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**WHITE REVOLUTION 2.0: A  
NEW CHAPTER FOR INDIA'S  
DAIRY INDUSTRY**

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## WHITE REVOLUTION 2.0: A NEW CHAPTER FOR INDIA'S DAIRY INDUSTRY

### Context

- India's dairy industry has undergone a remarkable transformation since independence, evolving from a milk-deficient nation to the world's largest milk producer and consumer. However, despite its achievements, the industry faces challenges that necessitate a White Revolution 2.0.

### About the White Revolution in India, aka Operation Flood

- It was launched in 1970 by the **National Dairy Development Board (NDDB)** under the leadership of **Dr. Verghese Kurien**, often referred to as the '**Father of the White Revolution**'.
- It significantly boosted milk production through initiatives like crossbreeding indigenous cows with high-yielding exotic breeds, improving animal nutrition, and enhancing milk processing infrastructure.
- As a result, India's milk production skyrocketed from 17 million tonnes in 1950-51 to an impressive 230.58 million tonnes in 2022-23.
- As per the **Basic Animal Husbandry Statistics (BAHS) 2023**, the top five milk producing states are UP (15.72%), Rajasthan (14.44%), Madhya Pradesh (8.73%), Gujarat (7.49%), and Andhra Pradesh (6.70%), which together contribute 53.08% of the country's total milk production.
  - ♦ According to BAHS, almost 31.94% of the total milk production comes from indigenous buffaloes, followed by 29.81% from crossbred cattle. Nondescript buffaloes contribute 12.87%, indigenous cattle 10.73%, and nondescript cattle 9.51%. The share of goat milk is 3.30%, and that of exotic cows, 1.86%.

### Challenges and the Need for White Revolution 2.0

- **Productivity:** India's average **milk yield per cow** remains relatively low. For instance, exotic or crossbred cows produce **just 8.52 litres of milk per day**, while their counterparts in the **United States churn out nearly 30 litres daily**.
  - ♦ While total milk production increased from 187.75 million tonnes in 2018-19 to 230.58 million tonnes in 2022-23, the annual growth rate of production came down from 6.47% to 3.83% during this period.
  - ♦ This productivity gap leads to a growing demand-supply imbalance and rising milk prices.
- **Demand Surge:** Population growth, the universal appeal of milk as a protein source, and increased focus on nutrition have driven up demand. However, production struggles to keep pace.
- **Cost Pressures:** Rising feed costs contribute to the overall cost of milk production. With milk prices outpacing broader inflation, there's a risk of reduced consumption if urgent action isn't taken.
  - ♦ The lack of stable and remunerative prices for milk affect the income of dairy farmers, making it challenging for them to plan and invest in their operations.
- **Animal health and Breeding Services Provision:** Issues such as diseases, lack of proper breeding practices, and insufficient healthcare facilities affect the overall health and quality of livestock.
- **Technology Adoption:** Lack of awareness, education, and training among farmers impede the implementation of advanced practices such as artificial insemination, efficient feeding methods, and disease management.
- **Quality Standards:** Ensuring that products meet both domestic and international quality standards requires investments in quality control measures and adherence to hygiene practices.

### Entering Into White Revolution 2.0

- The idea of White Revolution 2.0 revolves around cooperative societies, which were also the bedrock of Operation Flood five decades ago. It focuses on several key areas:
- **Empowering Women Farmers:** Recognising the pivotal role women play in dairy farming, the program aims to empower them further. By providing **training, access to credit, and market linkages**, it seeks to enhance their participation in the sector.

- **Boosting Milk Collection:** The primary goal is to increase milk collection across the country **by 50% over the next five years.**
  - ♦ It means ramping up daily milk procurement from 660 lakh kilograms to 1,007 lakh kilograms by 2028-29.
- **Scope for Expansion of Dairy Cooperatives:** Since it was created in 2021, the **Ministry of Cooperation** has focused on expanding the network of cooperatives, in **particular dairy cooperatives.**
  - ♦ Dairy cooperatives procured 660 lakh kg of milk per day in 2023-24; the government wants to increase this to 1,007 lakh kg/ day by 2028-29.
  - ♦ **National Dairy Development Board (NDDB)** has drawn up an action plan to establish about **56,000 new multipurpose dairy cooperative** societies over the next five years, and to strengthen 46,000 existing village level DCSs by providing more advanced milk procurement and testing infrastructure. Most of the new DCSs will be established in Uttar Pradesh, Odisha, Rajasthan, and Andhra Pradesh.

### Data on Dairy Cooperatives in India

- According to officials of the **National Dairy Development Board (NDDB)**, the regulator of the dairy industry in India, dairy cooperatives **operate in around 70% of the country's districts.**
- There are about **1.7 lakh dairy cooperative societies (DCSs)**, which cover around 2 lakh villages (30% of the total number of villages in the country), and 22% of producer households.
- These cooperative societies procure about 10% of the country's milk production and 16% of the marketable surplus.

### State-wise Dairy Cooperatives

- In the states of Gujarat, Kerala, and Sikkim, and the Union Territory of Puducherry, **more than 70% of villages** are covered by dairy cooperatives.
- In the states of Uttar Pradesh, Uttarakhand, and Madhya Pradesh, and the UT of Jammu & Kashmir, however, coverage is **only 10-20%.**
- West Bengal, Assam, Odisha, Jharkhand, Chhattisgarh, Himachal Pradesh, and the smaller states of the Northeast, **less than 10% of villages are covered.**

- **Funding:** The bulk of the funding for White Revolution 2.0 will come through the **National Programme for Dairy Development (NPDD) 2.0**, a new **Central Sector Scheme** under the **Department of Animal Husbandry and Dairying.**
  - ♦ Union Cooperation Minister assured full budgetary support for White Revolution 2.0, emphasising its priority status.
  - ♦ Additionally, the '**Cooperation among Cooperatives**' initiative, successfully **piloted in Gujarat**, will be expanded nationwide. It provides interest-free cash credit to dairy farmers through RuPay-Kisan Credit Cards, promoting cooperative collaboration.
- **Technology Adoption:** Modern technologies like **embryo transfer and sex-sorted semen** hold the key to improving productivity. These innovations enhance breeding outcomes, genetic stock, and the likelihood of female calves, ultimately raising milk yields.
- **Strengthening Dairy Infrastructure:** The program emphasises building robust infrastructure for milk collection, processing, and distribution. This includes setting up and enhancing district cooperative societies, multi-purpose societies, and **Primary Agriculture Credit Societies (PACS)** linked to milk routes.
- **Boosting Dairy Exports:** White Revolution 2.0 recognises the potential of India's dairy sector in global markets. By improving production and quality, the initiative aims to boost dairy exports, benefiting both farmers and the economy.

### Key Components of White Revolution 2.0

- **RuPay Kisan Credit Cards:** The nationwide rollout of RuPay Kisan Credit Cards for dairy farmers facilitates easy access to credit and financial services. These cards empower farmers to manage their finances efficiently.

- **Micro-ATMs at Dairy Cooperative Societies:** Installing micro-ATMs at dairy cooperative societies brings banking services directly to farmers' doorsteps. This move enhances financial inclusion and convenience.
- **Computerisation of PACS:** Standard operating procedures have been released for the computerization of Primary Agriculture Credit Societies (PACS). This digital transformation streamlines processes and ensures efficient management of credit and cooperative activities.

### Related Government Initiatives

- **Rashtriya Gokul Mission:** It aims to conserve and develop indigenous cattle breeds and to enhance the productivity and genetic improvement of indigenous cattle.
- **National Programme for Dairy Development:** It aims to build or strengthen infrastructure for the production of high-quality milk as well as for the procurement, processing, and marketing of milk and milk products through the State Cooperative Dairy Federation.
- **Dairy Entrepreneurship Development Scheme:** It is being implemented by the Department of Animal Husbandry, Dairying, and Fisheries **to create self-employment opportunities in the dairy industry.**
  - ♦ It provides financial assistance to individuals for setting up small to medium-scale dairy ventures.
- **National Animal Disease Control Programme:** It is a flagship scheme launched for control of **Foot & Mouth Disease and Brucellosis** by vaccinating 100% cattle, buffalo, sheep, goat and pig population.
- **National Livestock Mission:** It was launched by the **Ministry of Agriculture**, and aims to ensure sustainable development of the livestock sector, including dairy farming.
  - ♦ It focuses on increasing the productivity of livestock, improving their health, and providing support for fodder and feed resources.

### Conclusion

- White Revolution 2.0 represents a significant step toward empowering women, improving milk production, and strengthening India's dairy sector. By fostering cooperation, innovation, and sustainable practices, this initiative aims to script a new chapter of success for the country's dairy industry.

### Mains Practice Question

**[Q]** Critically analyse the challenges and opportunities that lie ahead for the Indian dairy industry in achieving the ambitious goals of the 'White Revolution 2.0'.

