of dairy cooperative society are getting payment in delayed, followed by low milk price [95%], collection point and timing is becoming a constraint to the 86 per cent of the respondents. it is also noted that 77 per cent of the respondents have reported that storage facilities are the constraints to storage at home whereas immediate selling is only option to them and half of the respondents [50%] have felt they are having highly competitive in their field.

## **MAJOR FINDINGS OF THE STUDY**

### **PROFILE OF DIARY COOPERATIVE MEMBER**

- The study findings found that majority [88%] of the respondents are male, followed by the female [37%].
- The study revealed significant proportion [47%] of respondents is belonged to the age group of 31-40 years category. It is noticed that a small level [20%] of respondents are belonged to the age group of below 30 years category, followed by 18 percent of the respondents are belonged to the age group of between 41-50 years category and 13 per cent of the respondents are belonged to the age category of above 50 years in the study area.
- The study indicated that among the total respondents, majority [69%] of the respondents are belonged to the worship of Hindus, followed by [23%] Christian and Muslims [8%].
- The study revealed that of the total respondents, 48 percent of the respondents are belonged to the category of Backward Community [BC], followed by [21%] Most Backward Community, Scheduled Caste [16%] and Scheduled Tribe [15%].
- It is understood that a considerable level [32%] of the respondents have found as illiterate. It is noted that 25 per cent of the respondents are found to be high schooling educational qualification, followed by [18%] primary and secondary, UG and PG [15%] and [10%] higher secondary schooling educational qualification.
- The majority [72%] of the respondents are earned their monthly income below Rs.25,000, whereas a small portion [16%] are earned the monthly income between Rs. 25,000-50,000 and 12 per cent of the respondents are earned above Rs.50,000.

### **Enabling Factors on Milk Selling to Dairy Cooperative Society by the Members**

- The study revealed that considerable proportion [381%] of the respondents sold their milk to the diary cooperative society for the reason of transport cost cut-down, followed by [22%] low margin of price variation, easy to sell the milk [21%] and no commission [19%]. Hence, the study is confined that most of the milk producers are selling their milk to the diary cooperative society for the convenience of transaction which has made them to have good relationship with cooperative society.

### **Constraints of Respondents**

- The majority [97%] of the respondents expressed that the milk producers of dairy cooperative society are getting payment in delayed, followed by low milk price [95%], collection point and timing is becoming a constraint to the 86 per cent of the respondents.
- It is found that 77 per cent of the respondents have reported that storage facilities are the constraints to storage at home whereas immediate selling is only option to them and half of the respondents [50%] have felt they are having highly competitive in their field.

### **SUGGESTIONS AND RECOMMENDATIONS**

- The administration of dairy co-operatives, need to take appropriate action to make the dairy society to take a commendable role in future in regenerating the rural life.
- Government need to provide technical and financial support to dairy cooperatives in the areas of strengthening cooperative business, productivity enhancement, quality assurance, building dairy infrastructure and for creation of a national information network by developing various schemes such as Dairy Venture Capital Fund (DVCF)/ Dairy Entrepreneurship Development Scheme (DEDS) at large scale. Automatic Milk Collection Unit (AMCU) and Bulk Milk Cooler (BMC) at grass root level - preserve quality and reduce post- procurement losses.
- The members of the dairy cooperative society need to be part of the society with making of adequate support technical and financial support from Government, high capacity utilization of dairy plants, viability through profit maximization activities with transparency in administration and active participation in society discussions, maximization of working capital, Develop a suitable and appropriate marketing strategy to meet competition with proper training and knowledge.

### **CONCLUSION**

The study concluded that dairy industry is poised to play a key role in nation's economy growth and development at grassroots level. The milk production is reached a new milestone which has brought up various opportunities to provide new avenues for employment at large scale which also focusing to strengthen its nutritional standards for the hygienic and healthy environments.

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