
RURAL DEVELOPMENT AND MILK COOPERATIVES IN INDIA

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DOI: **10.5958/2249-7315.2021.00208.2**

ABSTRACT

Dairy farming is a centuries-old vocation. Millions of agricultural workers and small farmers have benefited from its growing popularity. A well-balanced diet must include milk. For millions of Indian rural families, dairying is a centuries-old practice; domesticated animals have always been an important component of agricultural systems. Milk contributes more to the economy than any other agricultural product. Following the success of the Green Revolution, the Indian government embarked on a project known as White Revolution and Operation Flood to improve the living conditions of rural people and the rural economy. One fundamental difference between producing more food grains and more milk is that, whereas the former has a 120-day interval between sowing the crop and harvesting it, the latter may have a 1000-day interval between the birth of a female calf and its calving and giving any marketable milk, and it is also a much more capital intensive and time consuming exercise. The primary goal of this essay is to look at how dairy farmers have been able to expand their socioeconomics by encouraging them to retain more cows, moving procurement and input systems, and putting in place supporting government structures.

KEYWORDS: Milk Producers, Socio Economy, Women Empowerment.

1. INTRODUCTION

Dairy farming has become a significant secondary source of income for millions of rural people, and it has played a critical role in creating jobs and revenue. The system's distinguishing characteristic is that it involves approximately 120 million rural households in milk production, as opposed to large, specialized dairy farms in the west[1]–[3]. Attempts have been undertaken to supply nutritious milk to urban consumers since 1947, when India achieved independence. To satisfy the demand, a significant number of dairies, mainly under government supervision, were built up one by one in metropolitan areas. There was no plan in place to supplement supply. During the low production season, serious difficulties in the form of raw milk shortages arose. Short-term solutions were implemented without considering the whole supply-demand system. More issues arose as a result of this.

The old method of purchasing milk was used by urban dairies due to a lack of an efficient and stable procurement system and organization. As a consequence, middleman contractors who dominated the old system began to rule the urban dairies, which were under government authority. As a consequence, there was a scarcity of raw milk for dairies, forcing them to rely on imported milk solids.

The cheapness of milk solids deterred urban dairies from paying a fair price for indigenous milk. During the flush season, farmers were forced to sell milk to middleman contractors at a discount. In such a scenario, no farmer would have adequately fed his dairy cows or provided the required

inputs to boost milk output. Greater and larger amounts of milk powder had to be imported as the number of urban dairies and customers grew. When the commitment of urban dairies to customers was modest, high fat buffalo milk was sufficient to satisfy the milk fat need for toned milk and double toned milk. As the availability of milk to consumers increased, so did the demand for procurement and, as a result, import of milk fat. This state of affairs persisted until 1974[4]–[6].

Although almost none of the new Feeder Balancing Dairies under Operation Flood were commissioned in 1975, there was a brief surplus of milk powder in the nation. The milk powder producers, nearly all of whom are in the private sector, asked the government to purchase SMP at market pricing. The Indian Dairy Corporation (IDC) was given permission by the government to purchase the indigenous SMP at the lowest bid price. During the post-independence era, the dairy industry achieved tremendous strides. Milk production has increased more than fourfold from 17 million tons in 1950-51 to 104.8 million tons in 2007-08, but per capita availability remains lower than the world average of about 285 grams per day, despite Operation Flood doubling it from 124 grams per day in 1950-51 to 256 grams per day in 2007-08. After the United States, India is now the world's second biggest milk producer. In 2012-13, Tamil Nadu produced approximately 1.82 crore litres per day, placing it seventh in India for milk production.

1.1. Health Benefits of drinking Cow's milk:

In India, milk is a highly prized commodity. Milk and milk products accounted for a little more than 9% of total household consumer spending in the economy as a whole, and milk spending would give a significant boost to milk output owing to cows. Milk is a nutrient-dense food that comes in a variety of forms, including whole, skim, light, fat-free, and flavored variants. Milk is rich in protein, lactose, B vitamins, Vitamin A, Vitamin D, and zinc, as well as other nutrients. Milk, on the other hand, becomes an essential component of our child's nutrition once he or she is able to digest it. It's high in calcium, which helps to create strong bones and teeth while also regulating blood coagulation and muscle function. It's also one of the few sources of vitamin D, which aids calcium absorption and is essential for bone development. Milk also contains protein and carbs, which will supply our kid with the energy they need to toddle about all day. And there's evidence that if our kid receives adequate calcium from the start, he'll be less likely to have high blood pressure, stroke, colon cancer, or hip fractures later in life.

Most children will receive enough calcium and vitamin D if they drink 16 to 20 ounces (2 to 2 1/2 cups) of cow's milk per day, according to the American Academy of Pediatrics (AAP). According to Sarah Schenker, a dietitian, cow's milk contains nutrients that are essential for children as they develop, including protein, calcium, magnesium, and vitamins B-12 and B-2. According to Julie Redfern, a Registered Dietitian, to obtain enough calcium during pregnancy, drink three 8-ounce glasses of nonfat milk each day or consume a range of calcium-rich foods such as yogurt and cheese[7]–[10].

1.2. National Dairy Development Board (NDDB):

On October 31, 1964, Prime Minister Lal Bahadur Shastri paid a visit to Anand to inaugurate the Amul Cattle Feed Factory in Kanjari. Dr. Verghese Kurien, then the General Manager of Kaira District Cooperative Milk Producers Union Limited (AMUL), was interested in learning more about the cooperative's success, so he spent the night with farmers in a village and even had dinner with one of them. He expressed his desire to Dr. Verghese Kurien, then the General Manager of Kaira District Cooperative Milk Producers Union Limited (AMUL), to replicate this model in other parts of the country to improve farmers' socio As a result of this visit, the National Dairy Development Board (NDDB) was established in Anand in 1965, and by 1970, it had launched the Dairy Development Programmes for India, often known as Operation Flood, under the Seventh Five-year Plan. The Government of India established the Indian Dairy Corporation (IDC) in 1970 to route the donated commodities and money under Operation Flood, which was subsequently

amalgamated with NDDDB in 1987 by an Act of Parliament (the NDDDB Act 1987).

Dr. Verghese Kurien, the Milk Man and Father of the White Revolution, was born on November 26, 1921 in Kozhikode, Kerala, and received a Bachelor of Science from Madras University in 1940, a Bachelor of Mechanical Engineering (Honours) from Madras University in 1943, and a graduate of the Tata Iron and Steel Company Technical Institute in Jamshedpur in 1946. He received a Master of Science in Mechanical Engineering (Distinction) from Michigan State University in 1948 and then went on to the National Dairy Research Institute in Bangalore for specialized training in dairying. He received 17 honorary doctorates from universities in India and abroad before passing away on September 9, 2012. He had been Chancellor of the University of Allahabad since April 17, 2006, a member of the Lal Bahadur Shastri National Memorial Trust's Board of Trustees since 1986, and a member of the South Asian Network on Fermented Foods' Advisory Committee since 2004 when he died. He served as the Founder Chairman of the National Dairy Development Board (1965-1998), the Gujarat Cooperative Milk Marketing Federation Ltd., Anand (1983-2006), the National Cooperative Dairy Federation of India Ltd (1986-1993, 1995-2000, and 2003-2006), and the Board of Governors, Institute of Rural Management, Anand (1979-2006), among other positions. He received the Padmashri (1965), Padmabhushan (1966), KrishiRatna (1986), and Padma Vibhushan (1986) among other prestigious Indian and international honors (1999). Outside of India, it was the Ramon Magaysay Award for Community Leadership (1963); the Carnegie Foundation's "Water Peace Prize" Award for 1986; the World Food Prize award for 1989; the World Dairy Expo's "International Person of the Year" award for 1993; the French government's "Ordre du Merite Agricole" in March 1997.

In 1970, the NDDDB began "Operation Flood," making India the world's biggest milk production. From 1965 until 1998, he was Chairman of the NDDDB for 33 years. Approximately 10 million farmers are now part of the NDDDB, which procures over 20 million liters of milk each day from 200 dairy cooperatives across the nation.

1.3. Operation Flood Phase-I:

18 of the country's main milk sheds were connected to the consumers of the four metros, namely Mumbai, Delhi, Kolkata, and Chennai, during Operation Flood-I (1 July 1970 to 30 June 1981). The total cost of this phase was Rs.116.5 crores, and the funds were generated from donated commodities received from the United Nations World Food Program, including 1,26,000 tons of Skimmed Milk Powder and 42,000 tons of butter. The commodities were recombined as liquid milk and sold in these cities at market prices, with the proceeds going to the program's cooperative dairies and capturing the urban market for rurally produced milk. The program's main objectives were to command a share of the milk market and to speed up the development of dairy animals in rural areas, respectively. Milk was procured at a rate of 2.56 million kg per day from 17.5 lakh members at the conclusion of the term. Since 1950, the overall spending on dairying has been Rs.6, 613 million throughout the six five-year plans up to 1983-84.

1.4. Operation Flood Phase-II:

With an increased investment of Rs.7,800 million, Operation Flood-II covered 155 milk shed districts and connected them to markets in 147 towns and cities, benefitting 10 million rural households. Milk powder imports, which averaged 35,000 tons per year from 1956 to 1970, fell to 28,000 tons per year during the next 14 years. Significantly, the usage of imported milk powder as a proportion of total throughput fell dramatically from an average of 60% in the 1950s to 39% in the 1960s, 14% in the 1970s, and 7.4% in 1983-84. Since 1975-76, commercial dairy imports have been prohibited. Only gifted powder and butter oil were received as a result of Operation Flood's bilateral assistance. Milk powder output in the United States increased from 22,000 tons in 1970 to over 1,00,000 tons in 1983.

During Operation Flood-II, the management raised the number of milk sheds from 18 to 136, and milk outlets were extended to 290 urban markets. By the end of 1985, a self-sustaining system of 43,000 village cooperatives had been established, covering 42.5 lakh milk producers. Domestic milk powder output rose from 22,000 tons in the year before the project to 1,40,000 tons by 1989, with all of the growth coming from dairies built during this phase, which cost Rs.277.2 crores. The main goal of Operation Flood-II was to create a modern, self-sustaining dairy sector on the basis of OF-I to satisfy the nation's milk and milk product requirements. The European Economic Community (EEC) provided contributed commodities for OF-II, including 1,86,000 tons of skimmed milk powder and 76,000 tons of butter oil. OF-II encompassed 150 milk sheds and was funded by money produced by the sale of these commodities as recombined milk, a soft loan of US\$150 million from the World Bank, and internal resources of the Indian Dairy Corporation. The National Milk Grid with storage and long-distance transport facilities was developed to connect these milk sheds to the city market and guarantee a year-round continuous milk supply. Milk was procured at a rate of 5.78 million kg per day from 36.3 lakh members at the conclusion of the term.

1.5. Operation Flood Phase-III:

With a total investment of Rs.1303 crores, the dairy cooperatives were able to develop and improve the infrastructure needed to acquire and sell growing quantities of milk during Operation Flood-III (1 April 1985 to 31 March 1996). Cooperative members now have access to veterinary first-aid health care, feed, and artificial insemination services, as well as increased member education. It was done by adding 30,000 new dairy cooperatives to the 42,000 already established under OF-II. In 1988-89, the number of milk sheds reached a high of 173, with the number of women members and Women's Dairy Cooperative Societies substantially rising. The third phase of Operation Flood aimed to bring together the milk procurement, processing, and marketing infrastructure that had been put in place during Phases I and II. OF-III was financed by NDDB's own resources, as well as a US\$365 million World Bank loan/credit and profits from the sale of EEC-gifted dairy goods. Milk was procured at a rate of 10.99 million kg per day from 92.63 lakh members at the conclusion of the term.

1.6. National Project for Cattle and Buffalo Breeding (NPCBB):

The Government of India started a major genetic improvement program called the National Project for Cattle and Buffalo Breeding (NPCBB) in October 2000, which will run for ten years, in two phases of five years each, with a budget of Rs.402 crores for the first phase. It will prioritize genetic upgradation and development of indigenous breeds.

1.6.1. National Dairy Plan:

India is an agricultural country and a cow-worshipping country, yet our bovine animals' milk production is among the lowest in the world. The nation's milk output was 127 million tonnes in the assessment year 2011-12, and our need will be 200 million tonnes by 2021-22. The Central Government has proposed a scheme called the "National Dairy Plan" with a budget of Rs.2,040 crores, which includes a credit of Rs.1,584 crores from the International Development Agency (IDA), a Government of India share of Rs.176 crores, and a contribution of Rs.280 crores from cooperatives' End-Implementing Agency (EIA). In addition, NDDB and its subsidiaries will contribute about 200 crores towards technology.

2. DISCUSSION

India has made significant progress in the area of dairy development during the last five decades. The country's performance in terms of milk production, as well as yearly increase in output, has been outstanding. It is widely known that dairying, more than any other sector of the Indian economy, has benefitted the poor the most. In comparison to other industries, the livestock

industry provides enormous job possibilities, especially rural self-employment, at the lowest feasible investment unit.

Women are heavily involved in livestock production in general, and cattle and buffalo in particular, since it is a labor-intensive industry. As a result, the livestock industry in India is highly labor-intensive and tightly knit into the social and economic fabric of rural society, making investments in its growth a vital route to rural wealth. Over the last five decades, India has shown without a shadow of a doubt how effectively dairying can be utilized as a tool for social and economic transformation in Indian communities.

The rural economy should be regarded as a whole, rather than in discrete parts. There is a need to provide a permanent economic system for rural economies; a system in which the entire village community can participate, as Nehru envisioned, and the system can have wider operational links with the outside world, so that the village community receives all of its needs through its own system and disposes of its surplus produce through it. Obviously, the ideal way to offer such a system is via a cooperative. Through higher federations, cooperative village economic management will have national and international connections. When Nehru envisioned cooperatives, Panchayats, and schools, he envisioned a local administrative, economic, and social structure in which each component supported the others. The advantages will not reach the whole community if the village economy is not absorbed as a whole by cooperatives.

Until a few years ago, dairying was considered a secondary or subsidiary profession in India, with the animals being fed only agricultural wastes and byproducts, and the milk produced being consumed by the farmer's family. Dairying has become a significant source of revenue and employment in many regions of rural and urban India, thanks to the implementation of Operation Flood projects and increasing demand for milk and milk products in urban areas. The profit margin in milk production may be significantly increased through scientific dairy animal management.

Any dairy farm's main tasks include feeding, artificial insemination, and health care. Operation Flood and milk cooperatives became India's biggest rural employment program, allowing the dairy industry to modernize to the point where it can satisfy not just the country's need for milk and milk products, but also take advantage of global market possibilities. Milk cooperatives are shown to have an important role in reducing rural poverty by increasing rural milk production and marketing. The plan of Operation Flood/White Revolution agreed that rural producers would receive a remunerative price all year and urban dairies would receive conserved milk solids when needed, that milk marketing would be improved by allowing the organized dairy sector to gain a commanding share of the markets, and that dairy development would be accelerated by increasing milk procurement and production in rural areas.

3. CONCLUSION

After considering the findings of the NDDB and the National Commission on Agriculture, the Planning Commission estimated that the animal husbandry sector could generate 86 million person years of employment, including jobs in the processing and marketing of milk and milk products, even with existing stock. According to a World Bank assessment, Rs.200 crores were spent in Operation Flood II, with a net return of Rs.24,000 crores each year and Rs.2,40,000 crores over a ten-year period, and no other large development initiative has achieved this input output ratio. "Operation Flood may be regarded as a twenty-year experiment validating Rural Development Vision," according to a World Bank report from 1997. Another relevant argument made by World Bank specialists is that the entire job creation effect of 1,00,000liters/day of dairy development activities is more than 12,000 new jobs. As a result, dairy development has a lot of potential for creating jobs, which is something that our nation desperately needs. Increased dairy development activities, in addition to the main advantages of daily cash income to farmers or their families,

manure and fertilizer benefit (including legume rotation) to farmers land, improved labor and time utilization, and so on, are undeniably beneficial.

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