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Achieving sustainable development goals as well as women empowerment through dairy sector

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Abstract

The dairy sector is predominantly supported by women, yet their contributions often remain inadequately acknowledged, particularly in developing countries such as India, where livestock plays a crucial role in rural livelihoods and the national economy (Basic Animal Husbandry Statistics, 2022; Jabir Ali, 2007). India, the world's largest milk producer depends significantly on dairying, with women forming nearly 70% of the workforce engaged in livestock-related activities (20th Livestock Census; IDF, 2023). Women are actively involved in feeding, breeding, animal healthcare, milk processing, marketing and cooperative management, highlighting their central role in dairy production systems (Kulvir Kaur, 2015). Their participation contributes substantially to improving household income, strengthening food and nutritional security and enhancing decision-making power and social status within families and communities (Raut, 2023). Additionally, the dairy sector serves as an important pathway for achieving several Sustainable Development Goals, including poverty reduction, zero hunger, good health and well-being, gender equality, decent work and inclusive economic growth (Sachs, 2020; FAO, 2011). Institutional support through government initiatives, Self-Help Groups and organizations such as the National Bank for Agriculture and Rural Development further promotes women's entrepreneurship and financial inclusion (Parida & Yadav, 2020). Despite these contributions, women continue to face constraints related to ownership rights, access to resources and leadership opportunities (UN Women, 2019). Promoting scientific dairy practices, encouraging value addition and improving market access can further accelerate women's empowerment and sustainable agricultural transformation (Segerkvist *et al.*, 2020). Thus, the dairy sector emerges as a significant driver of rural development, gender equity and inclusive economic growth (Kates *et al.*, 2005).

Keywords: Women empowerment, dairy sector, rural livelihood, Sustainable Development Goals (SDGs), smallholder dairy farming

1. Introduction

Empowerment refers to the process of giving power strength and confidence to individuals so that they become capable of making decisions and improving their own lives. As Jawaharlal Nehru rightly observed the condition of a nation can be judged by the status of its women. Globally women represent nearly half of the population and play a crucial role in socio-economic development. In 2022 the world population reached approximately 7.95 billion out of which about 3.95 billion (49.7%) were women. The global adult female literacy rate is around 83%. Agriculture continues to be a major livelihood source employing nearly 1.1 billion people worldwide. Women constitute nearly 43% of the global agricultural workforce but they still encounter several challenges such as limited ownership of land and livestock wage disparities restricted access to credit and low participation in decision-making institutions.

In India women also represent a significant proportion of the population and contribute substantially to economic activities. According to the 2011 Census the total population of India was 121.1 crore with women accounting for 48.5%. The overall female literacy rate was 70.3% with rural female literacy at 65.0% and urban female literacy at 82.2%. The decade between 2001 and 2011 witnessed notable improvement in literacy particularly among rural

women. Kerala recorded the highest female literacy rate (92.1%) whereas Bihar reported the lowest (51.5%). During this period rural female literacy increased from 46.13% in 2001 to 58.75% in 2011 reflecting a growth of 12.62%. The sex ratio stood at 940 females per 1000 males.

Women's participation in the workforce although improving remains lower than that of men. As per Census 2011 the female workforce participation rate was 25.51% compared to 53.26% for males. A significant proportion of working women are engaged in agriculture and allied sectors accounting for about 54.6% of female workers. In India's dairy sector women contribute substantially forming nearly 70% of the workforce with 41.8% participation from rural women and 35.31% from urban women. Despite their large contribution female labour participation often remains undervalued because much of their work is unpaid. Agriculture continues to be the primary employment source in rural areas where about three-fourths of female workers and nearly half of male workers are involved.

The introduction of dairy development programmes has further strengthened women's economic role. Prior to these initiatives women spent nearly 30% of their time on agricultural labour however after implementation they devoted around 50% of their time to dairy activities which resulted in higher income generation. Women's participation in dairy cooperatives has also increased significantly. More than 0.32 million women are actively involved in village-level dairy cooperative societies and management committees and over 354 women serve on the boards of milk unions highlighting their growing leadership role in the dairy sector.

Different activities perform by women in dairy sector

The following discussion focuses on women's participation in various dairy-related activities. Dairy farming is one of the important enterprises which dominate the economic activities of the woman in the rural areas of India. Increasing demand for milk and milk products in recent years intensifies dairy farming as profitable enterprise for rural woman.

1. Feeding and watering
2. Health care
3. Breeding
4. Process and marketing
5. Management
6. Miscellaneous

1. Feeding and Watering: Women play a dominant role in feeding and watering of dairy animals and most of these responsibilities are handled primarily by them. Their tasks include taking animals for grazing fodder collection chopping and storage of feed feeding animals mixing green fodder with roughage and providing water. These activities are largely performed by women across rural households. Elderly women are often more engaged in grazing activities as these tasks require comparatively less physical effort while middle-aged women are mainly involved in cutting and storing feed and fodder which demands moderate labour and experience.

2. Health Care: Middle-aged women actively participate in animal health care mainly due to their practical knowledge gained through experience and observation. They take care of sick animals assist during pregnancy and follow traditional health practices. Various studies have reported that the care of sick animals is predominantly performed by farm women. Women were involved in care of newborn calves (65.3%) deworming (55.3%) taking animals for treatment (52.0%) and

vaccination (30.6%) whereas only 16.6% women maintained health records. Similar observations were also reported by Kulvir Kaur (2015) ^[4].

Breeding: Participation of rural women in breeding activities is relatively low compared to other dairy operations mainly due to social customs and traditional norms. However, women actively take animals for pregnancy diagnosis. Studies indicate that about 78.33% of farm women took animals for artificial insemination while 69.16% arranged natural service. It was also reported that 73.33% respondents called veterinarians during dystocia and 67.5% arranged bedding materials during parturition. Comparable findings were documented by Singh (2003).

Processing and Marketing: Women's participation in milk processing and marketing activities is relatively limited. They are less involved in preparation of value-added products such as ghee butter and khoa mainly because these activities are time-consuming and labour-intensive. Women generally focus more on milk collection and supplying milk to collection centres. Studies have shown that only about 64.4% women were engaged in small-scale processing and most of them prepared milk products mainly for household consumption. In general women were more involved in direct sale of milk rather than product diversification.

Management: Women also contribute significantly to the management of dairy animals. Their responsibilities include cleaning animal sheds washing and grooming animals' disposal of dung milking and maintaining milk records. Many women also participate in construction of animal sheds using locally available materials. Milking of animals and cleaning of milking utensils are among the most commonly performed activities by women in dairy households.

Miscellaneous Activities: Miscellaneous activities include obtaining credit from banks or cooperatives and maintaining records. Rural women often consider financial dealings as the responsibility of men and therefore only 49.16% women were involved in loan-related activities. Record keeping was also limited as only about 52.2% women maintained simple notes in small registers or on loose papers. Similar observations regarding record maintenance were reported by Yadav *et al.* (2005) ^[8].

Despite their extensive involvement in animal husbandry women's contributions in India remain undervalued and often unrecognized. They frequently work as invisible labourers even though they perform a majority of dairy-related activities. Therefore, it is important to assess and quantify women's contribution in dairy farming and link it with empowerment. Women are increasingly becoming central to dairy development which helps improve their economic nutritional and social status. At the same time modern dairy farming faces sustainability challenges including greenhouse gas emissions and the need for environmentally economically and socially sustainable production systems at the farm level.

How to Achieve Sustainable Development Goals through Dairy Sector

What is Sustainability: "Ability to make development sustainable-to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs". According to Robert *et al* in easy way sustainable means it is the techniques or methods of

harvesting or using a resource without depleting it or damaging it permanently.

What is to be sustained		What is to be developed
Nature- Earth Biodiversity Ecosystem	For how long “now in the future”	People- Child survival Life expectancy Equity Equal opportunity
Life support- Ecosystem service Resource Environment		Economy- Wealth Productive sector Consumption
Community- Culture Group Place		Society- Institution Social capital State Regions

Sustainable Development Goals (SDGs)

The SDGs have been developed through an unprecedented consultative process that brought national governments and millions of citizens from the globe together to negotiate and adopt this ambitious agenda. Environmental degradation and social tensions have put societies under severe pressures the past couple of decades to such a degree that a historic global political agreement was made in September 2015, when 193 countries signed the United Nations Sustainable Development Goals for 2030, the so-called SDGs or “Global Goals”. SDG were adopted on September 25th, 2015. The 17 Sustainable Development Goals (SDGs) with 169 target are part of this agenda, demand nothing short of a transformation of the financial, economic and political systems that govern our societies today to guarantee the human rights of all.

1. End poverty in all its forms everywhere.
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
3. Ensure healthy lives and promote well-being for all at all age.
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. Achieve gender equality and empower all women and girls.
6. Ensure availability and sustainable management of water and sanitation for all.
7. Ensure access to affordable, reliable, sustainable and modern energy for all.
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
10. Reduce inequality within and among countries.
11. Make cities and human settlements inclusive, safe, resilient and sustainable.
12. Ensure sustainable consumption and production patterns.
13. Take urgent action to combat climate change and its impacts.
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

So there are 17 sdgs goals made by UN. Although the dairy sector attains all 17 Sustainable Development Goals but significantly dairy covers these 6 goals i.e.

1. No poverty
2. Zero hunger
3. Good health and well being
4. Gender equality
5. Decent work and economic growth
6. Partnership for the goals

Goals 1,2,3,5,8 and 17 the women empowerment is also occurred by achieving this goal.

Why chosen dairy sector for women empowerment??

Women's empowerment through the dairy sector has significant positive effects on both households and rural communities. Dairy farming offers multiple advantages that make it suitable for empowering women. India has a large livestock population which provides year-round income opportunities. Dairy farming offers decent employment and women are traditionally familiar with handling animals which reduces the need for formal education and specialized skills. It requires comparatively low investment and government schemes provide access to loans and subsidies. Dairy farming also contributes to food security and improved nutrition. As a result, rural women are increasingly adopting dairy activities which help improve the economic condition of their families.

Population of livestock: India possesses vast livestock resources which provide strong support for dairy-based empowerment. According to the latest livestock census the total livestock population in India is about 535.82 million including 192.52 million cattle and 109.85 million buffaloes. Around 20.5 million people depend on livestock for their livelihood. Livestock contributes nearly 16 percent to the income of small farm households compared to an average of 14 percent for all rural households. India is the largest milk producer in the world contributing about 23 percent of global milk production. This production largely comes from animals managed at the household level where women form a major part of the workforce. Therefore, the dairy sector acts as an important employment generator particularly for rural women and plays a vital role in their empowerment.

Revenue generation: Participation of women in dairy activities enables them to earn regular income and achieve economic independence. Through milk production processing and marketing of dairy products women can generate consistent earnings. This income helps them contribute to household expenses and improves their decision-making power within the family.

Decent work: Dairy farming provides decent employment opportunities for rural women. Decent work refers to productive employment that ensures fair income workplace security social protection and opportunities for personal development. It also promotes social inclusion and equality of

opportunity. Through dairy farming women can participate in decision making express their views and improve their socio-economic status.

Food and nutritional security: The dairy sector contributes to women's empowerment from both livelihood and nutritional perspectives. Women who own or manage livestock improve household nutrition health and education outcomes. Milk production supports millions of rural families and creates socio-economic value. Milk and dairy products enhance the nutritional intake of women and girls at different stages of life.

Low investment business: Dairy farming is a low investment enterprise which makes it suitable for rural women. For example selling buffalo milk is a profitable activity in many rural areas. With proper care and feeding animals can produce high-quality milk which provides regular income. This reduces financial risk and encourages women to adopt dairy farming.

Insufficient agriculture land: Declining land holdings and increasing population have reduced agricultural income. This situation has increased the importance of livestock-based livelihoods. Dairy farming can be carried out even by landless households and therefore provides opportunities for women's empowerment. Livestock also provides supplementary income and acts as a financial buffer during crop failure.

Education: Low literacy levels among rural women limit their employment opportunities. Dairy farming does not require high educational qualifications which makes it accessible to less educated women. By engaging in dairy activities rural women can support their families and gradually improve their socio-economic condition. Overall, the dairy sector offers regular income employment opportunities food security and social empowerment. Due to these advantages dairy farming is considered one of the most effective pathways for strengthening women's economic and social status in rural India.

Achieving Sustainable development goal through dairy sector-

Goal 1: No Poverty: Eliminating poverty is closely linked with ending gender-based discrimination. Globally, gender inequality keeps women poor by restricting their access to basic rights and livelihood opportunities. Dairy farming can play a key role in poverty alleviation. Worldwide there are approximately 120 million dairy cattle farms, and in India total milk production reached 221 million tonnes in 2022, with a per capita availability of 444 grams per day. Most of these farms are small family-run units, often owning two or three cows, which provide a steady source of income. Daily milk production allows families to meet household nutritional needs and sells surplus milk to nearby dairies, generating income that supports rural livelihoods.

Goal 2: Zero Hunger: Unequal household power dynamics increase women's vulnerability to food insecurity. In 2018 women had a 10% higher risk of food insecurity than men globally. Dairy products improve nutrition and contribute to food security when included as part of balanced diets. Around 160 million children worldwide benefit from milk provided through school feeding programmes. For smallholder families, even one or two cows can ensure a regular supply of

milk, a nutrient-rich food that supports the health and growth of children and adults and helps alleviate hunger in rural households.

Goal 3: Good Health and Well-Being: Milk and dairy products are rich in essential proteins vitamins and minerals necessary for the growth and maintenance of vital organs such as bones muscles and the brain. Consumption of dairy supports healthy development in children and maintains adult well-being. Scientific evidence shows that dairy consumption may help prevent lifestyle-related diseases including osteoporosis and type 2 diabetes. Therefore, dairy products contribute to long-term health and should be included as part of a diverse and nutritious diet.

Goal 5: Gender Equality: Despite comprising 39% of the global workforce in 2018 women held only 27% of managerial positions. Women also spend three times more hours than men on unpaid domestic and care work. In the dairy sector women often manage household livestock and are primarily responsible for milk production. They ensure that cows are fed and watered milk the animals and sell surplus milk in local markets. This income allows women to meet family needs and increases their social and economic autonomy. Livestock enterprises are women-oriented, and growth in livestock production can enhance gender equity. Dairy farming contributes to income and employment equality in rural areas because livestock distribution is generally more egalitarian than land ownership.

Goal 8: Decent Work and Economic Growth: Societal norms related to childbearing and caregiving limit women's availability for paid work. Opportunities in the dairy sub-sector provide decent employment that supports gender equality food security and sustainable livestock development. By 2030 the aim is to achieve full and productive employment for women with equal pay for work of equal value. Employment in dairy farming improves rural women's socioeconomic status and provides a stable and reliable income. Decent work in this sector ensures freedom equity security and human dignity.

Goal 17: Partnership for Goals: The SDGs emphasize partnerships to tackle poverty malnutrition economic growth social justice and climate-related challenges. Self-help groups (SHGs) are a key mechanism for empowering women in dairy farming. According to FAO, SHGs often engage in milking processing and other dairy activities. Typically comprising 10 to 20 members from families below the poverty line these groups encourage regular savings which are pooled into a common fund. SHGs provide women with collective bargaining power, access to credit and technical knowledge, contributing to poverty reduction and empowerment.

Role of Dairy Sector in Women Empowerment

Empowering rural women, especially smallholder farmers, promotes gender equality and helps reduce hunger and poverty by increasing farm productivity through technological and institutional support. The livestock sector provides insights into women's empowerment because livestock ownership has gendered effects on income and social status. Livestock management is strongly linked to female poverty; thus, enhancing women's access to dairy resources can improve household nutrition and child well-being. Studies indicate that when women earn income household nutrition

improves more than when men earn income. Despite dominating milk production and processing women often have limited decision-making power due to entrenched social norms. Dairy farming presents an opportunity to challenge these norms and enhance women's social and economic agency, transforming power relations within rural communities.

Areas in dairy sector through which women empowerment can be done

1. Production
2. Processing
3. Marketing

1. Production: An estimated 80 to 90% of milk in developing countries is produced in small-scale farming systems. Milk provides relatively quick returns for small-scale producers and is an important source of cash income.

- Rural small holder dairying
- Pastoral/agropastoral dairying
- Landless peri urban dairying

The production of very low in the small scale dairy system because these are based upon low input mostly, and use of traditional way, women are not aware about scientific and reargarding production processing and marketing. Women accounted for 93% of total employment in dairy production in India.

Common Practices for Increasing Production

Breeding: Selective breeding and improved reproductive management can enhance productivity and economic returns. Reproductive efficiency, such as calving interval and conception rate, can be improved by selecting genotypes suitable for local production environments along with appropriate husbandry practices. Factors influencing reproductive performance include environment, nutrition, socio-economic conditions, adaptability, genetic characteristics and type of production system. Although small-scale dairy producers often lack formal scientific knowledge of breeding, they possess valuable traditional knowledge regarding local breeds and their management which can be integrated with modern practices.

Farm Practices: The objective of good dairy farming practices is to produce safe and high-quality milk from healthy animals under acceptable management conditions. Dairy producers should adopt good agricultural practices in areas such as animal health, milking hygiene, nutrition, animal welfare, environmental management and socio-economic management. Adoption of these practices helps improve productivity and ensures sustainability of dairy enterprises.

Feed Resources: Poor-quality feed with low digestibility and nutritive value is a major constraint in dairy production in many developing countries. Supplementation with energy-rich and protein-rich feeds is essential because milk production requires high energy. To overcome feed shortages and seasonal variation, producers in Asia and Africa are increasingly using fodder from trees and shrubs in fresh, dried or processed forms. Balanced feeding improves animal productivity and overall herd performance.

Animal Health: Animal diseases reduce milk yield, fertility and growth which leads to economic losses. Diseases also affect milk quality, delay puberty and reduce feed efficiency. Selecting animals adapted to local environmental conditions and implementing preventive health care can reduce disease incidence. Proper vaccination, deworming and biosecurity measures help improve productivity and ensure better animal welfare.

2. Processing: Processing is another important component of the dairy value chain. Processing dairy products provides higher income to small-scale producers compared to selling raw milk and creates opportunities to access regional and urban markets. Milk processing also helps manage seasonal fluctuations in milk supply. Transformation of raw milk into processed products generates additional employment in collection, transportation, processing and marketing. Women can become entrepreneurs through involvement in dairy processing. Traditional dairy products such as ghee, chhana, paneer, khoa, rabri, lassi, shrikhand and kheer provide additional income opportunities for rural women. Milk can also be converted into value-added products with longer shelf life such as butter, cheese and ghee which are easier to transport and store.

Value Added Products: Value-added products are those that are differentiated from raw milk through processing or quality enhancement which increases consumer willingness to pay. By converting milk into processed products, producers can increase profitability and strengthen rural livelihoods particularly for women engaged in small-scale dairy enterprises.

Value added product

"A value-added product is anything that you are able to differentiate from the competition so that consumers are willing to pay more for the product because of that difference."

- Full cream milk powder
- Skim milk powder
- Ice cream
- Butter oil
- Cheddar cheese

In dairy sector the processing system means value added product that is very important for women because it differentiated from the competition and helps in gain more income than other because of the consumers interest for these products is more. So through these value added product women can achieve sustainability and empowerment is also done. But our women have no idea about how value added to the product. mostly they were selling raw milk so it is needed to aware them about value added products.

Dairy product	Consumption rate (%) in India
Fluid milk	46
Ghee	28
Butter	6
Yoghurt	7
Khoa	6
Non fat milk powder	4
Panner	2
Other value added product (Ice Cream)	1

This is the percentage consumption of dairy product in India. In coming days there will be increase demand of dairy by products like ice cream paneer, Channa cheese so by increasing the production these dairy product added the extra income of women.

3. Marketing: Marketing is considered the third important pillar for women's empowerment in the dairy sector. Marketing of surplus milk increases household income and generates employment opportunities in processing, marketing and distribution, both in rural and peri-urban areas. This provides women with a valuable opportunity to earn income through the sale of milk and value-added dairy products. By actively participating in marketing activities, women can utilize these opportunities and develop entrepreneurial skills. The marketing of surplus milk not only enhances income but also supports employment generation and strengthens food security in rural communities. India's dairy sector also contributes to exports. The share of milk products in total exports is about 1.59%. During 2022-23, India exported dairy products amounting to 67,572.99 metric tonnes, valued at Rs. 2,269.85 crores or 284.65 million USD. These figures highlight the economic potential of dairy marketing for rural households, especially women.

Women can improve dairy marketing strategies by understanding the concept of the 4Ps of marketing. These include:

1. Product- Channel, coverage, location, inventory, transportation, logistics
2. Price- Least price, discount, allowance, payment period, credit terms
3. Place- Variety, quality, design, feature, brand name, packaging, service
4. Promotion- Advertisement, personal selling, sale promotion, public relation

Efforts to Promote Women in Dairying

Government initiatives in terms of- There are so many efforts done by government to promote women in dairy sector. But the problem is that most of the women who involved in dairy sector are not aware of these programmes of government. This the window where women can show their products and sell their product.

Funds	Development training programmes
Women entrepreneurship development	Entrepreneurship development programme
Stand up India	Mahila e- haat
Women enterprise development	Vocational training programme
Rashtriya mahila kosh	Entrepreneurship support scheme

National Bank for Agriculture and Rural Development under the Ministry of Finance has established a Women Self Help Group Development Fund to promote women-led self-help groups, particularly in Left Wing Extremism affected and backward districts of India. This initiative also includes support for dairy-related activities aimed at strengthening women's participation in the livestock sector.

Under various dairy development schemes, assistance is provided for creation, strengthening and modernization of infrastructure related to procurement, processing and marketing of milk and milk products. These initiatives are designed to enhance the income of dairy farmers and improve the efficiency of the dairy value chain. Women engaged in dairy activities, especially those associated with self-help

groups, are major beneficiaries of these schemes. Access to financial support, improved infrastructure and institutional guidance helps women expand dairy enterprises and strengthens their economic empowerment.

Entrepreneurship Opportunity women entrepreneurs may be defined as the women or a group of women who initiate, organize and operate a business enterprise. Women can setup their own small scale dairy farms, milk gathering centers dairy product processing facilities production of milk powder production of value added product and production of dairy by product.

Efforts of Institutions and Organizations: Several institutions and non-governmental organizations have made efforts to support rural farmers by providing technical knowledge through mobile-based applications. These digital tools help farmers access real-time information and improve decision-making in dairy management. One such initiative is the Pashu Poshan developed by the National Dairy Development Board. This application assists farmers in formulating balanced rations by optimizing feed costs based on the animal profile, thereby improving productivity and reducing expenses.

Another useful application is DSSA, which provides services such as online monitoring of daily milk poured at milk cooperative societies and real-time updates on milk prices. The application is available in multiple languages and helps milk producers stay informed about market trends.

Additionally, the Cattle Market System application keeps farmers updated about the latest auction prices of livestock. These digital platforms enhance access to information, improve marketing decisions and strengthen the capacity of rural women engaged in dairy farming.

Extension support: There are various awareness programme about dairy sector. These awareness programme can increase the knowledge of women and also empower them and helps in achieving SDGs.

- Demonstration Instant E-advisory
- Farmers Integrated Handbooks
- Farmers Mass Contact Programme
- Mass Media Community Radio Station
- ICT Tools
- Exposure Visit
- Farmers Hub
- Farmers Guide Booklet

Success stories: There are many success stories of women involved in dairy sectors, so out of them here are two.

Case Study 1: Dairy Farming as a Tool for Poverty Eradication

Dairy farming has emerged as an effective means for improving rural livelihoods and reducing poverty. A notable example is Smt. Almoti Devi, a 55-year-old progressive dairy farmer from Bihar who owns about 0.8 hectares of land. She began dairy farming in 2003 with a single cow received as a gift from her father. Over time, she gradually expanded her herd and by 2010 she owned 10 crossbred cows. To utilize surplus milk, approximately 10 kg of peda is prepared daily from unsold milk and sold in the local market through a small shop managed by her husband. This integrated dairy enterprise has generated an annual net income of around Rs. 6 lakh for the past eight years, demonstrating the economic potential of small-scale dairy farming.

Case Study 2: Women Empowerment through Self Help Groups

Women's self-help groups have also demonstrated strong income-generating potential in dairy-based enterprises. The Bharti SHG from Karnal achieved recognition by winning the Best Stall Award during the Saras Mela held at the International Gita Mahotsav in Kurukshetra from 22 November 2019 to 10 December 2019. The group earned Rs. 35,000 through the sale of gulab jamun. The same group further earned Rs. 70,000 by selling gulab jamun at the Saras Mela organized during the International Saraswati Mahotsav from 27 to 29 January 2020. These examples highlight how collective action through self-help groups can enhance women's income and entrepreneurial capabilities.

Conclusion

Although women are extensively involved in dairy-related activities, their participation in decision-making processes remains limited. In many cases, women perform the majority of operational work but have little control over resources, income and management decisions. For meaningful empowerment, it is essential to ensure that women are included at every stage of decision-making and development within the livestock sector. Equal participation will help reduce gender-based discrimination and strengthen women's role in planning, production, processing and marketing activities. When women are empowered within their communities, it encourages greater involvement of other women in the dairy industry. This collective participation enhances skills, increases productivity and ultimately leads to economic independence. Strengthening women's decision-making power not only improves household welfare but also contributes to sustainable rural development.

As rightly stated by Amartya Sen, "Empowering women is key to building a future we want." This highlights that women's empowerment in the dairy sector is essential for achieving inclusive growth, social equity and long-term economic development.

Conflict of Interest

Not available

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Not available

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