

White Revolution and its Impact on Indian Economy

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Abstract

Milk production in the world

Approximately 150 million families around the world are engaged in milk manufacturing. In maximum growing nations, milk is produced with the aid of using smallholders and milk manufacturing contributes to family livelihoods, meals protection and nutrition. Milk presents relatively quick returns for small-scale manufacturers and is an essential supply of cash income. In recent decades, growing nations have elevated their percentage in international dairy

manufacturing. This increase is mostly the end result of a boom in the number of animals in preference to an upward thrust in productivity consistent with head[i].

In many growing nations, dairy productivity is restrained with the aid of using poor-pleasant feed resources, diseases, and restricted admission to markets and services (e.g., health, credit score and training) and dairy animals' low genetic ability for milk manufacturing. Unlike advanced nations, many growing nations have warm and/or humid climates which might be damaging for dairy activities. Some nations have an extended culture of milk manufacturing, and milk or its merchandise have an essential function within the diet. Other nations have hooked up big dairy manufacturing best recently. Most of the previous nations are positioned within the Mediterranean and Near East, the Indian subcontinent, the Savannah areas of West Africa, the highlands of East Africa and components of South and Central America. Countries without an extended culture of dairy manufacturing are in Southeast Asia (along with China) and tropical areas with excessive ambient temperatures and/or humidity.

In the last 3 decades, international milk manufacturing has expanded by more than 59 percent, from 530 million tonnes in 1988 to 843 million tonnes in 2018. India is the world's biggest milk producer followed by the US, China, Pakistan and Brazil. However, this was not the case a few decades ago. The country used to be milk deficient, and

imported milk from other countries to serve its growing population. The journey from being a milk deficit country to becoming the world's largest milk producing nation has been exemplary[iii]. Since the 1970s, maximum of the enlargement in milk manufacturing has been in South Asia, that's the principal motive force of the milk manufacturing boom[iiii].

Milk manufacturing in Africa is developing more slowly than in different growing regions, due to poverty and – in a few international locations – negative climatic conditions.

The international locations with the very best milk surpluses are New Zealand, the US of America, Germany, France, Australia and Ireland. The international locations with the very best milk deficits are China, Italy, the Russian Federation, Mexico, Algeria and Indonesia.

Milk production and white revolution in India

The White Revolution was one of the major dairy movements organized by the government of India, back in 1970. During this movement, the production of milk was regulated all over the nation and it also ensured that the price of milk was not varied across regions.

The main aim of the movement was to establish a nationwide milk grid that would result in a link from all the large scale producers, industrialists of India with the small farmers reducing the scope of any middle man. The result of the movement was such that India transformed from a *dairy deficient nation to the largest producer of Milk* in the world, and production of dairy was so enormous that it led to the

export of products all over the world. It helped India become a self-sufficient nation. In 2018, India's market share in the World milk production was 22 percent[iv].



History of White Revolution

Operation flood was the program that led to the White Revolution movement launched on the 13th of January, 1970, it was the largest dairy development program and one of its kind. Launched by India's National Dairy Development Board (NDDB) under the supervision of Dr. Verghese Kurien, *the father of the White Revolution* who was also the founder of AMUL.

It was launched to give farmers the benefit of the resources they create. As an employment generation program, it led to the mass production of dairy supplies. At the base of the white revolution were the farmers who by producing milk in large countries formed the foundation of the revolution. Had it not been farmers of India, the government would not be able to do so. The successful implementation of the movement was because of the production by the masses

and not just mass production.

Growth of the movement: The movement was implemented in three phases:

1. Phase 1:

Phase 1 was financed by the profit made by the sale of skimmed milk powder and butter oil through the World Food Program. During this phase, 18 major milk sheds were linked with the consumers in India's major metropolitan cities. And this led to the establishment of mother dairies in Mumbai, Delhi, Kolkata, and Chennai. This phase was started in 1970 and lasted till 1979.

Some of the aims kept in mind during this phase:

1. Improvement in the dairy sector in metropolitan cities.
2. Increase of producer's share in the milk market.
3. The speedy development of dairy animals to increase production.

2. Phase 2:

Activities during phase two:

During this phase (1981-1985), the milk sheds which were initially 18 were increased to 36. Some of the highlights are

1. Milk outlets were expanded to 290.
2. Domestic milk production quadrupled.
3. A self-sustaining system of co-operatives and producers was established.

All these activities resulted in making India self-reliant and marketing of milk was increased by several million liters. To conclude, India was moving forward.

3. Phase 3:

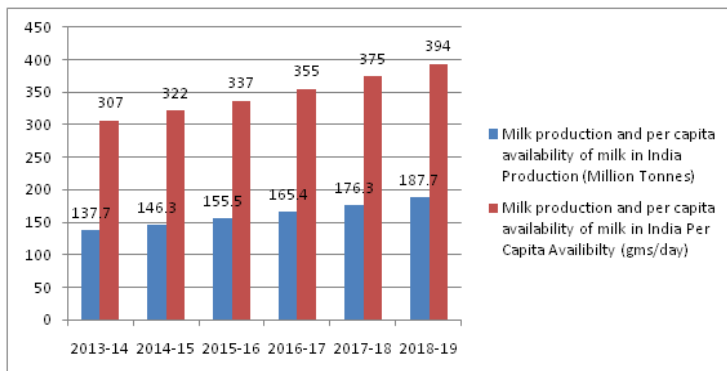
During this phase (1985-1996) the number of milk sheds peaked at 173.

Aims of phase 3:

1. It emphasized on research and development in animal health and nutrition.
2. It aimed at expanding the infrastructure required to procure the market.
3. Increase services for artificial insemination.

All these contributed to the enhanced productivity of milk-producing animals[v].

Figure No.1 Milk Production in India



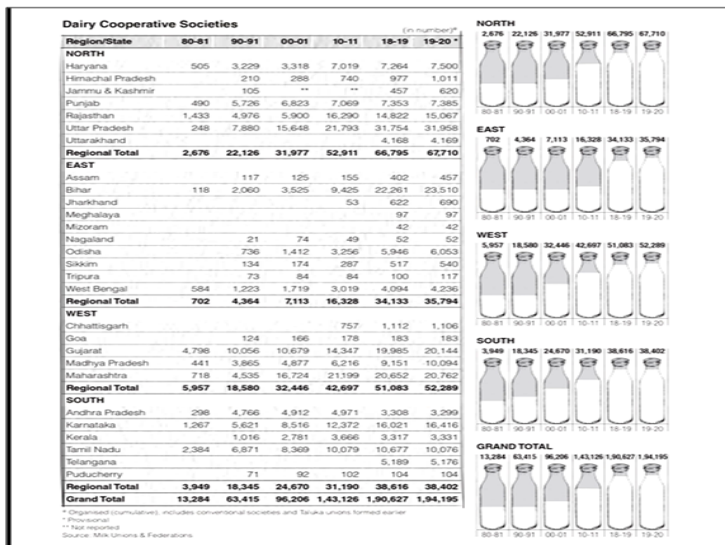
(Source –National Dairy Development Board (NDDB))

Here in figure 1 shows the growth of milk production and per capita availability of milk in India in Million tonnes and in gm per day in recent times . In 2013-14 it was 137.7 million tonnes and 307 gm per day which increased to 187.7 million per day and 394 gm per day by 2018-19. The graph indicates

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the success of white revolution in India[vi]. The milk production in 1950 was merely 17 tonnes , thus a milk deficit country.

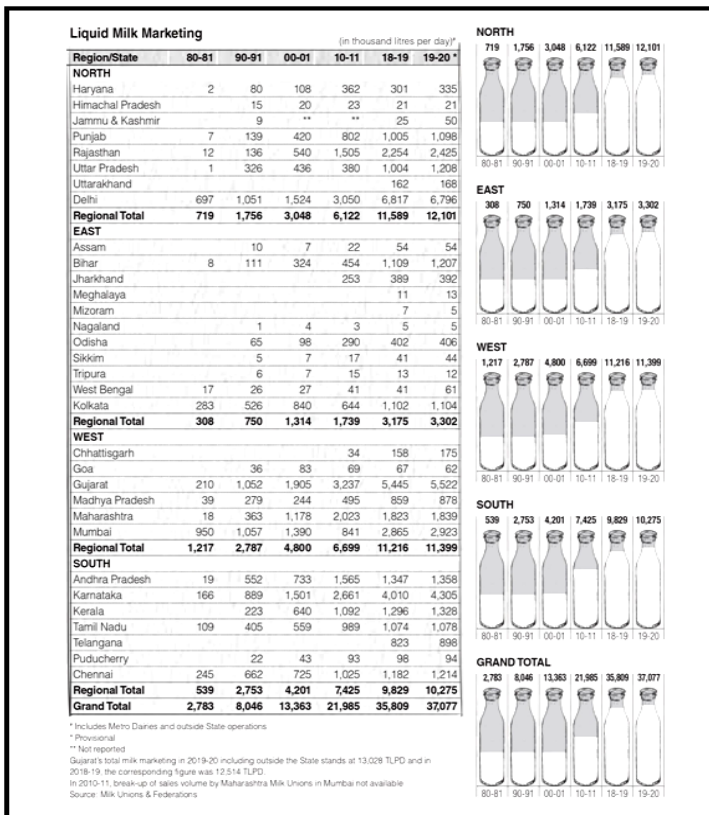
Figure No.2 Working number of Dairy Cooperatives in India



(Source – Milk Unions and federations)

In figure 2 the data is shown about the Dairy co-operative societies in India which are operative in various zones of India i.e North ,south, East and west[vii].

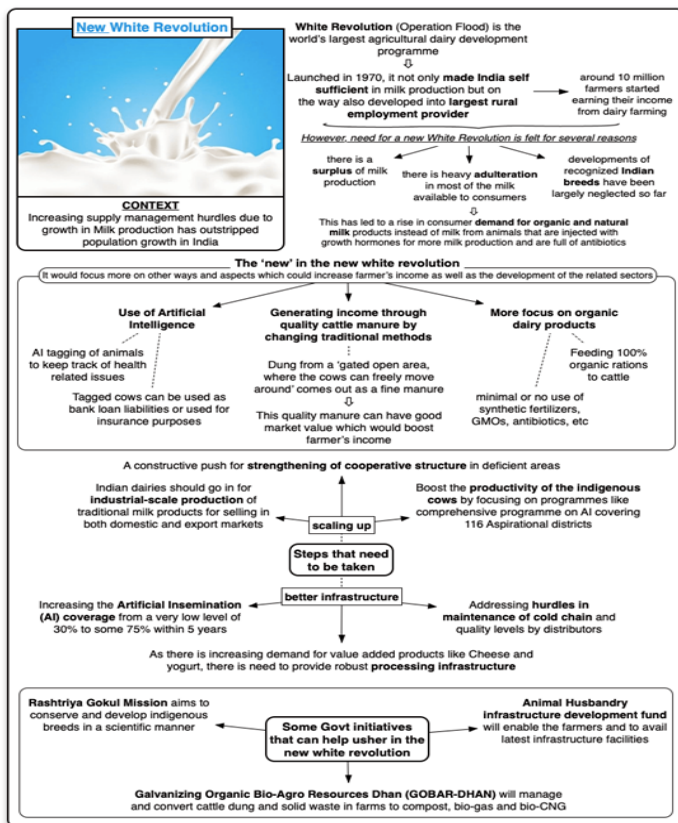
Figure No.3 Milk Marketing in India



(Source – Milk Unions and federations, India)

Figure 3 shows the liquid milk marketing in all four zones as well. If you see the data every decade the production and marketing of milk has increased giving a certificate to white revolution about its success[viii]

Figure 4: White Revolution at a Glance



(Source- <https://iasscore.in/current-affairs/mains/new-white-revolution-t-he-new-milky-way-to-growth>)

In figure 4 it shows the structure of white revolution ,requirements and government initiatives of new white revolution to be done in coming future[ix]

Key characteristics of White Revolution in India

1. Adopted new methods of animal husbandry
2. Varying the composition and proportion of the ingredients in the feed.
3. Fixing the cost of different producers on a sliding scale of India.
4. Dairy cooperatives were introduced to create a small farmer-controlled network.
5. The milk availability per person in India doubled in 30 years.
6. Due to the successful implementation of the White revolution in India, the total milk production output was increased 4 times.
7. The White revolution increased production and hence removed the role of middlemen. 70%-80% of the cost was directly given to the farmers by the customers.
8. In 40 years, the phenomenal growth of milk production reached 100 Mt million from 20 MT million.
9. The dairy cooperative movement under the White revolution stretched across the country covering about 125,000 villages of 180 districts and 22 states.

Effect of white revolution

1. Increased milk production With this aim, the government wanted to enhance the economy of the nation. Increased milk production would not only make India self-sufficient but also expand its business overseas. And this is what happened. With large scale production, India became an exporter of dairy

products.

2. Augmented incomes of people in rural areas
We know that farmers support a major part of India's economy and to be economically stable, the government is required to make reforms that are beneficial for the farmers. So efforts were made to increase rural income.
3. Fair prices to consumers:
The government aimed at regulating the prices of milk and its products all over the country. This was to ensure that consumers across the nation can buy dairy at fair prices without variations.
4. Increased income of, and reduced poverty in participating farmers
5. The white revolution was aimed at maximum participation from farmers. This would increase their income and help them eradicate poverty. What a good way to give back to the people from whom we receive the most.
6. It made dairy farming India's largest self-sustaining industry
7. It became the largest rural employment provider.
8. It hugely impacted the social as well as economic growth of the nation.
9. All the small scale farmers and landless labourers were benefitted as they got employment under the revolution.

10. The quality of the livestock improved
11. Research centers were set up at Anand, Mehsana, and Palampur
12. Metro dairies were set up in 10 metropolitan cities of the nation which increased the productivity and quality of milk and milk products.
13. India became the largest exporter of dairy and its products.
14. The White Revolution had a great impact on the rural population and encouraged them to adopt dairying as an secondary occupation.
15. India no longer needs to import milk or milk production. The nation is capable enough to meet the milk demand of the country. Now India is exporting milk powder to many countries across the world.
16. Cross-breeding was adopted extensively to improve the quality of the livestock.
17. The government introduced many health schemes to ensure disease-free status.
18. White revolution removed the regional and seasonal price variations of the milk. It ensured that the producer gets the major share of what is paid by the consumer along with customer satisfaction.

Conclusion

The white revolution came out to be the most successful step taken by the Indian Government to increase milk production. It had many positive impacts on Indian

economy.. For a developing country like India to become self-sufficient, the white revolution was as important as the green revolution. White Revolution was successful in transforming India from a milk deficient nation to the world's largest milk producer. It doubled the milk available per person which was the need at that time; moreover, India became self-reliant and reached at the peak of its economy.

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