CHAPTER II

Evolution of Dairy Industry in India and in Andhra Pradesh

The purpose of this chapter is to study the evolution of dairy industry in India and in Andhra Pradesh in detail. The origin of National Milk Grid, Dairy development programmes, establishment of National Dairy Development Board and working of dairy cooperatives in India and in Andhra Pradesh are also studied at length.

In the colonial period dairy industry was largely an unorganized activity. The origin of dairy farms under public management goes back to 1886, when the Department of Defence established a few dairy farms to supply milk and milk products to the British troops. Later in 1920, a few more dairy farms were started in Bangalore, Bombay and Karnal. Until 1923, the British government’s approach was confined to the milk requirements of the military only. Later, a more broad based approach was pursued and in 1937, the Lucknow Milk Producers’ Co-operative Union Ltd. was established. In 1945, a British Dairy expert was appointed as milk marketing adviser to the government of India for the development of this industry and he recommended the setting up of Milk Commissions.

Under the greater Bombay Milk Scheme, in 1945 Aarey Milk Colony was set up for the first time by the then Government of Bombay. Similarly, in Bengal, the greater Calcutta Milk Scheme was started two years later. In 1946, the first farmers’ integrated Dairy co-operative Unit (AMUL) was established at Anand in Kaira District of Gujarat, which became very famous in India. However, the first co-operative dairy was organized in 1913 at Allahabad. Amul and the greater Bombay Milk Scheme helped the dairy industry in India to develop at a faster rate. They improved the technique of
processing and marketing under Indian conditions. There were no significant developments on the government part in the initial years after independence as the new government was still busy with planning in a comprehensive manner. Until then dairy industry had not been recognized as a separate industry. It was only treated as part of animal husbandry. However, from the second five-year plan period, the government had taken keen interest in the development of the industry.

**Origin of National milk grid:**

In 1970, the National milk grid, a distant-seeming concept was established in India. The grid is beneficial to both the producers and consumers of milk as it brings down the price of milk in cities offers a fair share of lean season price to the producers and guarantees a more even supply of milk throughout the year to the consumers. It offers more rational prices to both the parties. It puts an end to distress-selling of milk in flush season in rural areas and does away with exorbitant urban milk prices in the summer season. Two significant developments of 1970’s were the initiation of schemes in dairy development and introduction of special schemes for assisting small and marginal farmers and agricultural laboures. Under the later scheme, assistance for the purchase of milch cattle tended to gain priority.

**Dairy Development Programmes:**

The dairy development programmes sponsored by the National dairy development board (NDDB), constitutes a significant step in promoting rural development. These programmes, over the last decade, witnessed a 55% increase in milk production and a five-fold increase in milk powder production. These schemes were carried out in three phases: Operation flood I, Operation flood II & Operation flood III.
Operation flood I was launched in 1970 with an estimate outlay of Rs. 1164 millions, the Indian dairy corporation, a government of India undertaking was set-up in 1970 at Baroda to advance funds for the development of various dairy projects. Funds provided by the corporation are usually on subsidy basis. During the period of Operation flood I programme 18 major dairies were started in India in 10 states, covering 1.3 million firm families*1. Within 10 years the incomes of milk producers have been doubled. The milk supply to the metropolitan cities has increased from 1 million liters to 2.5 million liters.

Operational flood II was thought in an ambitious manner for a period of 7 years starting from 1978-1985, it was provided with an amount of Rs. 4,850 millions. The major objectives of the second phase include – coverage of about 10 million families of rural milk producers, addition of 16 million cross breed cows and buffaloes, development of regional milk grids, with linkage to the national milk grid and major urban centers, development of the processing capacity of the various dairies by providing additional plants and improving the infrastructure facilities concerned with the dairy industry.

*1. In A.P alone there were 79 dairy units including 10 district dairies, 26 mini milk-chilling centers, 19 cooling centers and five milk product factories.
Operation flood III was initiated with an outlay of Rs.9580 millions, which is intended for expansion and improvement of dairy plant, chilling centers and technical input activities. All the above finance is provided at 70% loan & 30% grant basis. In addition to this amounts, the state government granted additional funds for the construction of Quarters and technical input.

**Evolution of dairy co-operatives in India:**

It is a well-known fact that the state’s participation and intervention in the co-operatives does not exit. Owing to low living standards, the members of the co-operative organisations could not contribute fully to the finance of the societies. As such the government came to their rescue by contributing a substantial part of the share capital.

Efficiency of any organisation especially of the co-operative sector depends on the enlightened self-interest of its members and commitment of its employees. Education and training are essential ingredients of any business activity, more so of co-operative activity which has social objectives in addition to the pursuit of the economical goals. Thus the NCDC has been of great help in this sphere. The dairy co-operatives are expected to take full advantage of this opportunity. A national conference of dairy co-operatives held in November 1978 further strengthened support to the idea that the co-operative structure has been the potential to realize the desired objectives of dairy development.

The growth of the dairy co-operatives is uneven in India. It was only during 1950s that Tamilnadu, Gujarat and U.P took some important steps in organizing the dairy co-operatives. But no organized efforts were made for the development of these dairy co-operatives before the introduction of the planning era. Amul, the most significant and
prestigious venture in the dairy co-operatives provided a model for the milk producer co-operatives in India. Such units played an important role not only in increasing milk production but also promoting the economic status of their members. During the last two decades with the assistance of Indian Dairy Corporation a number of village level co-operative milk societies came up and millions of agricultural farmers were involved in the supply of milk to these societies. The total value of the turnover of milk procured by these co-operatives was estimated to be more than Rs.5000 millions per year. To provide guidelines and policy direction, state level federations of dairy co-operatives have been formed in various states.

National Dairy Development Board (NDDB):

Due to very wide dispersal of producing and consuming units of milk, the unorganized sector continues to dominate the milk marketing in India. However, the market structure for milk is constantly changing. The organized sector now handles above 20% of the milk output in the country. The cooperative sector accounts for nearly 50% of this. There are over 1.10 lakh milk producers cooperatives federated into district milk unions and State Dairy Federations, which have organic links with the Mother Dairy at the national level. It is heartening to note that the milk producers in the Anand Model of milk production get net of intermediation, about 60% of the final price. In other basic foods, the returns are as low as 30% of the final price. NDDB supports the development of dairy cooperatives by providing them financial assistance and technical expertise. Over the years, brands in milk products created by cooperatives have become synonymous with quality and value. Brands like Amul (GCMMF), Vijaya (AP), Verka (Punjab), Saras (Rajasthan), Nandini (Karnataka), Milma (Kerala) and Gokul (Kolhapur) are among those
that have earned customer confidence. The Dairy Cooperative Network includes 170 milk unions operates in over 338 districts covers nearly 1,08,574 village level societies is owned by nearly 12 million farmer members.

**Milk Production:**
- India's milk production increased from 21.2 million MT in 1968 to 88.1 million MT in 2003-04.
- Per capita availability of milk presently is 231 grams per day, up from 112 grams per day in 1968-69.
- India's 3.8 percent annual growth of milk production surpasses the 2 per cent growth in population; the net increase in availability is around 2 per cent per year.

**Marketing:**
- In 2003-04, average daily cooperative milk marketing stood at 148.75 lakh litres; annual growth has averaged about 4.2 per cent compounded over the last five years.
- Dairy Cooperatives now market milk in about 200 cities including metros and some 550 smaller towns.
- During the last decade, the daily milk supply per 1,000 urban consumers has increased from 17.5 to 52.0 litres.

**Innovation:**
- Bulk vending - saving money.
- Milk travels as far as 2,200 kilometers to deficit areas, carried by innovative rail and road milk tankers.
- Ninety-five percent of dairy equipment is produced in India, saving valuable foreign exchange.

**Macro Impact:**
- The annual value of India's milk production amounts to about Rs. 880 billion.
• Dairy cooperatives generate employment opportunities for some 12 million-farm families.

In sum, NDDB is a unique example of an organizational innovation with a focus on human resource and co-operative development in India. By placing technology and professional management in the hands of the village societies, it has helped to raise the standard of living of millions of poor people. These processes prove that true development is the development of the people and this could be achieved through putting the instruments of development in the hands of the people.

The National Dairy Development Board has been constituted as a body corporate and declared an institution of national importance by an Act of India's Parliament. The National Dairy Development Board initially registered as a society under the Societies Act 1860. It was merged with the erstwhile Indian Dairy Corporation, a company formed and registered under the Companies Act 1956, by an Act of India's Parliament – the NDDB Act 1987 (37 of 1987), with effect from October 12, 1987. The new body corporate was declared an institution of national importance by the Act. The general superintendence, direction, controls and management of NDDB's affairs vest with the Board of Directors.

NDDB was founded to replace exploitation with empowerment, tradition with modernity, stagnation with growth, transforming dairy industry into an instrument for the development of India's rural people. NDDB was created for fulfilling the desire of the then Prime Minister of India – the late Lal Bahadur Shastri - to extend the success of the Kaira Cooperative Milk Producers' Union (Amul) to other parts of India. That success combined the wisdom and energy of farmers with professional management to successfully capture liquid milk and milk product markets while supporting farmer investment with inputs and services.
NDDB began its operations with the mission of making dairy industry a vehicle to a better future for millions of grass root milk producers. The mission achieved thrust and direction with the launching of "Operation Flood", a programme extending over 26 years and which used World Bank loan to finance India's emergence as the world's largest milk producing nation. Operation Flood's third phase was completed in 1996 and has to its credit a number of significant achievements.

By March 2001, India’s 96,000 dairy cooperatives integrated through a three tier cooperative structure - "The Anand Pattern", owned by more than ten million farmers, procure an average of 16.5 million liters of milk every day. The milk is processed and marketed by 170 milk producers' cooperative unions.

Since its inception, the Dairy Board has planned and spearheaded India's dairy programmes by placing dairy development in the hands of milk producers and the Professionals they employ to manage their cooperatives. In addition, NDDB also promotes other commodity-based cooperatives, allied industries and veterinary biological on an intensive and nation-wide basis.

The past 33 years of the National Dairy Development Board (NDDB) have seen the birth of India's modern dairy industry. The cooperative movement, that NDDB helped to create, has become a model for other developing countries and the international agencies that are concerned with dairy development.

In the late sixties, the Board drew up a project called **Operation Flood** (OF), meant to create a flood of milk in India's villages with funds mobilized from foreign food donations.
The enormous urban market stimulus has led to sustained production increases, raising per capita availability of milk to nearly 200 grams per day.

The dependence on commercial imports of milk solids is done away with.

Modernization and expansion of the dairy industry and its infrastructure, activating a milk grid.

Marketing expanded to supply hygienic and fair priced milk to some 300 million consumers in 550 cities and towns.

Ninety lakh small producers in 74,000 villages are earning jointly an incremental income of Rs 2500 crores from milk.

A nationwide network of multi-tier producers' cooperatives, democratic in structure and professionally managed, has come into existence. Millions of small producers participate in an economic enterprise and improve the quality of their life and environs.

Dairy equipment manufacture has expanded to meet most of the industry's needs.

Imagine every morning and evening, some 9 million farmers carrying potfuls of milk to their cooperatives, milk that will travel from remote villages to towns and cities throughout India. Today, these farmers own some of the largest and most successful businesses in India. Their infrastructure has returned a greater share of the consumers' rupee to the farmer. It has built markets, supplied inputs, created value-added processing and products. All this has happened because farmers' productive capacity has been linked with professional management in cooperatives.
**Dairy Co-operatives in India:**

Dairy Cooperatives account for the major share of processed liquid milk marketed in the country. Milk is processed and marketed by 170 Milk Producers’ Cooperative Unions, which federate into 15 State Cooperative Milk Marketing Federations. The Dairy Board’s programmes and activities seek to strengthen the functioning of dairy Cooperatives, as producer-owned and controlled organizations. DDB supports the development of dairy cooperatives by providing them financial assistance and technical expertise, ensuring a better future for India’s farmers.

**Some of the major Dairy Cooperative Federations include:**

1. Andhra Pradesh Dairy Development Cooperative Federation Ltd (APDDCF)
2. Bihar State Cooperative Milk Producers’ Federation Ltd (COMPFED)
3. Gujarat Cooperative Milk Marketing Federation Ltd (GCMMF)
4. Haryana Dairy Development Cooperative Federation Ltd. (HDDCF)
5. Himachal Pradesh State Cooperative Milk Producers’ Federation Ltd (HPSCMPF)
6. Karnataka Cooperative Milk Producers’ Federation Ltd (KMF)
7. Kerala State Cooperative Milk Marketing Federation Ltd (KCMMF)
8. Madhya Pradesh State Cooperative Dairy Federation Ltd (MPCDF)
9. Maharashtra Rajya Sahakari Maryadit Dugdh Mahasangh (Mahasangh)
10. Orissa State Cooperative Milk Producers’ Federation Ltd (OMFED)
11. Pradeshik Cooperative Dairy Federation Ltd (UP) (PCDF)
12. Punjab State Cooperative Milk Producers’ Federation Ltd (MILKFED)
13. Rajasthan Cooperative Dairy Federation Ltd (RCDF)
14. Tamilnadu Cooperative Milk Producers’ Federation Ltd (TCMPF)
IS. West Bengal Cooperative Milk Producers’ Federation Ltd. (WBCMPF).

**Genesis of Dairy Development in Andhra Pradesh:**

Before the entry of the State into milk processing and marketing, they were mainly in the hands of private individuals. The consumers were not sure about the quality of milk and the cost of milk was highly variable. Hence, the state government thought it fit to organize the entire dairy industry by establishing a Directorate in the government. Prior to 1960 the dairy development was one of the many subjects in the state attached to the Ministry of Animal Husbandry.

Initially a pilot milk supply scheme was started in 1960 in Hyderabad, as a prelude to the implementation of the integrated milk project in 1964. During the same year UNICEF’s aid of Rs.1 crore was utilized for starting two milk powder factories, one at Vijayawada and the other, Central Dairy, at Hyderabad. With the two projects the dairy development in the state took a new turn. In 1967 installation of the chilling centres in Krishna District was also taken up and the work relating to the co-operative dairies at Nellore, Chittoor, Warangal and Kurnool was completed. Meanwhile, setting up chilling and cooling centres at Warangal, Khammam and Nizamabad expanded the milk procurement network of the Hyderabad Central Dairy. Milk producers’ co-operative societies were organized for this purpose in the villages covered by the milk routes.

In the year 1971, the state government established a separate dairy development department as a part of the state Ministry of Food and Agriculture, as the need for milk and supply was growing largely. The integrated milk project, along with the other dairy units, and the co-operative dairies were attached to the new organization.
The Andhra Pradesh Dairy Development Co-operative Federation (APDDCF):

The Andhra Pradesh Dairy Development Co-operative Federation (APDDCF), which came into existence on April 2, 1974, has secured the pride of place among the State co-operatives. All the dairy units in Andhra Pradesh, including the feed mixing plants under the control of the government departments, were transferred to the administrative control of this corporation. At the time of its formation there were 41 dairy units and one milk-producing factory in the state. During the last two decades there has been a tremendous growth in the dairy industry.

The APDDCF is manufacturing milk products such as whole milk powder, baby food and cheese butter. It has brought a silent economic revolution in the rural areas, creating a new hope for eliminating poverty and unemployment in rural areas. To bring the white revolution in the state which is an integral part of the rural development, this corporation has concentrated more on modern technical inputs like, quality of cross breed cattle, better quality of feed, etc., in order to increase the production of milk.

As the years passed, APDDCF built up the infrastructure needed to meet every requirement of dairy industry, be it procurement of milk from over 8,00,000 dairy farmers spread across Andhra Pradesh, or are it chilling and processing 1.6 million liters of milk everyday, or getting it ready for nationwide distribution. It all happened within the vast Dairy plant network of APDDCF. Through extensive use of high technology and management acumen honed to steer such a widespread operation, and brought prosperity to the State many times. The Federation has developed comprehensive systems for procurement and processing of milk. A dedicated research
cell is actively pursuing ways and means of bettering quality. Collaborations with global experts are also being sought, all in an attempt to remain at the forefront of modern dairy industry in India where QUALITY will be the watchword.

At present there are 7,000 primary Co-operatives including 300 Women Co-operatives with a membership of over 8 lakh people across the state. All primary cooperative societies in each district come under district cooperative federation.

**District Cooperative Federations:**

The following are the existing district dairy development cooperative federations in Andhra Pradesh.