

Empowering Rural Women Through White Revolution 2.0: a Study of India's Dairy Cooperative Sector

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ABSTRACT

India presently holds the position of the world's leading dairy producer, contributing over 25% of global milk production, and the Indian Government aims to augment milk production and processing under the newly launched White Revolution 2.0 initiative. This program, launched by the Ministry of Cooperation in 2024, is inspired by the legacy of Operation Flood (India's groundbreaking White Revolution) and seeks to modernize, expand, and enhance dairy cooperatives across the country. 'White Revolution 2.0' posits that dairy agriculture will promote women's empowerment and alleviate hunger. The increased availability of milk will mostly benefit disadvantaged and malnourished children. The eradication of child malnutrition is primarily dependent on the efforts of mothers rather than governmental interventions. The White Revolution 2.0 would promote the official employment of women engaged in milk procurement by guaranteeing that payments are deposited into their bank accounts. The program aims to enhance cooperative procurement from the present 660 lakh liters per day to 1,000 lakh liters. Our mothers and sisters are associated with dairy production, especially cooperative dairies. Thirty-six lakh women in Gujarat engage in the dairy sector, producing a cumulative revenue of ₹60,000 crore.

Keywords: White revolution, women empowerment, employment, cooperative

INTRODUCTION

The Indian Government has launched White Revolution 2.0 as a deliberate effort to enhance the dairy cooperative industry and foster inclusive and sustainable rural advancement. Capitalizing on the successes of the initial White Revolution, the project aims to broaden cooperative entities, augment milk output and collection, refine dairy infrastructure, and elevate the financial prosperity of rural producers.

A key element of the initiative is the formation and enhancement of 200,000 new Multipurpose Primary Agriculture Cooperative Societies (PACS), dairy cooperatives, and fisheries cooperatives. These community-based organizations are anticipated to enhance farmers' access to markets, infrastructure, technology, financial resources, and structured value chains. The program specifically highlights the role of women farmers, acknowledging their vital impact on India's dairy sector.

The White Revolution 2.0 emphasizes four primary domains: empowering female agriculturalists, augmenting domestic milk output, enhancing dairy infrastructure, and fostering dairy exports. The initiative seeks to enhance milk acquisition by dairy cooperatives by 50 percent within the following five years, aspiring to achieve a daily procurement of 1,000 lakh liters of milk by the conclusion of the fifth year. This development is anticipated to generate improved revenue prospects and enhance the livelihoods of rural dairy farmers.

The program additionally suggests the creation and enhancement of 100,000 new and existing district cooperative societies, multipurpose district cooperative societies, and multipurpose PACS. These cooperatives will be linked to milk acquisition and distribution pathways, bolstered by the requisite infrastructure for effective collection, transportation, processing, and marketing.

Consequently, White Revolution 2.0 embodies an all-encompassing strategy aimed at fortifying India's dairy sector via cooperative advancement, female empowerment, infrastructure improvement, value-chain consolidation, and enhanced market accessibility, with the overarching goal of fostering a more robust and affluent rural economy.

DAIRY REVOLUTION

The first White Revolution, referred to as Operation Flood, was launched in the 1970s by the National Dairy Development Board. Dr. Verghese Kurien led the project, recognized for the success of the dairy cooperative AMUL, and was tasked with the goal of duplicating this model across the country. Operation Flood focused on cooperatives for dairy farmers and sought to accomplish the following objectives:

1. Augmenting dairy output
2. Enhancing rural earnings
3. Offering fair pricing for customers

Operation Flood was executed in three overarching stages -

Phase I (1970-1980) received financial support from the sale of skimmed milk powder and butter oil, which were donated by the European Union, formerly referred to as the EEC, under the World Food Program. The NDDB formulated and executed the plan while discussing the particulars of the EEC's assistance. In its preliminary stage, Operation Flood linked 18 of India's biggest milk-producing areas with consumers in the nation's four major urban centers: Delhi, Mumbai, Kolkata, and Chennai.

Phase II of Operation Flood (1981-85) increased the count of milk sheds from 18 to 136, concurrently expanding the distribution network for milk through 290 metropolitan markets. By the end of 1985, a self-sustaining system of 43,000 village cooperatives comprising 4.25 million milk producers had emerged. Domestic milk powder production increased from 22,000 tons in the year prior to the campaign to 140,000 tons by 1989. Consequently, EEC contributions and World Bank funding aided in promoting self-sufficiency. The direct sale of milk by producers' cooperatives increased by several million liters per day.

Phase III (1985-1996) enabled dairy cooperatives to improve and strengthen the infrastructure required for the acquisition and distribution of increasing volumes of milk. Veterinary emergency healthcare services, nutritional support, and artificial insemination aid for cooperative members were improved, alongside increased educational programs for members.

Operation Flood revolutionized India from a milk-scarce country to the globe's foremost producer, yielding over 230 million tons in 2022-23, while significantly enhancing the per capita milk availability for Indians (459g for India in 2024 versus the global average of 323g daily) and fostering employment and income opportunities in rural regions via dairy cooperatives. Dairy cooperatives presently encompass 70% of India's districts, with more than 170,000 cooperatives functioning throughout over 200,000 districts. The dairy industry accounts for over 40% of the entire agricultural economy and provides support to more than 80 million individuals, either directly or indirectly.

Notwithstanding these remarkable accomplishments, many challenges remain in the Indian dairy industry, including geographical inequalities in the distribution of dairy cooperative societies (DCS), particularly in West Bengal and Odisha, where fewer than 10% of villages are affiliated with DCS. Additional concerns encompass insufficient rural dairy infrastructure, minimal export levels, and the prevalence of the unregulated sector in milk acquisition, which the Government intends to address with the White Revolution 2.0 initiative.

Principal characteristics and accomplishments of the White Revolution:

The cooperative concept was implemented in the dairy sector, promoting the establishment of dairy cooperatives among farmers.

Amul: The foremost achievement of the White Revolution was the triumph of the Gujarat Cooperative Milk Marketing Federation (GCMMF), which promoted its goods under the Amul brand. Currently, Amul has established itself as the most reliable brand in the global food industry,

- Enhanced Dairy Output: The initiative resulted in a significant rise in milk production nationwide by elevating cattle quality.

- Infrastructure Advancement: Facilities like milk processing plants, cold storage units, and transportation systems were established to bolster the expanding dairy sector.

The initiative enhanced the earnings of dairy producers, hence fostering the economic advancement of rural regions.

The triumph of Operation Flood in Gujarat prompted its adoption in other states, therefore broadening the influence and scope of the White Revolution throughout India.

Dairy Industry in India

India stands as the foremost milk producer globally, accounting for 24% of worldwide milk output in 2021-22.

The leading five states in milk production are Rajasthan, Uttar Pradesh, Madhya Pradesh, Gujarat, and Andhra Pradesh. They collectively account for 53.11% of the nation's total milk output.

The Indian dairy industry has expanded its offerings beyond liquid milk to include an array of value-added goods like butter, ghee, cheese, yogurt, and ice cream.

The sector accounts for 5% of the national GDP and directly sustains over 80 million farmers.

The industry serves as a significant source of employment, particularly for women, and is crucial in advancing women's empowerment.

Obstacles Faced by the Dairy Industry in India

- Insufficient Productivity: The caliber of livestock is pivotal in influencing its milk yield and, consequently, total output.

Despite being the foremost milk producer globally, India's yield per cow is much below than the international average.

- The provision of animal health and breeding services is hindered by challenges such diseases, inadequate breeding methodologies, and limited healthcare infrastructure, which impact the overall well-being and quality of livestock.

- Insufficient fodder resources: There is an absence of restrictions to guaranty quality.

Without a cohesive policy, various inferior feeds are accessible in the marketplace.

- Infrastructure Limitations: Insufficient infrastructure, including the absence of a reliable cold chain, leads to the deterioration of milk and dairy items, particularly in areas with unstable electricity availability.

- The introduction of sophisticated procedures like artificial insemination, effective feeding techniques, and disease management is hindered by farmers' insufficient awareness, education, and training.

Market Instability and Price Variability: The absence of consistent and profitable milk pricing impacts dairy farmers' earnings, complicating their ability to strategize and invest in their businesses.

- Quality Standards: Achieving compliance with both national and international quality benchmarks necessitates investments in quality control protocols and strict attention to sanitary practices.

Government Programs for the Advancement of the Dairy Industry

The Rashtriya Gokul Mission was initiated in 2014 with the objective of preserving and enhancing native cattle breeds.

Objective: To augment the efficiency and genetic advancement of native cattle.

The National Program for Dairy Development (NPDD) has been operational since 2014, with the objective of enhancing or establishing infrastructure for the production of superior quality milk, alongside the procurement, processing, and marketing of milk and dairy products via the State Cooperative Dairy Federation.

The Department of Animal Husbandry, Dairying, and Fisheries runs the Dairy Entrepreneurship Development Scheme (DEDS) to encourage people to start their own businesses in the dairy industry. It offers monetary support to individuals for establishing small to medium-sized dairy enterprises.

The National Bank for Agriculture and Rural Development is executing the initiative.

The National Animal Disease Control Program (NADCP) is a premier initiative initiated in 2019 aimed at managing Foot & Mouth Disease and Brucellosis by the vaccination of the whole population of cattle, buffalo, sheep, goats, and pigs.

The National Livestock Mission (NLM), initiated by the Ministry of Agriculture, seeks to promote sustainable advancement within the livestock industry, encompassing dairy production.

It emphasizes enhancing livestock productivity, advancing their health, and offering assistance for fodder and feed supplies.

GOALS AND AIMS OF THE PROGRAM

The "White Revolution 2.0" initiative aims to increase the procurement of milk by dairy cooperatives by 50% within the next five years by facilitating market access for dairy farmers in underserved regions and increasing the participation of dairy cooperatives in the organized sector. It also aims to promote women's empowerment, foster job creation, and enhance cooperative outreach.

The initiative's primary objectives are as follows:

1. To elevate the annual milk procurement rate conducted by cooperatives from the present six percent to surpass nine percent within five years. In absolute figures, the milk procurement by cooperatives is projected to increase from 660 lakh kilograms daily to more than 1000 lakh kg daily by the fiscal year 2028-29.

The NDDB (National Dairy Development Board) has established objectives to create around 56,000 new Multipurpose Dairy Cooperative Societies (MDCS) over the forthcoming five years.

Approximately 46,000 current village-level DCS/PACS (Primary Agricultural Societies) are anticipated to be enhanced with improved and sophisticated milk procurement and testing facilities. Automatic Milk Collection Unit (AMCU), Data Processor Milk Collection Unit (DPMCU), testing apparatus, Bulk Milk Coolers, etc., will be provided as needed, and they will operate as MDCS/MPACS.

Operation of the Program

The initiative aims to reach these objectives and enhance dairy infrastructure and milk output by offering financial support to the several PACs. The particulars are outlined as follows -

1. Financial support will be extended to all PACS/MPACS intending to commence dairy operations, contingent upon meeting the subsequent criteria:

The Gram Panchayat lacks a foundational milk collection entity for dairy operations.

The MPACS have sufficient milk capacity to commence sustainable dairy enterprises.

The MPACS operates within the jurisdiction of a Dairy Cooperative Institution to guaranty the subsequent transportation of milk.

The determination to finance the MPACS will rest solely with NDDB, contingent upon a feasibility evaluation and the MPACS's readiness to engage in the initiative.

Singular financial assistance of up to ₹40,000 would be granted to eligible PACS/MPACS to commence milk procurement operations. The monetary support for PACS/MPACS will be channeled via the Dairy Cooperative Institution functioning in the area. In a like manner, onward linkages will be facilitated by the Dairy Cooperative Institution functioning in the area. The NDDB will additionally offer technical assistance to the PACS/MPACS.

Anticipated Results/Effects

1. It is anticipated to enhance market accessibility for smallholder dairy producers, concurrently guaranteeing equitable and profitable pricing for them.

It will assist in advancing the network of primary dairy cooperatives and will reinforce the complete milk value chain from procurement, testing, chilling, logistics to processing facilities.

3. Given that women constitute a significant shareholder in the dairy industry, there has been an increased focus on include women as members in cooperatives. The initiative will facilitate the inclusion and empowerment of women, granting them access to formal jobs and enhanced earnings via participation in dairy cooperatives.

Enhanced procurement may facilitate the growth of the organized sector's share within the dairy industry, which remains largely controlled by the unorganized sector. This will assist in guaranteeing food safety and quality assurance, as well as enhancing the accessibility of fresh and sanitary milk and dairy products.

The initiative will aid in advancing the dairy industry and augmenting milk output to satisfy local need, while concurrently using India's dairy export capabilities. With the decline in local demand and the rise in milk output, enhancing India's dairy industry exports is crucial, as the nation has a minimal portion of the global dairy market while being the leading milk producer worldwide.

EVOLVING CHALLENGES AND FUTURE DIRECTIONS

The White Revolution 2.0 has set some very ambitious goals, yet it is still facing some very big problems. To ensure that states and areas with low dairy cooperative presence also benefit from this program, it is necessary to make substantial financial expenditures and coordinate logistics well in order to address the regional imbalance in dairy infrastructure and output.

Also, newly formed PACs under this structure need logistical and financial support, good administration, and efficient use of resources if they want to be financially viable in the long run. In the end, it will be difficult to solve the problem of two-thirds of the milk being sold in the informal sector; thus, additional government actions are needed to encourage the growth of the organized sector, which is led by cooperatives, in the dairy industry.

In order for the endeavor to move forward, it is imperative that the aforementioned issues be resolved. By tailoring incentives and collaboration frameworks to the needs of individual communities, we can reduce regional disparities. In order to determine if the program is effective and make adjustments based on data, the Ministry must ensure the creation of a thorough monitoring and evaluation system.

Enhancing digital literacy and advocating for the adoption of innovative technology via financial investments and incentives can bolster the efficiency of milk production, processing, and distribution systems. Through the coordinated execution of initiatives, one may diminish the expenses associated with milk production in India, enhance the welfare of dairy farmers, and secure a sustainable and prosperous dairy sector. Accelerated immunization initiatives to address circumstances such as fatalities from Lumpy skin disease. In a similar vein, fostering partnerships with the commercial sector and NGOs can facilitate the provision of financial assistance, technical knowledge, and various other forms of support to dairy cooperatives, so enhancing their overall efficacy. Ultimately, additional measures are necessary to enhance the export competitiveness of Indian dairy products to achieve the objective of becoming the world's foremost dairy exporter, as exports are essential for sustaining the growth of India's dairy industry.

In summary, the White Revolution 2.0 signifies a vital chance for India to enhance its robust dairy production base through the cooperative model. The project corresponds with the overarching objectives of rural advancement and poverty alleviation by tackling regional inequalities, encouraging female involvement, and utilizing technology. Nonetheless, the Government has to tackle persistent challenges inside the dairy industry to optimize the effectiveness of these initiatives

REFERENCES

1. The Hindu, Bureau. (September 19, 2024). Amit Shah announces White Revolution 2.0 to empower women. The article discusses the White Revolution 2.0 initiative aimed at empowering women, as articulated by Amit Shah.
2. Chand, R. (2023). Draft Document on India's Dairy Revolution. NITI Aayog. The link directs to a working paper on India's White Revolution published by NITI Aayog.
3. Government of India (2024). Press Announcement <https://pib.gov.in/PressReleasePage.aspx?PRID=2056329>
4. IBEF (March 19, 2024). India's Dairy Revolution. Indian Brand Equity Foundation. The link provided directs to a case study on India's White Revolution.
5. ICAR (2024). Tribute to the Pioneer of the White Revolution in India
6. Invest India (2024). Animal Husbandry and Dairy Production <https://www.investindia.gov.in/sector/animal-husbandry-and-dairying/dairy>
7. Ministry of Cooperation (2024) White Revolution 2.0
8. https://www.cooperation.gov.in/sites/default/files/2024-09/White%20Revolution%202.0_Booklet_Bilingual_New_19092024_%20%283%29.pdf

9. National Dairy Development Board (2024). Operation Flood <https://www.nddb.coop/about/genesis/flood>
10. Pti. (2024c, September 19). Amit Shah initiates "White Revolution 2.0" to enhance the dairy industry. The Financial Times. Shah inaugurates White Revolution 2.0 to enhance the dairy industry.
11. Sharma, H. September 22, 2024. A novel white revolution in the dairy industry: India's current position and its aspirations.