

THE ROLE OF DAIRY FARMING IN RURAL DEVELOPMENT

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Abstract:

Since ancient times, dairy farming has been a significant source of income for women and other traditionally underprivileged groups in rural areas. For many of them, it is their only source of income, providing them with cash twice a day, every day of the year. For those who previously could only rely on earnings from modest seasonal crops or from sporadic labor, it has given them a year-round source of income. It is believed that up to 60–65 percent of this group's income currently comes from dairying, which includes marginal and small-scale farmers. Research has indicated that when it comes to profit margin in marginal, small, and medium-sized holdings, dairying in rural areas outperformed crop production. It has been discovered that dairying and crop production together were more profitable for small-scale farmers with irrigated land than crop farming alone. Over time, dairying has also taken on the characteristics of a fully-fledged industry in the nation, improving the lives of those involved in the industry, either directly or indirectly, and serving as a vital source of income support for a sizable portion of the impoverished.

Key Words : Dairy farming , Income source, Women , Underprivileged groups, Rural areas, Year-round income, Marginal farmers, Small-scale farmers , Profit margin , Crop production, Irrigated land, Industry , Income support , Impoverished.

Introduction

Dairy farming has long been a significant economic activity, particularly for women and other traditionally underprivileged groups in rural areas. This sector provides a reliable source of income, offering daily cash flow throughout the year. For many in these communities, dairy farming represents their primary means of financial support, especially in contrast to the limited and often seasonal earnings from modest crop cultivation or sporadic labor. Current estimates suggest that dairy farming constitutes 60–65 percent of the income for marginal and small-scale farmers. Research has highlighted that dairy farming tends to yield a higher profit margin compared to crop production for small and medium-sized holdings. Furthermore, the combination of dairying and crop production has proven to be more lucrative for small-scale farmers with access to irrigated land than crop farming alone.

Over time, dairy farming has evolved into a fully-fledged industry within the nation. This development has significantly enhanced the livelihoods of those directly or indirectly involved in dairy farming, providing vital income support for a substantial portion of the impoverished population. The transformation of dairy farming into a robust industry underscores its critical role in rural economic development and its potential to uplift economically disadvantaged communities.

The Indian context for Dairy

India is the world's largest producer and consumer of milk. 25% of the dairy industry in India is unorganized, with the remaining 25% being organized. With almost 30 million cows, India has the greatest population of any country, and in 2019–20, it produced 198.4 million tons of milk. According to CRISIL, despite the COVID-19-induced restrictions, the organized sector is expected to grow by 5-6%, or @Rs. 1.5 lakh crore, in

sectoral revenue generation in 2021–2022. Dairy products, including milk, can be a significant source of dietary fat, protein, and calories when consumed in a balanced diet. Crop and cattle population coexist in economic harmony in Indian agriculture. India's dairy business is dominated by millions of smallholder rural milk producers, who account for 62% of the nation's total milk production. Crop leftovers are fed to the milch cows, and their feces is utilized as crop manure. The most significant economic activity in rural areas is animal husbandry, which depends heavily on livestock. Today, the dairy industry offers 150 million farm households the triple win of wholesome food, additional revenue, and gainful employment for family labor—primarily for women. It is now profitable to dairise high-yielding buffaloes and crossbred animals.

Small-scale farmers favor animal husbandry over crop production because of the simple income it offers. Increased dairying gives milk farmers a safety net without upsetting their agro-economic structures. Under light of economic liberalization, rural livelihoods are today more under jeopardy than ever. In general, there are fewer possibilities for livelihoods in rural areas; this is especially true in environmentally vulnerable locations like drought-prone desert regions, hilly terrain, and other less developed or developed areas. New opportunities to improve rural incomes are being presented by the rapidly expanding markets for livestock goods in general and dairy products in particular (due to increases in per capita income).

However, by significantly boosting the District/State agriculture economy, a few of the dairy-based, drought-prone districts quickly achieved progress toward reducing poverty. While the livestock sector's contribution to the national GDP increased from less than 5% in the early 1980s to over 6% in the late 1990s, and from 25.6 percent of the agricultural GDP in 2021 to 4.11 percent of the national GDP in 2021, the contribution of agriculture and related sectors to the GDP has decreased over the past few decades. Aside from providing jobs for families and the community, dairy is essential to the food

supply, family nutrition, family income, asset savings, soil productivity, livelihoods, transportation, agricultural traction, agricultural diversification, and sustainable agricultural output.

An effective network for the acquisition, processing, and distribution of milk was established in more than a lakh rural Indian villages by the 1970 Operation Flood program, which linked rural dairy producers' cooperatives with urban consumers. Workplace Approximately 70% of the 18 million individuals employed in the livestock sector are women. Furthermore, for an estimated 27.6 million people, the dairy industry is their primary source of income. Of them, 65–70% are laborers without land and small, marginal farmers. Approximately 10 million farmers are supported by the dairy industry through the nation's 10,000 cooperative groups. In addition to the jobs created by raising animals, obtaining and processing milk also creates a significant number of jobs.

For instance, COMFED helps over 4.5 lakh milk producers in Bihar through its network of over 11638 rural Milk Producers' Cooperative Societies. Furthermore, approximately 25% of women are now taking out loans for dairy farming under NRLM (Jeevika in Bihar) and approximately 35% of swarjogaries chose dairy farming as their source of income under SGSY (Swarnjayanti Gram Swarjgar Yojana), the only program for self-employment for rural areas.

According to the Nationwide Study on SGSY, NIRD, 2005, each person's increased net income was Rs. 865 per month, while the additional employment created was 11 man-days per month. A high priority is given in a number of places to strengthening the milk marketing infrastructure, veterinary services for breed improvement and health care, extension support for capacity building of farmers, developing entrepreneurship, technical skills and knowledge on scientific dairy farming practices, etc., in recognition of the significant contribution that dairy farming makes to the agriculture economy and the lives of resource-poor farmers and rural populations. The State and Central

Governments have periodically implemented a number of programs to promote the industry, but the results have been very inconsistent.

A contribution to the economy of India

For millions of rural people, dairying has grown to be a significant secondary source of income. It also plays a significant role in creating job opportunities and revenue-generating opportunities. Indian dairying is distinct in a number of ways. Milk is one of the main agricultural products in India, accounting for 5.3% of the country's agricultural GDP. At current rates, the value output from milk in 2006–07 was over Rs. 144386 crores, more than the value output from wheat (Rs. 66721 crore) and sugarcane (Rs. 28488 crore) combined, as well as more than the output from paddy (Rs. 85032 crore) alone. The system's distinctive aspect is that, in contrast to large, specialized dairy farmers in the west, approximately 120 million rural families produce milk. Significant advancements have been made in the dairy industry since independence. From a meager 17 million tons in 1950–1951 to 104.8 million tons in 2007–2008 to 198.4 million tons in 2019–20, milk production has expanded significantly.

Additionally, the nation's per capita availability has surpassed the global average of roughly 302 gallons per day to 394 gallons per day in 2018. For India, the dairy industry plays a vital role. With about 13% of the global milk supply, the nation is the world's largest producer of milk. With nearly all of its own milk produced being consumed, it is the top consumer of dairy products worldwide.

For millions of Indians, dairy products provide a key source of affordable, nutrient-dense food. For a sizable portion of the country's vegetarian population, notably the landless, small-scale, and marginal farmers and women, dairy products represent the sole source of animal protein that is suitable. One activity that has been proposed to help reduce

poverty and unemployment is dairying, particularly in rural areas that receive heavy rainfall or are at risk of drought. The country's rural economy will grow in a more balanced manner as a result of the dairy sector's advancement.

The following categories best describe this impact of the dairy industry: -

- Impact on infrastructure;
- Impact on enhanced food assistance security and nutrition;
- Impact on social and economic aspects.

A. Economic and Social Effects

Due to the fact that dairy farming is accessible to everyone without distinction based on caste, creed, gender, or socioeconomic status, barriers for those who own dairy animals have been successfully removed. The social component of social impact encompasses various aspects such as livelihood, labor rights, social justice, health equity, and community development. Additionally, milk producers are becoming increasingly conscious of the latest technology used in dairy production.

a. Addressing Social Inequalities

Many rural areas of India still have this societal stigma. Hundreds of adults and children from all castes of milk producers gather at all DCS collection centers morning and evening to give milk, forming a disciplined habit in the process. The mixture of different social and ethnic groups gets together twice a day for a shared goal, which has reduced social inequality at the village levels.

a. The democratic system

Members oversee the DCSs and make all policy decisions; they are elected as the members' representatives at the DCS level. To choose the members of the management committee, each member is allowed to cast one vote. This yearly member-led election of the management committee's chairperson increases voter awareness of the importance of voting and their right to choose the best candidate for the position, demonstrating democracy at work.

b. Tidiness and Hygiene

At the DCS level, all producers receive frequent updates on the significance of maintaining animal and milker cleanliness and hygiene during milking and at the milk collection facility. It has been noted that they use this knowledge to their everyday routines, which lowers their health-related expenses.

d. Medical Services

The cooperatives are required by the customs and practices of milk collection from its members to supply inputs that will boost milk output. Dairy producers can access veterinary services to maintain the health of their livestock at their doorstep from the DCS unions and the Animal Husbandry department. Farmers are now more conscious of the importance of healthcare for their families outside of dairy farming as a source of revenue, thanks to their exposure to a variety of contemporary technology and how vets use them to treat their patients.

Women's employment is a good indicator of their social and economic standing in society. It has been noted that women dominate dairying at the household level, having influence over the products and revenue generated by the industry. With 7628 women members, nearly 306 DCS are currently run and managed entirely by women in Bihar,

thanks to the initiative of Jeevika—the Bihar Rural Livelihood Promotion Society—and Comfed's joint support.

These women-owned DCS not only make good profits but also work to improve their families' nutrition, cleanliness, and hygiene. 71% of the labor force in animal farming is made up of women; there are 75 million women working in the dairy industry, compared to 15 million men.

B. Infrastructure Effect

The dairy producers that are taking part in DCS have realized their obligation to the community. Each year, they kindly donate a portion of their cooperative's earnings to the advancement of the village, like repairing the village's approach roads, building village libraries, supporting local primary health centers and educational institutions, offering SMS services for quicker and more efficient communication, setting up WhatsApp groups for members to share photos and videos of the best dairy farmers and provide daily knowledge, and providing and updating television sets in DCSs. Thus, cooperative dairying has demonstrated a noteworthy socio-economic influence on the entire development of rural areas, aside from encouraging and motivating new members to pursue dairy farming as a business.

C. Effect on Enhanced Nutrition and Food Assistance

Numerous studies have shown that India is currently doing better than it was in terms of food grain output. The true issue, however, is that malnutrition still exists even with more grains available because people who truly need them cannot afford them. The establishment of a symbiotic relationship between crop and animal husbandry is facilitated by the milk producers' organizations (MPOs), which help these impoverished

groups by providing additional income. In other words, the output of one becomes feed for the other. MPOs primarily benefit dairy farmer families by increasing their income.

The cost of food goods rises together with the per capita expenditure. Stated differently, there is a commensurate rise in food consumption with rising spending power. Therefore, families living below the poverty line benefit from increased revenue supplied by MPOs, which actually encourages them to eat more. MPOs paid out money on a consistent basis—typically once a day, but occasionally once a week. Due to rural communities' limited means, daily purchases of necessities like salt, sugar, vegetable oils, spices, lentils, and vegetables are necessary. These commodities are not produced by the families themselves.

The approach that provides dairy farmers with additional cash revenue on a daily or weekly basis clearly helps the families in the rural areas combat malnutrition by increasing their purchase and consumption power of all vital commodities.

CONCLUSION

Together with dairy cooperative societies, other characteristics of the dairy industry include low productivity, improper and insufficient animal care and feeding, a lack of guaranteed year-round producer prices for milk, dispersed, small-scale milch animal ownership, inadequate basic infrastructure for the provision of production inputs and services, inadequate basic infrastructure for the procurement, transportation, processing, and marketing of milk, and a lack of professional management.

For the great majority of India's rural impoverished, the dairy industry holds great potential as a stable source of income despite all the issues it faces. For the growth of smallholder dairy in India, the AMUL model of small-scale dairy production and commercialization, which has been developed and improved over the past 70 years,

holds great potential. The liberalization of global dairy commerce under the new WTO trade regime presents new obstacles as well as opportunities for Indian dairy exporters.

It must strengthen dairy products' competitive economic edge in terms of price, quality, and marketability abroad. In order to reduce production costs per litre, milk yield must rise. Additionally, dairy product exports will rise if the newest processing and packaging technologies are used and quality is improved. In summary, research has shown that dairy products have the ability to significantly increase access to and affordability of basic necessities such as food, water, shelter, and clothes, which can help lift individuals, families, and entire communities out of poverty.

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