The Role of Women Dairy Cooperative Society in the Socio-Economic Empowerment of Women Members: A Study of Nadia District of West Bengal in India.

[1]Dr. Manish Sarker, [2]Kowshik Datta (M.sc)

[1]Assistant Professor, Department of Business Administration and Additional Director (IQAC), Ishakha International University, Bangladesh,

[2]Department of Statistics, Comilla University, Comilla

DOI: https://dx.doi.org/10.47772/IJRISS.2023.7869

Received: 09 July 2023; Revised: 02 August 2023; Accepted: 08 August 2023; Published: 12 September 2023

ABSTRACT

The purpose of India's diary development projects is to empower rural women. Rural women in West Bengal are empowered by cooperatives that produce women's milk at the village level. A case study of particular women's milk producers' society was done in the West Bengal district of Nadia by the Modhumoti women milk producers' co-operative society, which is a member of the West Bengal Milk Union (WBMUL). The socioeconomic standing of the women members greatly improved when they joined the women milk producers' cooperative association. A three-tier structure of dairy cooperative groups, including producers' societies at the village level, unions at the district level, and federations at the state level, was discovered by the study in West Bengal. The study discovered that there are two sectors in the milk marketing system: organized and unorganized. The authors conclude by identifying the employment at one's own home, an increase in family income, a rise in social status, and economic independence as the three most significant drivers of these women's decision to join cooperative societies as seen in the study area.

Keywords: Role, Women Dairy Cooperative Society, Socio- Economic Empowerment, Women Members, Nadia District, India

INTRODUCTION

India is a densely populated country, and most people live in villages. The majority of them are involved in agriculture. The cattle is correlated with agriculture in India, and the old method of cultivation is still in vogue there. The rearing of cattle is also an additional source of income for the villagers of this country. In ancient Indian history, it is said that domestication of the cow and the buffalo dates back nearly 4000 years (Manob 1996). The Scriptures of India refer to wealth through the word "Goddhan [i]." The largest proportion of cows and buffaloes in the world are seen in India. However, India produces only five percent of the total quantity of milk produced in the world. This amount is too inadequate to meet the country's demand. The supply of milk in some parts of India is higher than the local demand. On the other hand, the supply of milk in the rest of the country as well as in urban areas is much lower than the demand. As a result, many dairy cooperatives have been formed to meet local demand and develop the dairy industry. A huge amount of money has been spent on the creation of infrastructure and the provision of facilities for the dairy cooperatives. In India, cooperative dairy has three levels of structure, which consist of the National Dairy Development Board (NDDB), state federations, milk unions, and dairy cooperative societies operating at state level, district level, and village level, respectively. The dairy cooperatives at village level are the main focus of this study. Livestock production in India is not a specialized commercial operation as it is in developed countries; a mixed crop-livestock farming system is generally practiced. Farmers in rain-fed,

semi-arid areas heavily depend on livestock, particularly when the monsoon fails. Livestock has socio-religious importance and is regarded an indicators of status and wealth. The statistics show that women's participation in cooperatives is low in South Asian countries, especially in rural cooperatives. In developing countries, such as India or Bangladesh, socio-cultural and religious factors are often evoked: illiteracy, women's inside role, discretion, not speaking in front of men, traditions of men negotiating and handling money matters, supposed inferior abilities, and social pressures make it difficult for women to play an active and visible role.

The types of business cooperatives deal in, particularly cash crops, which tend to be male precincts, is another factor, and male resistance to women's participation goes a long way to keeping them out. During the last decade, the gender issue has attracted the attention of many researchers as well as government agencies. There is a sudden emphasis on the need to study the role or position of women in agricultural production, and special programs for this purpose are being designed. Recent research on dairy cooperatives in India shows that dairy cooperatives are playing a prominent role in the development of the dairy industry as well as increasing the income of rural people. It has also been noticed that for small farmers, livestock production and it is recognized that most of the livestock management is carried out by women (Shing & Viitanen, 1987).

Nevertheless, little research has been conducted on the role of dairy cooperatives in women's empowerment or the role of women in dairy farming in rural areas. In some studies reported, however, observations are recorded mainly on the type and amount of work performed by women (Banu, 1987). It should be realized that studies must go beyond this point. In order to derive the maximum benefit from development, extension, and training programs (provided by the cooperative authority), it is necessary to understand the perception of women with regard to livestock production and their involvement in decision-making, particularly those women from remote areas and poor families who are generally neither very communicative nor very confident of themselves. Thus, this study has selected a village from a very remote area in West Bengal, India, and intends to assess the socio-economic empowerment of cooperative dairy farming on women's empowerment and how cooperative dairy farming actually empowers women.

Milk production is an important source of income for the rural poor; unfortunately, the condition of the dairy sector in West Bengal is not healthy, like in other states of India. Most of the people in rural areas are poor and landless, and the raising of cows is done in a traditional way without any special care. The majority of rural households keep cattle in order to cultivate their land and produce milk for family consumption. Dairy cows in West Bengal are mainly non-descript (local cows), which are generally small and slow growers. They are short in length and produce comparatively less milk. They are usually fed with crop residues instead of supplementary feed and fodder. West Bengal is predominantly agricultural, and 75 percent of the people depend on agriculture. The state has 19 districts, and Calcutta is the capital of the state. The population of the state is about 83 million, or 7.6 percent of the Indian population. Sarker (2009) However, the study was chosen for West Bengal because the state has a long history of dairy cooperatives and dairy farming. Like other states in India, West Bengal also has an Anand-type dairy cooperative model. Anand-type cooperatives are the most successful cooperatives in South Asia. To increase milk production, Indian women farmers are playing a vital role. In India, more than 70 percent of women farmers are involved with dairy farming, and there is an individual women's society at the village level. This is another important reason for choosing West Bengal, India.

Dairy cooperative scenario in West Bengal India:

The state-level West Bengal milk federation oversees dairy development. State-funded dairy development began in 1965. Since then, the state has emulated Anand-style dairy cooperative societies. The 14 West Bengal milk unions generated 3.91 million liters of milk per day from 3,028 societies with 2, 26, 837 members. (State Federation 2008). The federation has run the Indian government-funded women's dairy

cooperative project (WDCP) since 1980. The federation is conducting the hilly integrated dairy development project (IDDP). The West Bengal cooperative milk producers' federation, Ltd., aims to guarantee and compensate cooperative milk producers. The federation also provides high-quality milk to urban consumers and built village-level cooperative institutions to manage dairy activities and facilitate socioeconomic development by providing village-level self-employment, preventing migration to urban areas, introducing a cash economy, and providing steady income.

Objectives of the study

The study examines women's dairy cooperatives, organizational structure, and farmer personalities. The study identifies milk-marketing routes. West Bengal's Nadia district hosted the study. The study's objectives are listed below.

1. To examine how cooperative dairy farming empowers women members and socioeconomic empowerment.
2. To identify the milk marketing channels in the study area.
3. To find out the organizational structure of the dairy cooperative society.

Method of the study:

Population, sample and data collection:

This research has been done based on primary and secondary data. Primary data have been obtained through face-to-face interview. The Kishan cooperative milk union gave approval for a field survey. Field surveying was done in Madanpur. Modumoti societies have 142 women cooperative farmers. This study randomly selected 100 Modumoti village milk-producing cooperative society members and all the information used in this analysis was collected personally, through interviews, observations, and investigations.

Secondary Sources:

Secondary data were collected from official records, research papers, and publications. These were used to explore the real situation of women dairy cooperative society members.

Primary data:

Primary data were collected through a field survey. The data was collected through interviews and observations with the women dairy cooperative members. The interview was conducted through a structured questionnaire.

Method of data collection:

Open-ended questions were used to make the interview, and random sampling was used to choose the respondents among women dairy cooperative members.

Data analysis:

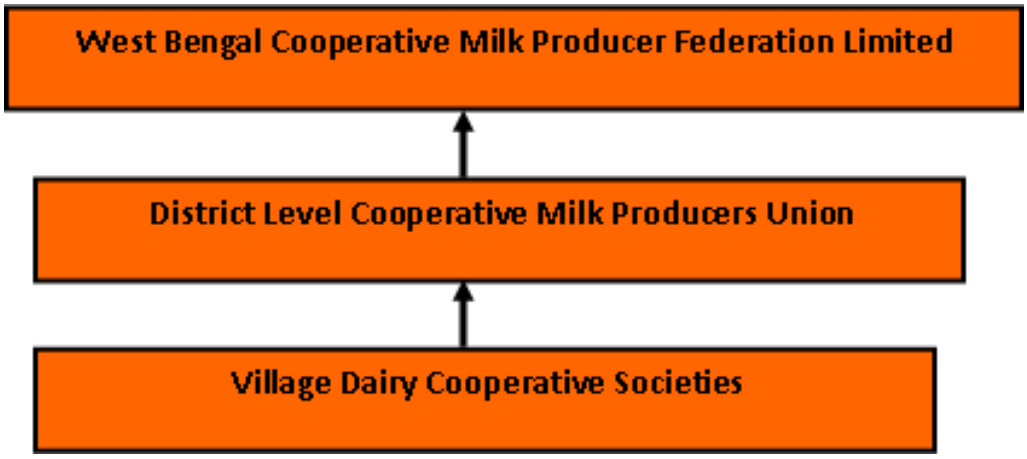
The collected data were both qualitative and quantitative. The statistical data was used to interpret the quantitative data. The data was tabulated according to the objectives of the study.

It should be mentioned that all the information used in this analysis was collected personally, in a

participatory way, through interviews, observations, and investigations (Appendices-1)

ANALYSIS AND FINDINGS

The dairy cooperative type in West Bengal state has a three-tier structure of dairy cooperative organizations consisting of the producers' societies at the village level, the unions at the district level, and the federations at the state level. Figure 1 shows the structure of dairy cooperatives in West Bengal of the Anand type.



Source: Field survey (2020)

Figure 1. Structure of Anand type dairy cooperatives in West Bengal

The village dairy cooperative society

Anand-type cooperatives are built on the main milk society. The dairy cooperative industry is built on village dairy cooperatives. The society improves milk production and provides counseling and help to promote its members' economic interests. Village societies gather milk and pay members periodically. Figure 2 describes West Bengal's primary society and cooperative members. Cooperative organizations and dairy producers increased from 2005 till 2020.

Source: Field survey (2020)

Figure 2. Total primary society and members in West Bengal state

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS |Volume VII Issue VIII August 2023

The district level cooperative milk producers union:

District-level cooperative milk producers unions are second-tier dairy cooperatives. The village-level cooperative societies of primary milk producers form a district-level milk union to procure, process, and market milk and milk products for socioeconomic development. District-level milk unions offer basic societal services for producer members. District unions join the West Bengal Milk Federation, which guides and monitors dairy development project implementation. The chief executive officer runs daily operations for the nine-member board of directors elected from chairpersons of associated primary milk societies. These unions process milk and sell it to metro dairies through the Federation.

West Bengal cooperative milk producer federation limited:

The federation is the third-tier structure in the overall organization of the dairy cooperative structure. The state minister is the chairman of the milk federation. The federation, apart from supervising the activities of the chairman of the affiliated milk unions, also looks after the processing and marketing of milk and milk products.

The Kishan cooperative milk producers' union ltd:

In West Bengal's three-tiered dairy cooperative structure, the district-level cooperative milk producers union, Kishan, is the second level. Nadia district, Krishnanagar, created the Kishan cooperative union in 1980. Cooperative milk unions have increased milk output in West Bengal. From 1980 to 2005, milk production nearly doubled to 3.8 million tons. (Sarker 2009) The milk union is headed by the district magistrate and vice-chaired by the local society chairman. The general manager, the union's CEO, hires managerial, technical, and clerical workers. The general manager can make union milk procurement, marketing, pricing, and money management decisions. The district-level producers union represents the village dairy cooperative society, which supplies farmers with artificial insemination, feed, and veterinary services.

Descriptions	Number
Dairy cooperatives male society	258
Dairy cooperatives women society	54
Dairy cooperatives members (male)	17,980
Dairy cooperatives members (women)	6,811
Artificial insemination centers	62
Milk chilling center	12
Milk production per day (liters)	41,000

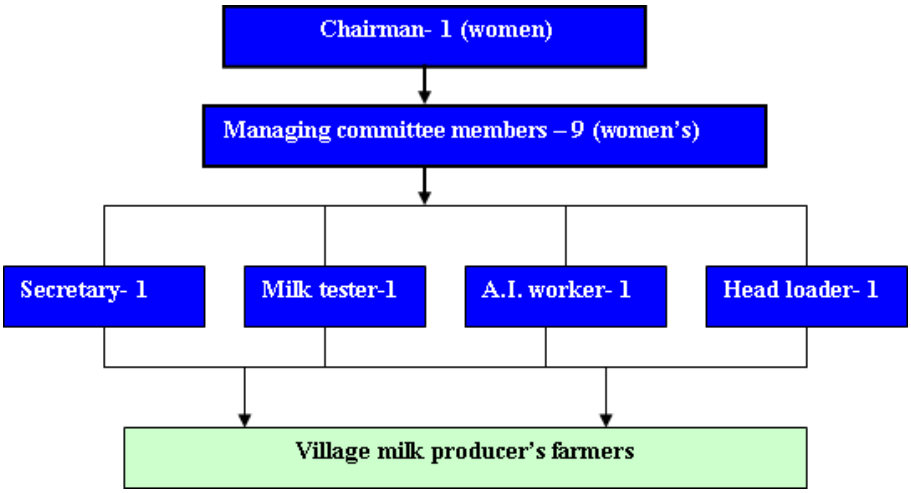
Source: Field survey (2020)

Table 1. Statistics of Kishan milk producers union:

Women in dairy farming and women's cooperative society:

Women are increasingly running India's dairy cooperative societies. India's dairy improvement initiative prioritized women's engagement and empowerment. Operation Flood began by training women in contemporary animal husbandry. All women's dairy cooperative groups received special incentives to support women's management. The 2001-02 national dairy development board annual report says 2.47 million women joined dairy cooperatives, up from 0.62 million in 1986–87. 2476 women's dairy

cooperatives operate in India (NDDB, 2005). It is significant that women run over 70% of milk cooperatives in India. (Sweta Patel, 2004) A milk union supervisor guides local women's dairy cooperative societies of primary milk producers. Women milk producers join by paying one rupee and buying 10 rupee shares. After meeting family demand, she must sell surplus milk to society every morning and evening. The minimum membership is 40 women farmers and one milking cow. Members elect a nine-member managing committee and a chairman from within.

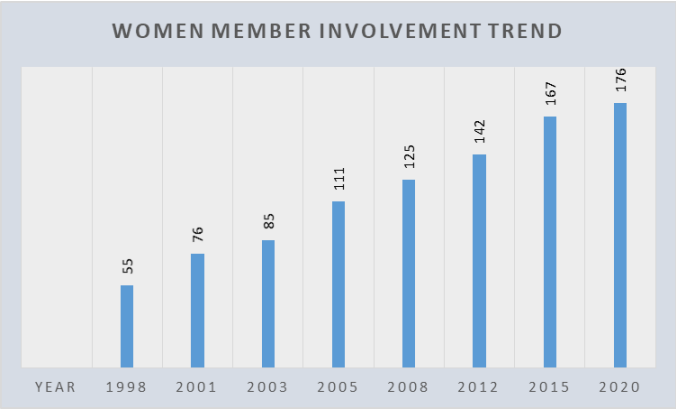


Source: Field survey (2020)

Figure 3. Organizational structure of women village dairy cooperative society

The chairman of the society is the head of the society. The society has a milk collection center. The farmers supply milk to the collection center. The secretary collected the milk and majored it. The chairperson takes care of the accounts and maintains the milk register twice a day. Society has a computer-based milk tester. The chairman is elected once every 3 years. The chairman calls monthly meetings or any special meeting, if necessary.

The society's chairman or committee members become the first members of the society. Milk producers bring milk to society every morning and evening. The quantity of milk is measured. A small sample of milk has been taken from the milk to test its quality. The payment for milk is made on the basis of its quality and quantity. The district milk unions carry milk from the society in their hired transport vehicles to their milk chilling centers and processing plants. The following figure shows the trends in female member involvement in Modumoti society.

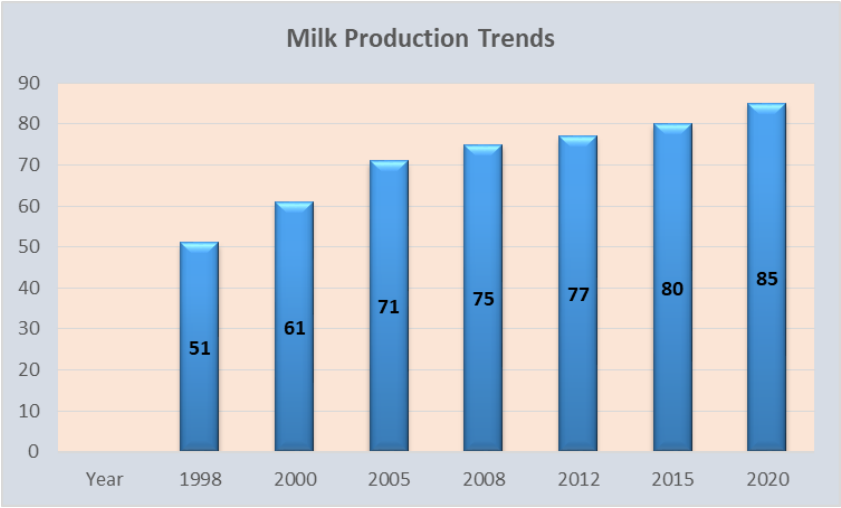


Source: Field survey (2020)

Figure 4. Shows that women involvement trend of Modumoti society.

The figure shows the establishment of Modumoti women society, the member participation increased gradually. Women's knowledge, abilities, and attitudes are developed through training, and as a result, they become more confident in the dairy farming industry.

Most of the cooperative's members were able to benefit from the chance to receive training. Women can take chances, question their established roles, and speak out when they are educated.



Source: Field survey (2020)

Figure 5. Shows milk collection trends of Modumoti society (000 liters)

The milk collection trend shows that their collection of milk in increasing. Because cooperative has varieties, training programmes for women members. Cooperative give them support and services for dairy farming.

Price system:

The price of milk depends on the CLR (corrected lactometer reading) and percentage of fat. For example, when the CLR is 30.0 and the fat percentage is 4.1, the price of milk per kg is 40.99 rupees in Indian currency. The following table shows the price of milk in village society. Moreover, the society has an electronic computer-based milk tester so that they can quickly measure the milk and farmers can get a real price according to the fat percentage.

CLR	Fat %	Coop rate (rupee)	Quantity(kg)	Price in Rupee
31.0	4.5	40.71	1	40.71
32.0	4.4	40.75	1	40.75
30.0	4.1	40.99	1	40.99
29.5	3.9	40.35	1	40.35

Source: field survey (2020)

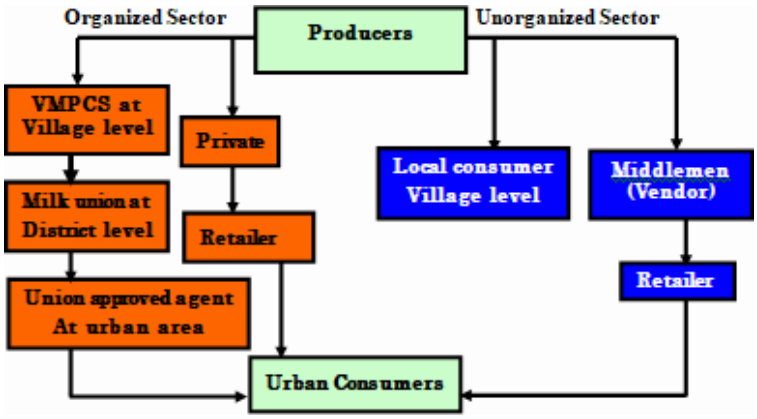
Table 2. Shows the milk price system per kg in India

Bonus system:

The community saves 0.25 Rupee per kg as a bonus. Farmers receive end-of-year bonuses for milk output. This encourages dairy farmers to produce more milk. New members must supply milk for three months. Chairman and managing committee decide if he or she joins.

Milk marketing channels in the study area:

Most farmers keep dairy animals for their own milk. Indian dairy producers, especially in West Bengal, rear their indigenous, cross-breed cows, which are small and produce little milk, in a traditional manner without feed, medication, or genetic enhancement. Rural Indians have not yet commercially farmed cows, despite a religious practice. Rural, small farms produce most milk. They want the best milk price. Consumers want the best milk for their money. Middlemen transport, sell, and connect dairy farmers and consumers. Marketing intermediaries seek maximum profit from their businesses (FAO, 2002).Most rural Indian homes drink their own milk. Different organizations process and commercialize urban surplus milk. The Indian milk marketing system contains two sectors: organized and unorganized. Figure 6. Shows research areas for milk marketing channel.



Source: Field survey (2020)

Figure 6. Milk marketing channels in the study area:

(VMPCS) Village Milk Producers Cooperative Society.

Over 75% of milk in India is sold via intermediaries, milk vendors, retailers, etc. 25% of organized milk is sold. (Sarker 2009) Even though Indian cooperatives pay producers well, the unorganized sector dominates milk sales for three reasons. The cooperatives buy milk based on fat content, while the commercial sector pays a set amount per liter. Second, milk dealers advance money to farmers and collect milk from producers' doors. Third, payment policy The commercial sector pays producers daily, while cooperatives pay weekly or twice a month. Consumers value the organized sector even when the payment policy doesn't suit producers. Organized milk and milk products are hygienic. After MMPO's 1992 registration, the organized sector maintained international milk and milk product standards.

Due to high milk prices, farmers sell to the unorganized sector. Unorganized sectors pay more than cooperatives. Cooperatives pay by percentage. Unorganized milk farmers obtain high prices, but consumers get unhygienic milk and milk products. The milk vendor/middleman sells water-mixed milk. Unorganized milk producers also don't maintain quality. The Kishan cooperative sells Ben's milk, Kalyani ghee, chocolate, paneer, yogurt, sweet yogurt, drinking water, honey, and more. Milk unions distribute this product to union-approved agents and consumers. The unorganized sector has middlemen (vendors) and retailers, and the organized sector has dairy cooperatives and private firms. I: Producer, Village Milk Producing Cooperative Society, Milk Union, Urban Consumers; II: Private Firm, Retailer, Urban Consumers In the unorganized sector, III: producers, local consumers, and IV: producers, middlemen (vendors), retailers, and urban consumers.

Socio-economic characteristics of the women members:

Most women farmers in Nadia districts, West Bengal, work in agriculture. Even with family labor, most

people cannot use it productively due to uneven land allocation. Rural land is therefore valuable. Land allocation among farmers shows that few own most of it. Most women farmers have less than one hectare. Most women must find other jobs in these conditions.

Land and dairy cows' holdings pattern of women members:

It is typical in Indian society for male members of the household to possess most of the land. Only a few women possess land. According to the women members, Table 8.1 shows the land holdings and dairy cow holdings per household farmer. The 48 women's farmers mentioned that they have less than one hectare of land and 61 dairy cows. The twenty-nine women's farmers said that they have 1-2 hectare of land and 53 dairy cows. The 17 women farmers said that they have 2-3 hectare of land and 35 dairy cows, and the 6 women farmers said that they have more than 3 hectare of land and 21 dairy cows.

Respondents	Landholdings	Dairy cows	Average cows
48	< 1 hectare	61	1.2
29	1-2 hectare	53	1.8
17	2-3 hectare	35	2.05
6	> 3 hectare	21	3.5
100		170	2.13

Table 8.1 Land and dairy cows' holdings pattern of women members

Source: Field survey (2020)

Level of education and age of the women members:

The table 8.2: below details the members' ages and education levels. The data suggest that 59% of female members are illiterate, while only 24% of female farmers have completed elementary school. Only about one in sixteen adults has completed high school. This data reveals that a sizable proportion of women in the Modumoti dairy cooperative are illiterate.

Distribution by Level of Education			Distribution by Age		
Education level	Respondents	Percent	Age group	Number of respondents	Percent
Illiterate	59	59.0	20-30	21	21.0
Primary	24	24.0	31-40	49	49.0
High school	16	16.0	41-50	23	23.0
S. S. C	1	1.0	51-60	6	6.0
H.S.C	0	0.0	61 +	1	1.0
Total	100		Total	100	100.0

Source: Field survey (2020)

NB: S.S.C = Secondary School Certificate. H.S.C= Higher Secondary School Certificate.

Table 8.2 Distribution of women members by age and their level of education

Age is considered an important factor in becoming involved in economic activities. Most of the respondents were under the economically active age group (between 20 and 50 years). The data shows that around 49 percent of women are 31 to 40 years old, and 23 percent are 41 to 50 years old. Data also shows 21 percent of women members are 20 to 30 years old. It means the majority of the women members are under 40 years old, and most are middle-aged. Thus, middle-aged women will continue to work in the dairy industry. The

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS |Volume VII Issue VIII August 2023

cooperative society's members were typically married. About 93% of them, it was discovered, were married; the remainder were widowed, divorced, or in other relationships

Type of training:

The women members have received different types of training from the district cooperative union. Training plays a key role in the development of women's knowledge, skills, and attitudes, which lead them to be more empowered. The majority of the cooperative women members were able to avail themselves of the opportunity to be trained. The subjects of the training were related to how to manage income-generating activities (training on awareness of animal husbandry, management of animals, milk preservation, etc.), consciousness raising (women's rights), leadership development, primary health care, nutrition, and health and family planning.

Levels (Length of membership)	**Subjects of Training**
Level – 1 (1 month – 12 months)	Basic training(management of household Dairy farming, awareness of animal husbandry, taking care of animals, and collection and milk preservation, milk nutrition, and primary health care).
Level -2 (13 months-24 months)	Basic course + artificial insemination and its benefits, merits, and risks of dairy farming
Level- 3 (24 – 48 months)	All of level 2 + leadership development, consciousness raising (women rights)
Level – 4 (48 months and above)	All of level 3 + consciousness of health and family planning

Source: Field survey (2020)

Table 8.3 Types of training according to length of membership

Length of membership:

The length of the membership of cooperative members was different in most of the cases. For example, some became members just a few months ago. On the other hand, there were some members who became members more than five, six, or ten years ago. In this research, the length of membership has been divided according to the classification of length of membership and training subjects of the cooperative society. The following table gives the details of the membership pattern of the cooperative members

Length of membership	**Number**	**Percent**
1month-12 months	19	19.0
13 month-24 months	26	26.0
25 months- 48 months	37	37.0
48 months and above	18	18.0
Total	100	100.0

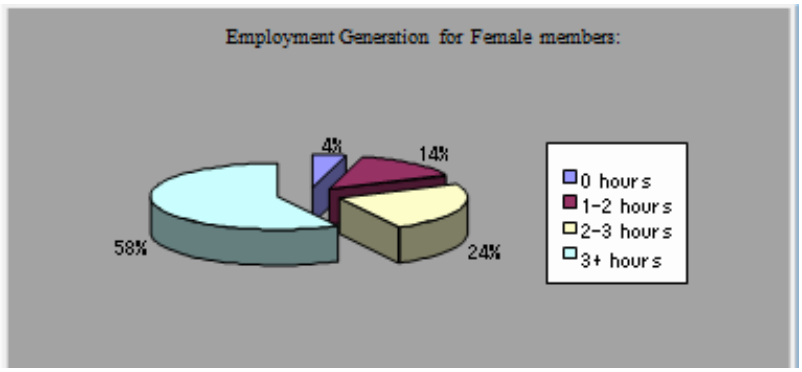
Source: Field survey (2020)

Table 8.4 Classification of the membership pattern of women members

The length of membership is one of the important factors in empowerment. Women's status in decision-making and mobility increases in tandem with their years of experience in cooperative societies. As women gain more experience in dairy farming activities and in managing small-scale enterprises, and as their grassroots organizations become institutionalized over time at village level, their position within the household becomes stronger. Immediately after marriage, Bengali women are generally under the control of their father-in-laws, mother in laws, and husbands, particularly in rural areas. Age of women has a beneficial and significant impact on dairy production in the studied locations.

Labor utilization for dairy farming of women members:

Dairy farming is also an important source of employment for rural women. Usually in Indian society, the women used to take care of their regular household chores as they did not have the opportunity to work outside. From figure 8.5, we can see that 96 percent of women work in dairy farming. It is also clear that of them, 58 percent are women who work more than 3 hours per day in dairy farming.



Source: Field survey (2020)

Figure 8.5 Labor utilization of women cooperatives membersHousehold income of women members:

The monthly household income of the cooperative members 2% of women farmers mentioned that their income was less than 2000 rupees, followed by 24% of members who mentioned that their monthly income was less than 3000 rupees, and 47% of members said that their household income was 4000 rupees. The data also shows that 1% of women members mention that their monthly household income is more than 5000 rupees.

Household Income	Respondents	Percent
Less than 2000	2	2.0
2000-3000	24	24.0
3000-4000	47	47.0
4000-5000	26	26.0
5000 and above	1	1.0
Total	100	100.0

Source: Field Survey (2020)

Note: Rs. = Rupee (Indian currency, one US dollar = about 45 Rupee)

Table 8.6. Monthly household income of the women members: (Rs)

Socio-economic empowerment by dairy farming on raising household income.

Typically, in South Asian countries, rural women are very poor and lack job opportunities. Most of the women members are illiterate and backward. Through cooperative help and support, rural women make a cooperative society. Data show that about 25 percent of women members reported that they were able to increase their family income per month from their income-generating activities, and 21 percent of women members mentioned that dairy income increased by 301 to 500 rupees due to the cooperatives provision of variety training and veterinary services.

Increased Income	Number	Percent
Less than 300	16	16.0
301-500	21	21.0
501-800	25	25.0
801-1100	15	15.0
1101-1400	14	14.0
1401 and above	9	9.0
	100	100.0

Source: Field Survey (2020)

Table 8.7 Economic empowerment of women cooperative member per month (Rs.)

CONCLUSIONS

With the help of data from field surveys conducted in the rural West Bengal province of India, A range of questioners are used to investigate the socioeconomic empowerment of dairy cooperatives' outcomes for women producers. The results demonstrated that women's participation in rural dairy farming through cooperative management aids in raising the income and social standing of its members. Women's social standing and economic empowerment both increase as a result of higher incomes. Women take a bigger part in household decision-making, have more access to financial and economic empowerment, have more freedom of movement, and have more bargaining power within the household when they are trained in dairy animal management activities and actively participate in various dairy farming management activities. Women's knowledge, abilities, and attitudes are developed through training, and as a result, they become more confident in the dairy farming industry. Most of the cooperative's members were able to benefit from the chance to receive training. Women can take chances, question their established roles, and speak out when they are educated. Women's education is taken into account in terms of years of schooling in order to determine their level of engagement. Women's level of education is significantly influenced by the number of years they spend in school. Women in rural communities typically have a lot of domestic work to undertake, and they rarely have the chance to learn about or experience the outside world. Producers, rural milk cooperative societies, milk unions, and urban consumers, respectively, fall under categories II and I of research on milk marketing channels in the organized sector. There are III producers, local consumers, and IV producers, middlemen (vendors), retailers, and urban consumers in the unorganized sectors. According to the study's findings, these women are more likely to join cooperative societies if they can work from home, have more flexibility with their schedules, earn more money for their families, have better social standing, provide their kids with better educations, have access to markets, and are financially independent. Women who are members of the women's dairy cooperative society feel powerful since they are allowed to vote in meetings conducted outside the home. The majority of household expenses may be handled by the women

independently of their husbands thanks to income from dairy cooperative groups. *The most important reason for joining cooperative society by these women as observed in the study are employment at own house , flexibility in timing, increase in family income, improvement in social status, better education for children and market access and economic independence.*

RECOMMENDATIONS

Based on the findings, it is advised that efforts be made to increase animal productivity. Better breeding facilities, health care, and scientific management of dairy animals can lower the cost of producing milk, and it will help to increase profit to increase animal productivity and reduce the cost of maintaining dairy cows. It is necessary to increase production efficiencies and animal management procedures to make cooperative dairy farming more lucrative. Dairy farming could benefit from contemporary infrastructure and technology upgrades. Farmers' enthusiasm in milk production will be rekindled by high milk purchase prices that are lucrative to them. Farmers are prepared to launch a new dairy enterprise, but funding is crucial. Therefore, the government should assist women by providing loans for launching a dairy business farming. In an integrated dairy development strategy, finance and insurance should be made accessible at the point where communities and members meet. Small and marginal farmers must receive a subsidy in order to buy high-quality animal feed, fodder, breeding, veterinary services, medications, immunizations, credit, and insurance.

REFERENCES

1. Banu, L. F. (1987) "The Role of Bangladeshi Women in Livestock Rearing", in A. M. Shing & A. K. Viitanen, eds. *Invisible hands*, p. 93-108. Stage Publications, New Delhi, India.
2. Hashemi, S., Schuler, S., and Riley, A. P. (1996) 'Rural Credit Programs and Women's Empowerment in Bangladesh', World Development, Vol. 24, No. 4.
3. Jejeebhoy, Shireen J. and Zeba A. Sathar (2001) "Women's Autonomy in India and Pakistan: The Influence of Religion and Region", *Population and Development Review* 27 (4): 687-712.
4. Malhotra, A., S. R. Schuler, and C. Boender (2002) "Measuring Women's Empowerment as variable in International Development", JSI Research and Training Center.
5. Manob Kanti Bandyopadhay (1996) "Dairy Cooperative and Rural Development (With Special Reference to Comparative Study Between the Kairia District Coopertive Milk Producers' Union Limited and Himalyan Cooperative Milk Producers' Union Limitied)", *Finance India*, Vol. 10, No. 2, p. 406-411. India.
6. Mayoux, L. (1998a) "Participatory Learning for Women's Empowerment in Micro-finance Programs: Negotiating Complexity, Conflict and Changes", *IDS Bulletin* Vol. 29, No. 4, IDS.
7. Saker,M(2009) Manish Sarkar's PhD Theses 2009-Dairy Farming and Cooperatives in south Asia countries: Studies from Bangladesh and India.
8. Pitt, M. M., and Khandaker, S. R. (1996) 'Impact of Credit Programs for the Poor on Household Behavior in Bangladesh', Published in *Credit Programs for the Poor on Household and Intra-household Impact and Program Sustainability*, BIDS, Dhaka.
9. Pitt, M. M., and Khandaker, S. R., and Jennifer, C. (2003) "Does Micro-Credit Empower Women? Evidence from Bangladesh", World Bank Policy Research working Paper 2998.
10. Satbir Shing, Euan Fleming and Tim Coeli (2000) "Efficiency and Productivity Analysis.
11. Shing, A. M. & Vittanen, A. K., 1987 "Introduction" *Invisible Hands*: Women in home-based Production, p. 13-26. Stage Publication, New Delhi, India

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS |Volume VII Issue VIII August 2023

APPENDIX- 1: QUESTIONNAIRE

1. Personal Details.

Name:

House no:

Address:

Name of the cooperative member:

Education:

2. What is your position of this cooperative?
3. When did you join in this cooperative?
4. What is objective to join this cooperative?
5. What kind of facilities do you receive through coop?

No	Objective	Yes	No	Comment
1	Milk collection			
2	AI service			
3	Animal health care			
4	Loan facilities			
5	calf			
6	training			
7	others			

6. Did you get any loan? Yes/no
7. Have you been enjoying the flowing merit from the coop? Please give your suggestions?

Advantages	Merit/ Demerit	Suggestions
1.Coop gives regular payment of milk		
2.Payment made basis of quality of milk		
3.coop gives early bonus out of profit		
4.coop provides varieties type of services		
5. Farmers can be educated in the knowledge through coop		
6. others		

8. How has your dairy farming changed after becoming coopmember?

Changing	Increase	Decrease	No change	Comment
Number of dairy cattle				
Milk collection				
Quality of milk				
Labor use for dairy farming				
Dairy farming management				
Technology				
Others				

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS |Volume VII Issue VIII August 2023

9. Farmers opinion about dairy cooperative:
10. What do you think about cooperative?
11. Do you have any benefit through cooperative for dairy farming?
12. Labors are involved in dairy framings.

Working type	Hours/day	Labor (person)			
		Family		Hired	
		Male	Female	Male	Female
Cleaning animal house					
Cleaning cattle					
Milking					
Feeding					
Delivering milk					
watering					
Grazing					
Cutting fodder					
Others					