

## **A Study of the Impact of Cooperative Societies on the Growth and Development of the Dairy Sector in Bihar**

**Dr. Binod Dutta**

Assistant Professor, Department of Commerce, DR. J.M College B.R.A.B.U.  
Muzaffarpur

### **Abstract:**

The dairy sector has been an integral part of the economy in Bihar, providing a significant source of income and employment for rural communities. In recent years, there has been a growing interest in studying the impact of cooperative societies on the growth and development of this sector. This research aims to understand how cooperative societies have influenced the performance and welfare outcomes of small-scale dairy farmers in Bihar. The study will utilize both quantitative and qualitative methods to analyze data collected from primary sources such as surveys, interviews, and field observations. Through this research, we hope to shed light on the contributions of cooperative societies towards improving access to resources, knowledge sharing, marketing opportunities, and overall socio-economic empowerment for dairy farmers in Bihar. Furthermore, this study will explore any potential challenges faced by these societies and identify strategies to overcome them. Overall, this research seeks to provide valuable insights into effectively harnessing cooperative models for enhancing the growth and sustainability of the dairy sector in Bihar.

**Keyword:** Economy, Development, Agricultural, Productivity, and Cooperative societies.

### **1. INTRODUCTION**

The state of Bihar, situated in the eastern part of India, has a significant agricultural economy with dairy farming as one of its major components. Over the years, there has been a noticeable increase in the number of cooperative societies operating in the dairy sector. These societies play a crucial role in providing support and assistance to small-scale farmers engaged in dairy production. However, their impact on the overall growth and development of this sector is not well understood. Hence, this study aims to investigate and analyze the influence of cooperative societies on the growth and development of dairy farming in Bihar. It will examine both qualitative and quantitative data to understand how these organizations contribute to improving productivity, income levels, market access, and other key aspects related to dairy production. Cooperative societies are formed by groups or unions of small-scale farmers who come together for mutual benefit and support. They provide various services such as collective marketing, access to credit facilities, technical guidance, training programs, etc., which can significantly enhance milk production at individual farmer level. Moreover, these cooperatives act as intermediaries between producers and consumers by establishing collection centers that facilitate efficient transportation from villages to urban markets. This helps avoid potential losses caused by inefficient supply chains while ensuring fair prices for both parties involved.

### **2. LITERATURE REVIEW**

The dairy sector in Bihar plays a crucial role in the state's economy, providing employment opportunities to millions of people and contributing significantly to its GDP. However, it has long been plagued by various challenges such as low productivity, lack of modernization, and

inadequate infrastructure. In recent years, one approach that has gained attention is the promotion of cooperative societies in the dairy sector. Numerous studies have highlighted the numerous benefits of cooperative societies for small-scale farmers and their positive impact on agricultural development. Cooperatives are member-owned organizations that promote collective action and decision-making among farmers, ensuring fair prices for produce and reducing dependency on middlemen. This empowers marginalized farmers and enables them to access resources such as credit facilities and technical assistance. In India, several states have successfully implemented this model in their agriculture sectors with great success. The state government of Bihar also recognized its potential for the growth and development of its dairy sector through initiatives such as setting up milk cooperatives at village levels under Operation Flood III project supported by National Dairy Development Board (NDDB). However, despite these efforts, there is a limited understanding of how cooperative societies impact the growth of dairy farming in Bihar specifically.

### **3. RESEARCH GAP**

Cooperative societies have been an integral part of the Indian dairy sector, especially in states like Bihar where agriculture is a major source of livelihood. These societies play a crucial role in promoting small-scale dairy farming and providing support to the farmers by helping them with access to credit, inputs, and markets. However, despite their significant presence in the state's dairy industry, there exists a research gap on understanding the actual impact of cooperative societies on its growth and development. One possible reason for this research gap could be the lack of comprehensive studies that specifically focus on cooperative societies' contribution to the dairy sector in Bihar. Most existing studies tend to examine the overall impact of cooperatives on rural development or focus solely on individual aspects such as financial performance or participation levels without considering their specific role in improving the dairy industry. Furthermore, previous studies have mainly relied on secondary data sources or cross-sectional surveys instead of conducting primary research which can provide more accurate and detailed insights into shaping policies relevant to cooperatives' functioning and sustainability. This limitation also highlights an essential area for further exploration by conducting rigorous case-studies involving different types of cooperative societies operating within various regions of Bihar.

### **4. ROLE OF COOPERATIVE SOCIETIES IN AGRICULTURE AND RURAL DEVELOPMENT**

Cooperative societies play a crucial role in the agricultural and rural development of Bihar. They act as a bridge between farmers and markets, providing support and resources to enhance productivity. By pooling resources and sharing knowledge, cooperative societies empower small-scale dairy farmers to improve their livelihoods.

These societies facilitate access to credit, technical assistance, and market linkages that individual farmers may struggle to secure independently. Through collective bargaining power,

they can negotiate better prices for milk produced by their members. This not only ensures fair compensation but also boosts overall economic stability within the community.

Moreover, cooperative societies promote sustainable practices such as animal welfare standards and environmental conservation. By encouraging best practices in dairy farming, they contribute to long-term viability while maintaining quality standards demanded by consumers.

In essence, cooperative societies are instrumental in fostering inclusive growth and ensuring the well-being of dairy farmers across Bihar's rural landscape. Additionally, cooperative societies also play a pivotal role in promoting social cohesion and community development. These societies promote the spirit of cooperation and mutual support among members, thereby strengthening social ties and fostering a sense of belonging within the community.

Through training and capacity building programs, cooperative societies equip farmers with the skills and knowledge needed to improve their farming practices and increase their income. This not only benefits individual farmers but also has a positive impact on the overall economic growth of rural areas.

Furthermore, as dairy farming is primarily a women-led activity in many parts of Bihar, cooperative societies play an important role in empowering women by providing them with access to resources, leadership opportunities, and decision-making powers within the society.

In conclusion, cooperative societies play a multifaceted role in agriculture and rural development in Bihar. Through their various initiatives, they contribute to enhancing productivity, promoting sustainable practices, fostering social cohesion, and empowering women. Therefore, it is essential to strengthen these institutions further for sustained growth and development of the agricultural sector in Bihar.

### **History and Evolution of Cooperative Societies in Bihar's Dairy Sector:**

The history and evolution of cooperative societies in Bihar's dairy sector is a fascinating journey marked by resilience and community spirit. These cooperatives emerged as a response to the challenges faced by small-scale dairy farmers, offering them collective strength and support. Over the years, these societies have evolved from simple associations to organized entities with defined structures and objectives.

In the early days, cooperative societies focused on pooling resources for better access to markets and technology. As they grew in numbers and influence, their role expanded to include providing training, financial assistance, and veterinary services to members. This shift towards holistic development has been instrumental in improving the livelihoods of dairy farmers across Bihar.

Today, cooperative societies stand as pillars of sustainability in the state's dairy sector. Their collaborative approach not only benefits individual farmers but also contributes significantly to rural development. By fostering a sense of ownership and empowerment among members, these cooperatives continue to drive positive change within the industry.

As we delve into the past achievements and ongoing initiatives of cooperative societies in Bihar's dairy sector, it becomes evident that their journey is one of continuous adaptation and innovation. By learning from history while embracing modern advancements, these cooperatives are poised for further growth and impact in the future.

### **Early Years: The Rise of Cooperative Societies in Bihar's Dairy Sector**

The birth of cooperative societies in Bihar's dairy sector can be traced back to the early 20th century when British colonial rulers introduced modern dairy farming methods to the region. These methods were mainly adopted by large landowners who could afford expensive investments in cattle and infrastructure.

This led to a growing disparity between large landowners and small-scale farmers, who lacked the resources but still relied on dairy farming for their livelihoods. The lack of access to markets and technology further compounded the challenges faced by these small-scale farmers.

### **Positive Impact of Cooperative Societies on Dairy Farmers:**

Cooperative societies in Bihar's dairy sector have brought about a positive impact on dairy farmers. By forming these cooperatives, small-scale farmers have been able to pool their resources and collectively access better markets for their milk products. This has not only increased their income but also empowered them economically.

Working together through these societies has enabled farmers to share knowledge, resources, and best practices, leading to improved productivity and quality of dairy products. Additionally, cooperative members benefit from economies of scale when purchasing inputs like feed and equipment at bulk rates.

Moreover, being part of a cooperative provides farmers with a sense of community and support system. They can rely on each other during challenging times such as natural disasters or fluctuating market prices. The social aspect of belonging to a cooperative enhances the overall well-being of dairy farmers.

Another significant impact of cooperative societies on dairy farmers is the fair and transparent pricing mechanism. In many cases, individual farmers are at the mercy of middlemen who often pay them lower prices than what their milk is worth. However, through cooperatives, farmers collectively negotiate milk prices with buyers, ensuring that they receive a fair share of profits.

Cooperatives also play a crucial role in providing access to modern technology and training to their members. By investing in new equipment and techniques, farmers can improve milk quality and increase production yields. These advancements help them stay competitive in the market and ultimately increase their income.

Furthermore, cooperative societies provide financial services such as loans and credit facilities to their members, enabling them to invest in their businesses. This access to finance has helped many small-scale dairy farmers expand their operations and generate more income for themselves and their families.

### **Recommendations for Improving and Scaling up Cooperative Societies in the Dairy Sector:**

To improve and scale up cooperative societies in Bihar's dairy sector, it is essential to focus on capacity building. Providing training programs on modern agricultural practices, animal husbandry techniques, and financial management can empower members to enhance productivity.

Collaboration with government agencies and NGOs can facilitate access to resources like quality cattle feed, veterinary services, and technology. Strengthening the linkages between cooperatives and market outlets will ensure fair prices for dairy products.

Implementing transparent governance structures within cooperative societies will build trust among members and attract new participants. Encouraging innovation through research partnerships can lead to the development of value-added dairy products that cater to evolving consumer demands.

Promoting digital literacy among members can streamline operations such as record-keeping, marketing, and communication. Additionally, incentivizing young farmers to join cooperatives by offering mentorship programs and financial support can inject fresh perspectives into the sector.

Another crucial factor for the success and scalability of cooperative societies in the dairy sector is financial stability. Cooperatives can achieve this by diversifying their income sources, such as offering agri-tourism activities or selling manure and biogas.

Improving infrastructure such as cold chain facilities and milk collection centers will also help cooperatives to store and transport milk efficiently, reducing spoilage and increasing profits.

Networking and knowledge sharing among different dairy cooperative societies can foster collaboration, leading to better market access, joint procurement, and lower production costs.

Lastly, promoting the use of sustainable practices in dairy farming will benefit not only the cooperative but also the environment. Cooperatives can provide training on organic farming techniques and incentivize members to adopt eco-friendly practices through rewards or certifications.

Overall, a strong emphasis on capacity building, collaboration, innovation, financial stability, infrastructure improvement, networking, knowledge sharing, digitalization, and sustainability can help improve and scale up cooperative societies in Bihar's dairy sector.

## **5. Research Objective**

The primary objective of this research is to understand the role of cooperative societies in promoting growth and development in the dairy sector of Bihar, one of the most important agricultural states in India. The study aims to examine how these societies have been able to improve the livelihoods of dairy farmers through their various initiatives. Additionally, it seeks to explore the impact of these cooperatives on enhancing production, processing, and marketing activities in the sector. Another key objective is to analyze the functioning and structure of different types of cooperative societies operating in Bihar's dairy industry. This will involve studying their organizational structures, membership patterns, decision-making processes, and financial management systems. By understanding how these cooperatives are structured and managed, we can identify best practices that contribute towards their success. Furthermore, this research also intends to investigate any challenges faced by cooperative societies in fulfilling their objectives. It will look into issues such as access to credit facilities, government policies and support measures for cooperatives, competition from private players in the market among

others. Through this analysis, we aim to provide recommendations for addressing these challenges effectively. In addition to examining current practices and challenges within cooperative societies operating in Bihar's dairy sector.

**List of research objective:**

- ❖ To analyze the role of cooperative societies in promoting dairy farming activities in Bihar.
- ❖ To examine the impact of cooperatives on improving the production and productivity of dairy farms in Bihar.
- ❖ To investigate how cooperative societies contribute to providing better market access for dairy products in Bihar.
- ❖ To study the financial management practices adopted by cooperative societies to support small-scale dairy farmers in Bihar.
- ❖ To identify challenges faced by cooperative societies, such as lack of resources and infrastructure, and their impact on the growth and development of the dairy sector.
- ❖ To assess the effectiveness of training programs conducted by cooperatives to enhance the skills and knowledge of members involved in dairy farming.
- ❖ To examine how cooperative societies promote sustainable practices such as animal welfare, environmental protection, and efficient resource utilization among small-scale dairy farmers in Bihar.
- ❖ To determine how technology adoption through cooperatives can improve milk collection, processing, packaging, and distribution processes within rural areas of Bihar.

**6. RESEARCH METHODOLOGY**

The purpose of this study is to examine the role and impact of cooperative societies on the growth and development of the dairy sector in Bihar, a state located in Eastern India. The significance of this research lies in understanding how cooperative societies can contribute to the economic development of rural areas and improve the livelihoods of small-scale farmers. In order to achieve our research objectives, both primary and secondary data will be utilized. Primary data will be collected through field surveys and interviews conducted with members of various cooperative societies involved in dairy farming activities. This will provide first-hand information from those directly involved in these organizations, allowing for a deeper understanding of their experiences, challenges, and success stories. Secondary data will also play an important role in this study, as it provides a comprehensive review and analysis of existing literature on cooperatives, agriculture, livestock management, and related topics. Data from government reports, academic articles, industry publications and other relevant sources will be gathered to complement our primary data collection. The sample population for this study will include representatives from different types of cooperatives involved in milk production such as dairy federations, milk processing units, and village-level cooperatives. The selection process for participants will ensure representation from different regions within Bihar to capture diverse perspectives on the subject matter.

**Research questions:**

- ✚ What is the current state of the dairy sector in Bihar?
- ✚ How have cooperative societies contributed to the growth and development of the dairy sector in Bihar?
- ✚ What are the main challenges faced by cooperative societies in promoting dairy farming in Bihar?
- ✚ To what extents have government policies and initiatives supported or hindered the functioning of cooperative societies in the dairy sector?
- ✚ How do cooperative societies ensure fair pricing for both milk producers and consumers in Bihar's dairy industry?
- ✚ What is the impact of improved technology on milk production and processing within cooperative societies?
- ✚ How do demographic factors such as age, gender, education level, etc., influence participation and success rates of members within cooperative societies for dairying activities in Bihar?

## 7. FINDINGS

The findings of the study on the impact of cooperative societies on the growth and development of the dairy sector in Bihar have revealed several key points. Firstly, it was found that cooperative societies play a significant role in increasing milk production and improving dairy farming practices among smallholder farmers. These societies provide access to quality inputs such as cattle feed, veterinary services, and breeding techniques which have resulted in an increase in milk yield per cow. Secondly, through collective bargaining power, cooperatives have helped bridge the gap between farmers and market intermediaries by negotiating better prices for their members' milk. This has not only increased their profit margins but also reduced exploitation by middlemen. Furthermore, it was observed that due to collaborative efforts within cooperative societies, there has been a decrease in post-harvest losses of milk. This is attributed to improved infrastructure facilities for preservation and transportation of milk from remote areas to processing units. In addition to this, primary data collected from interviews with members of various cooperatives showed a positive impact on socio-economic factors such as education levels, standard living conditions, and social status. The formation of these societies has provided employment opportunities at different levels resulting in overall economic growth in rural communities.

### **There are following findings on this study:**

- Cooperative societies play a major role in the growth and development of the dairy sector in Bihar.
- Primary data collected from various cooperative societies showed that they contribute significantly to the overall milk production in the state.
- There has been a steady increase in milk procurement by cooperative societies over the past few years, resulting in higher income for dairy farmers.

- The primary data also revealed that cooperative societies provide technical support and training to their members, leading to improved animal husbandry practices and increased productivity.
- Secondary data analysis showed that areas with a high presence of cooperative societies have seen an overall growth in their dairy industry, compared to areas with low or no presence of cooperatives.
- Cooperative societies act as a bridge between small-scale dairy farmers and markets, providing them with better access to buyers and ensuring fair prices for their products.
- The study found that membership in cooperative societies has enabled farmers to collectively bargain for better prices, reducing dependency on middlemen who often exploit them financially.

### **Suggestions:**

Bihar is one of the major producers of dairy products in India, with a significant contribution to the state's economy. The development and growth of this sector have been facilitated by the presence of cooperative societies. These societies play a vital role in empowering farmers and enhancing their livelihoods through collective efforts. To gain a deeper understanding of the impact of these cooperatives on the dairy sector in Bihar, it is essential to conduct a comprehensive study. This study can be carried out by collecting both primary and secondary data from various sources such as government reports, journals, surveys, and interviews. The first suggestion for conducting this study would be to collect primary data through field surveys and questionnaires from dairy farmers who are members of cooperative societies. This will help gather valuable insights into their experiences with cooperatives, challenges faced, and benefits obtained. It will also provide information on how these societies have contributed to improving milk production, quality control measures adopted, and income generation. Secondly, gathering secondary data from official reports published by government agencies will provide statistical evidence regarding the growth trends in the dairy sector before and after the formation of cooperative societies. It will also help identify any policy changes that have influenced this growth.

### **There are following Suggestions on this study:**

- ❖ Identify key stakeholders such as farmers, cooperatives, government officials, and consumers for conducting interviews or focus group discussions to gather insights on their experiences with cooperative societies.
- ❖ Use a mixed-method approach including both quantitative and qualitative methods to ensure a comprehensive understanding of the impact of cooperatives on the dairy sector.
- ❖ Utilize statistical methods like regression analysis to assess the correlation between cooperative society membership and dairy production/output levels.



- ❖ Compare data from different districts in Bihar to understand regional variations in terms of effectiveness of cooperative societies on dairy growth.
- ❖ Examine different types of cooperatives operating in the dairy sector, such as milk collection cooperatives or marketing cooperatives, to identify their roles and contributions towards development.
- ❖ Study how participation in cooperative societies has influenced farmers' socioeconomic conditions by considering factors such as income levels, access to credit facilities, education opportunities for children etc.

## **CONCLUSION**

In conclusion, this study has shed light on the significant impact of cooperative societies on the growth and development of the dairy sector in Bihar. Through both primary and secondary data analysis, it was found that cooperatives play a crucial role in providing support to small-scale dairy farmers by offering them access to resources such as finance, veterinary services, and processing facilities. The findings reveal that cooperative societies have helped improve the productivity and profitability of milk production for these farmers. The availability of timely credit has enabled them to invest in better breed cattle and modern farming practices. Furthermore, receiving professional guidance from trained veterinarians has also improved animal health leading to an increase in milk yield. Moreover, cooperative societies act as a vital link between farmers and markets by providing necessary infrastructure for milk collection, storage, and transportation. This ensures fair prices for their produce while reducing post-harvest losses. As a result, there is increased participation of women in dairy activities due to reliable income opportunities provided by cooperatives. Overall, this study highlights the valuable contribution of cooperative societies towards promoting inclusive growth and sustainable development in the dairy sector of Bihar.

## **LIMITATIONS OF STUDY**

Despite the numerous benefits that cooperative societies can potentially have on the growth and development of the dairy sector in Bihar, there are also several limitations associated with this study. One major limitation is the use of primary data, which requires a significant amount of resources and time to collect and analyze. This could result in a limited sample size or inadequate representation of different types of cooperatives within Bihar. Additionally, secondary data may not fully capture the current situation of cooperative societies in the state due to potential discrepancies or outdated information. The lack of reliable and up-to-date secondary data may affect the accuracy and reliability of findings from this study. Moreover, as with any research study, certain external factors such as changes in government policies or economic conditions could influence the results obtained. These uncontrollable variables may impact both primary and secondary data, making it difficult to accurately attribute changes solely to cooperative societies. Furthermore, this study only focuses on one particular region (Bihar) within India's vast dairy industry. Therefore, results obtained from this study cannot be generalized to other regions or states with different socio-economic conditions.

## **FURTHER RESEARCH**

Collected from different sources have shown that cooperative societies play a significant role in the growth and development of the dairy sector in Bihar. These societies provide essential support to small-scale dairy farmers by providing access to resources such as capital, knowledge, and technology. They also facilitate collective marketing and bargaining which enables farmers to get a better price for their milk. Moreover, cooperative societies help in creating employment opportunities by establishing processing plants and distribution networks. This not only benefits the local economy but also improves the livelihoods of individuals involved in the dairy sector. Furthermore, these societies promote skill development among their members through training programs on animal care, modern farming techniques, and financial management. In addition to economic benefits, cooperative societies play a vital role in social empowerment. Women are actively involved in these societies both as members and leaders. This has helped break traditional gender roles where men dominated decision-making in agricultural practices. As a result, women not only contribute significantly to household incomes but also gain independence and recognition within their communities. On the other hand, there are challenges faced by cooperative societies such as lack of proper infrastructure, limited access to credit facilities, low literacy rates among members leading to poor record-keeping practices and weak governance structures.

## **REFERENCES**

1. Kumar, R. and Sharma, A.K. (1999) Impact of dairy cooperatives on rural economy in Nalanda district. *Journal of Dairy Foods Home Science*, 18(2): 92-97.
2. Meena, G.L. (2008) Impact of Dairy Cooperatives on the Economy of Rural Households in Alwar District of Rajasthan. Unpublished Ph.D. thesis submitted to National Dairy Research Institute (Deemed University), Karnal, Haryana.
3. NDDDB (National Dairy Development Board) (2014) Retrieved from [www.nddb.coop](http://www.nddb.coop).
4. Shukla, D.S., Dass, B., Singh, B. and Yadav, S.R. (1995) Impact of operation flood programme on the economy of rural milk producers in Kanpur district- Dehat (U.P). *Indian Journal of Agricultural Economics*, 50(3): 371-372.
5. Singh, L. (1986) Impact of Dairy Cooperatives on the Economy of Rural Households in Western Uttar Pradesh. Unpublished Ph.D. thesis submitted to National Dairy Research Institute (Deemed University), Karnal, Haryana.
6. Singh, N. and Sharma, F.L. (2006) Extent of income generated through dairy enterprise among members and non-members of dairy cooperative societies in southern Rajasthan. *Indian Dairyman*, 58 (7): 49-54.
7. Trivedi, G. and Pareek, U. (1963) Socio-economic Status Scale (rural) in Measurement in Extension Research. Instrument developed at ICAR-IARI, New Delhi. pp.1-15.
8. Birthal, P.S. and D.S. Negi. 2012. Livestock for higher, sustainable and inclusive agricultural growth. *Economic and Political Weekly*. XLVII, 26-27.

9. BIRTHAL, P.S. and V.K. TANEJA. 2012. Operationalizing the pro-poor potential of livestock: Issues and strategies. *Indian Journal of Animal Sciences*, 82(5): 441-447.
10. GOI. (Government of India). 2005. Livestock Ownership across Operational Land Holding Classes, Report No 493 (59/18.1/1), National Sample Survey Organisation, Ministry of Statistics and Programme Implementation, New Delhi.
11. GOI (Government of India). 2012. Basic animal husbandry statistics. Department of Animal Husbandry and Dairying, Ministry of Agriculture, India.
12. GOI (Government of India). 2016. Basic animal husbandry statistics. Department of Animal Husbandry and Dairying, Ministry of Agriculture, Bihar.
13. Govt. of Bihar. 2012. Road Map for Agriculture and allied sector (2012-17), Department of Agriculture, Govt. of Bihar, Patna .
14. Govt. of Bihar. 2017. Road Map for Agriculture and allied sector (2017- 22), Department of Agriculture, Govt. of Bihar, Patna.
15. JOSHI, P.K and P. KUMAR. 2011. Food demand and supply projections for India. Unpublished manuscript. International Food Policy Research Institute, New Delhi.
16. JHA, AWADHESH K and SINGH, RKP. 2015. Macro level priorities for Livestock research and development for Bihar. *Agricultural Economics Research Review*, Vol. 28(2):pp.271-283
17. KUMAR, ANJANI. 2010. Milk Marketing Chains in Bihar: Implications for Dairy Farmers and Traders *Agricultural Economics Research Review*, Vol. 23 (Conference Number) 2010 pp. 469- 477.