

The Dairy Co-Operatives of India

Patel Priyababen Bharatbhai

Department:commerce
Designation: PhD. Scholar

Himamatnagar

Abstract:

India is closely attached with agriculture and agriculture is connected with dairy industry. A dairy cooperative business is owned, operated, and controlled by the dairy farmers, who get the benefit from its services. Dairy co-operative means any business that is between the household animals and the consumer. The dairy industry is the business of produce milk, cheese, creams and any products that use milk as a base, even yogurt. It is a large industry and is very expensive to maintain. Dairy industry is the business of milk, as well as the production and selling of dairy products (milk, cheese, ice cream, etc). The dairy industry actively contributes to the Indian economies. it plays a vital role in Indian economy. India is at number one in buffalo milk in all over world.

This article reviews the theoretical concept of dairy co-operatives in India. It includes the origin of co-operatives in India, about IDA, importance of dairy industry in India, Five-year plans and dairy development, contribution in Indian economy and the milk production in India.

Introduction:

India is primarily an agricultural country. Even then, the farmers and milk producers had to face many difficulties in their professions. Especially in the Dairy Industry, the middlemen were exploiting the milk producers. They would buy milk of good quality at very low prices from them and thus reaping profits at the milk producer's cost. The dairy industry has always been considered a side business of agriculture. Milk has enjoyed a pride of place among all foods in India, being regarded as "nectar" since the dawn of Indian civilization some 5000 years back. The dairy sector is important for its complementarities with agriculture and for its capability to provide protein rich diet to the vegetarian population. The milk producer is receiving consequent to the remunerative price, the milk economy is transforming from a subsistence activity to commercial activity. India is among the world's largest and fastest growing markets for milk and milk products. The average annual growth rate of milk production has been 4 percent during the past decade. The dairy sector is emerging as an important growth, leverage of the Indian economy. It is the largest contribution of agricultural sector to India's GDP (contributing 27% to Gross Domestic Product from agriculture.)From chronic shortage, India has emerged as the largest milk producer in the world. The backbone of the Indian Dairy Sector is the milk co-operatives. Dairy Co-operative account for the major share of processed liquid milk marketed in the country. Milk is processed and marketed by 170 milk producer's co-operative unions, which federate into 15 state co-operative milk marketing federations.

Dairying is a very significant sector to generate employment with lower unit cost of employment for the target groups of the rural India. For example, it is found that one rupee investment in the dairy sector could generate three. In fact, in the best favorable environment, dairying has found to provide as much as 78% of rupees worth employment. it has been also established as better source of employment as compared to other alternatives.

Origin of Dairy Cooperatives:

Dairying, as an activity has existed in India from the dawn of civilization. Vedas, Epics and Puranas depict cattle as a symbol of prosperity. The epidemic outbreak of rinder pest in 1836 causing heavy mortality amongst cattle and buffaloes, led to the setting up of Indian Cattle Plague Commission. This paved way for setting up of Indian Civil Veterinary Department in 1891. From this evolved the department of Animal Husbandry and Veterinary Services, in all the states. This helped in setting up of a network of facilities to provide preventive health cover to livestock.

The earliest attempts at dairy development can be traced back to British rule, when the defense department established military dairy farms to ensure supply of milk and butter to the colonial army. The first of these farms was set up in Allahabad in 1912 and subsequent facilities were established in Bangalore, Ootacamund and Karnal. This did not have any impact on the supply of milk to the urban consumers. To some extent, the Second World War gave impetus to private dairies. Polsons, Keventers and Express Dairy were some of the pioneer urban processing dairies. Milk procurement from the rural areas and its marketing in the urban areas was the major problem in Indian dairying at the time India gained Independence. In one of the earliest urban milk supply schemes, Polsons – a private dairy at Anand procured milk from producers through middlemen, processed it and then sent the milk to Mumbai, some 425 Km away. Mumbai was a good market for milk and Polsons profited immensely. In the mid-1940s, when the milk producers in Kaira asked for a proportionate share of the trade margins, they were denied even a modest increase. The milk producers went on strike, refusing to supply milk to Polsons. On the advice of Sardar Vallabhbhai Patel, a leader in India's Independence movement, the milk producers registered the Kaira District Cooperative Milk Producers' Union, now popularly known as Amul, in 1946. This was the genesis of organized milk marketing in India, a pioneering effort that opened a new vista for dairy development in the country.

Amul:

- It all began when milk became a symbol of protest
- Founded in 1946 to stop the exploitation by middlemen
- Inspired by the freedom movement

The seeds of this unusual saga were shown more than 65 years back in Anand, a small town in the state of Gujarat in western India. The exploitative trade practices followed by the local trade cartel triggered off the cooperative movement. Angered by unfair and manipulative practices followed by the trade, the farmers of the district approached the great Indian patriot Sardar Vallabhbhai Patel for a solution. He advised them to get rid of middlemen and form their own co-operative, which would have procurement, processing and marketing under their control. In 1946, the farmers of this area went on a milk strike refusing to be cowed down by the cartel. Under the inspiration of Sardar Patel, and the guidance of leaders like Morarji Desai and Tribhuvandas Patel, they formed their own cooperative in 1946. This co-operative, the Kaira District Co-operative Milk Producers Union Ltd. began with just two village dairy co-operative societies and 247 litres of milk and is today better known as Amul Dairy. Amul grew from strength to strength thanks to the inspired leadership of Tribhuvandas Patel, the founder Chairman and the committed professionalism of Dr. Verghese Kurien, who was entrusted the task of running the dairy from 1950. Then Prime Minister of India, Lal Bahadur Shastri decided that the same approach should become the basis of a National Dairy Development policy. He understood that the success of Amul could be attributed to four important factors. The farmers owned the dairy, their elected representatives managed the village societies and the district union, they employed professionals to operate the dairy and manage its business. Most importantly, the co-operatives were sensitive to the needs of farmers and responsive to their demands. At his instance in 1965, the National Dairy Development Board was set up with the basic objective of replicating the Amul model. Dr. Kurien was chosen to head the institution as its Chairman and asked to replicate this model throughout the country.

The 'AMUL' brand is managed by a cooperative body, which is known as GCMMF (Gujarat Co-operative Milk Marketing Federation Ltd.). Dr. Verghese Kurien is a founder and chairman of GCMMF for more than 30 years. He is credited with the success of Amul's marketing. GCMMF is India's largest food product marketing organization with annual turnover (2016-17) 270850 million. Its daily milk procurement is approx 14.85 million lit per day from 18,536 village milk cooperative societies, 18 member unions.

It is the Apex organization of the Dairy Cooperatives of Gujarat, popularly known as 'Amul', which aims to provide remunerative returns to the farmers and also serve the interest of consumers by providing quality products, which are good value for money. Its success has not only been emulated in India but serves as a model for rest of the World. It is exclusive marketing organization of 'Amul' brand products. It operates through 56 Sales Offices and has a dealer network of 10000 dealers and 10 lakh retailers, one of the largest such networks in India. Its product range comprises milk, milk powder, health beverages, ghee, butter, cheese, Pizza, Ice cream, Paneer, chocolates, and traditional Indian sweets, etc.

GCMMF is India's largest exporter of Dairy Products. It has been accorded a "Trading House" status. Many of its products are available in USA, Gulf Countries, Singapore, The Philippines, Japan, China and Australia. GCMMF has received the APEDA Award from Government of India for Excellence in Dairy Product Exports for the last 16 years. For the year 2009-10, GCMMF has been awarded "Golden Trophy" for its outstanding export performance and contribution in dairy products sector by APEDA. In 2013-14, GCMMF took giant strides in expanding its presence in International markets. Amul's presence on Global Dairy Trade (GDT) platform in which only the top six dairy players of the world sell their products, has earned respect and recognition across the world. By selling milk powders on GDT, GCMMF could not only realize better prices as per market demand but it also firmly established Amul in the league of top dairy players in world trade. For its consistent adherence to quality, customer focus and dependability, GCMMF has received numerous awards and accolades over the years. It received the Rajiv Gandhi National Quality Award in 1999 in Best of All Category. In 2002 GCMMF bagged India's Most Respected Company Award instituted by Business World. In 2003, it was awarded the IMC Ramkrishna Bajaj National Quality Award - 2003 - certificate of merit- for adopting noteworthy quality management practices for logistics and procurement. GCMMF is the first and only Indian organization to win topmost International Dairy Federation Marketing Award for pro-biotic ice cream launch in 2007. For the innovations, GCMMF has received AIMA-RK Swamy High Performance brand award 2013 and CNN-IBN Innovating for better tomorrow award in 2014. World Dairy Innovation Awards- 2014 for Best Marketing Campaign - "Eat Milk with Every Meal". For the tree plantation activity GCMMF has received seven consecutive Good Green Governance award from Srishti during 2007 to 2013.

The Amul brand is not only a product, but also a movement. It is in one way, the representation of the economic freedom of farmers. It has given farmers the courage to dream.

Indian Dairy Association (IDA):

Indian Dairy Association (IDA) an apex body of the dairy industry was established in the year 1948, in India. The members are from the cooperatives, MNCs, corporate bodies, private institutions, educational institutions, government and public sector units. IDA functions very closely with the dairy producers, professionals & planners, scientists & educationists, institutions and organizations associated with the development of dairying in India. The Association is managed by an apex policy making body called the Central Executive Committee (CEC). The CEC is headed by President and supported by two Vice-Presidents and 19 Executive Committee Members. IDA has emerged as a platform for assimilation and dissemination of knowledge, as an important tool for policy making in the dairy sector, in India. Besides, the IDA, in the recent time, has also succeeded to focus itself at the national and international level. The IDA since has a history of around six decades now, it has had the privilege of being headed by several Presidents and some of them were of national and international fame. It organizes seminars, symposia and exhibitions on a wide range of topics catering to various segments of professionals, scientists, institutions and organizations associated with the development of dairying in India.¹

Importance of Dairy Industry in India:

Dairy is currently the top-ranking commodity in India. Despite the importance of the dairy sector in overall GDP, it receives less government budgeting than the agriculture sector. Further, there has been no concentrated investment in the development of value-added or innovative products, nor any serious effort to support and modernize the informal sector. In light of the increasing demand driven by the growing population, higher incomes and more health consciousness, the slowdown in dairy industry growth is severely worrisome. Based on estimates by the National Dairy Development Board (NDDB), the demand for milk is likely to reach 180 million tonnes by 2022. To supply the market, an average incremental

¹ <http://shodhganga.inflibnet.ac.in/bitstream/10603/33788/3/chapter3.pdf>

increase of 5 million tonnes per annum over the next 15 years is required. In the absence of sufficient increased production, India will need to rely on the world market for imports and because of the huge volume required, it will affect global milk prices. India is the highest milk producer in the entire globe. India is well known as the 'Oyster' of the global dairy industry; India had tremendous milk production in 40 years and has become the world's largest milk-producing nation with a gross output of 84.6 million tons in 2001. The Indian Dairy Industry has achieved this strength of a produces. it is owned and professionally managed cooperative system, despite the facts that a majority of dairy farmers are illiterate and run small, marginal operations and for many farmers, selling milk is their sole source of income. The growth of Indian Dairy Industry during the last three decades has been impressive, at more than 5% per annum; and in the 90's the country has emerged as the largest producer of milk.

The following characterizes India's dairy farming and its relevance to inclusive growth:

- Small and marginal farmers own 33 percent of land and about 60 percent of female cattle and buffaloes.
- Some 75 percent of rural households own, on average, two to four animals.
- Dairying is a part of the farming system, not a separate enterprise. Feed is mostly residual from crops, whereas cow dung is important for manure.
- Dairying provides a source of regular income, whereas income from agriculture is seasonal. This regular source of income has a huge impact on minimizing risks to income. There is some indication that areas where dairy is well developed have less incidence of farmer suicide.
- About a third of rural incomes are dependent upon dairying.
- Livestock is a security asset to be sold in times of crisis.

Five-Year Plans and Dairy Development:

Introduction

After independence, our country adopted the policy of mixed economy wherein both private and public sector was to play their respective roles in development of the country. For rapid economic development accompanied by continuous progress towards equality and social justice, India adopted the policy of five-year plans

Five Year Plans

The table 21.1 reveals that allocation for dairying (D) and animal husbandry (AH) progressively increased the each five-year plan. It was Rs. 158 millions in first five-year plan (1951-56) and increased Rs. 8510 million in sixth five-year plan (1980-85). As compared to agriculture, the allocation is lower. The allocation for the Dairying and Animal Husbandry is on an average 0.8 percent of the total outlay. On analysis of these costs, it has been found that expenditure on dairying has been mainly on collection, transport, processing and distribution of milk. The production aspect of milk and particularly production of quality / hygienic milk has been not given due importance during various plan periods.

1) First five year plan

In the First five year plan (1951-56) the dairy development programme started in a small way. The main activities of the dairy development programme were to supply the good quality milk under hygienic conditions to big cities. This was supported by the scheme of procurement of milk from rural areas. In this plan period, dairy development activities were started in Andhra Pradesh, Bihar, Madhya Pradesh Orissa, Tamil Nadu and Uttar Pradesh. 146 key village blocks having the facility of artificial insemination was established. 650 veterinary hospitals and 25 gosadans were also established. The milk supply scheme was started in two metro cities i.e. Bombay and Calcutta. In this plan period, total production of milk in the country was 18 million tonnes. During this plan period, in 1955, the Indian Dairy Research Institute was transformed into the National Dairy Research Institute (NDRI). Its headquarter was shifted to Karnal from Bangalore.

2) Second five year plan

In the second five year plan (1956-61) certain specific objectives relating to production, marketing and consumption was laid down. In this plan period major thrust was given on quality control and paying remunerative price to both milk producer as well as consumer. It favored the establishment of milk producer co-operative societies at village level to ensure supply of milk to city dairies, creameries and milk drying plants. In this plan period, it was envisaged to establish dairy factory at Anand, the Delhi milk supply scheme, 36 milk plants, expansion of existing 114 key village blocks and 670 Artificial Insemination center, 34 new gosadans, 248 goshalas, 1900 veterinary hospitals. The plan promoted the three private vendors: Glaxo, Levers and Nestle to establish milk product plants. In the first five year plan NDRI, Southern region station at Bangalore was established. In this plan, expansion of the same was carried out. During the second plan period, seven liquid milk plants were completed and eight pilot schemes, three milk creameries and two milk product factories were taken up. In addition, civil works on 31 milk supply schemes were on the verge of completion.

By 1959, there were 2257 co-operative milk supply societies and 77 milk supply unions. About 2, 11, 131 farmers / milk producer were affiliated to this milk supply societies. This 77 milk supply unions owned in aggregate funds to the tune of Rs. 1.83 crores and marketed milk and milk products of Rs. 11.32 crores.

3) Third year plan

The major objective of third five year plan (1961-66) was to develop dairy projects emphasizing milk production in rural areas linked with plants for marketing surplus milk to urban centers. This plan emphasized the need to collect milk by a network of village milk producer's co-operative societies and to organize manufacture and marketing of milk and milk products on co-operative lines. The efforts and money invested on dairying in earlier two plan periods have yielded appropriate results but still the major problem confronting the dairy industry was the absence of public participation. Hence, the plan felt the need of cooperatives and the establishment of separate dairy development departments in each state.

In this plan period aim was kept to establish 55 milk supply schemes, and rural creameries, 6 milk products factories, 2 cheese factories, 4 cattle feed compounding factories. Apart from this, it was also aimed to complete the leftover schemes of the second plan period. Madras milk supply scheme was also started during this period only. One of the most important highlight of this plan period was the establishment of National Dairy Development Board, at Anand in 1965.

4) Fourth five year plan

In the Fourth Five Year Plan, (1969-74) target was kept to set up 49 milk supply schemes, 11 milk product factories and 43 rural dairy centers. Of these 6-milk supply schemes, 2 milk product factories and 32 rural dairy centers were commissioned. The cross breeding in cattle with exotic dairy breeds was taken up on a large scale during the plan by establishing frozen semen stations. The project operation flood was conceived and formulated by National Dairy Development Board in this plan Period.

5) Fifth five year plan

By 1974, 100 Dairy Plants and 62 pilot dairy schemes were set up. Of these 100 dairy plants, 94 were managed by government either through state dairy development corporations or by government department. By 1975, expansion work to increase the capacities of dairy plants in the four metros was completed and two large new plants were commissioned in Bombay and Delhi. A new large plant for Madras was also established and construction of a similar plant for Calcutta was in progress. Apart from these, establishment of 13 new plants and expansion of the capacity of seven existing rural dairy plants acting as feeder balancing units was also planned. Probably for the first time more and appropriate attention was paid to the function of research and development in the field of dairying during fifth five year plan (1974-79). During this plan period for the benefit of farmers particularly of weaker sections of Gujarat, Maharashtra, Uttar Pradesh and Orissa, a Project on Cattle breeding, farm forestry and food for work programme was taken up.

6) Sixth five year plan

Sixth Five year Plan (1980-85) laid special emphasis on projects for increasing the productivity of various indigenous species of livestock through genetic improvement and better healthcare. In this plan period necessary steps were taken to make available reliable and timely statistics of livestock. During this plan, a new development project was started in Sikkim, 3 integrated cattle - cum - dairy development projects were started in Rajasthan, Madhya Pradesh and Karnataka.

7) Seventh five year plan (1992-97)

Approaches and strategies of seventh five year plan are as under:

- To provide necessary infrastructure to achieve the accelerated growth in livestock production.
- To enable large section of rural population, including small and marginal farmers, laborers, tribal and weaker section to improve their nutritional and economic status by providing employment through livestock rearing.
- To make available good breeding material for increasing productivity.
- To strengthen animal health facilities, bringing them to the doorstep of farmers
- To make available quality fodder seeds more widely.
- To increase the coverage of area and farm facilities under co-operative dairy programmes and improve milk handling, processing and marketing infrastructure.
- Launching of technology mission for
 - i) Dairy cattle improvement (through embryo transfer tech.)
 - ii) Dairy development

Plan outlay was Rs. 1134.62 crores on AH and Dairying (Rs. 493.45 crores to be used for dairying only). Since 1950, total expenditure on AH and Dairying, during all the five year plans Rs.1584.17 crores.

8) Eighth five year plan (1992-97)

The emphasis was laid on enhancement of the productivity of milch cattle through up gradation by cross breeding. Frozen semen technology based upon progeny bulls is a major part of the programme. Drought intensity during the seventh five year plan has pointed to the need for integrating animal husbandry programme with the development of fodder. Programme for improving availability of fodder and seeds, development of pasturelands, feed analytical laboratories for analysis of various nutrients and toxins were taken up. The technology mission on dairy development was established to dovetail the activities of the central and state government.

9) Ninth five year plan (1997-98 to 2001-02)

The realities of post- GATT world reflected in the report of working group on animal husbandry and dairying for the formulation of 9th five years plan.

- Objectives of ninth five year plan
 - i) Effective health coverage
 - ii) To reduce economic losses due to diseases.
 - iii) To enlarge export of livestock products.
 - iv) Enforcement of international animal health code.
 - v) Harmonization of vaccines and biological product in India.

10) Tenth five year plan (2002-2007)

In the tenth five year plan, it was envisaged that Animal husbandry and dairying will receive high priority in the efforts for generating wealth and employment, increasing the availability of animal protein in the food basket and for generating exportable surpluses. The overall focus was on four broad pillars viz. (i) removing policy distortions that is hindering the natural growth of livestock production; (ii) building participatory institutions of collective action for small-scale farmers that allow them to get vertically integrated with livestock processors and input suppliers; (iii) creating an environment in which farmers will increase investment in ways that will improve productivity in the livestock sector; and (iv) promoting effective regulatory institutions to deal with the threat of environmental and health crises stemming from livestock. The Tenth Plan target for milk production was set at 108.4 million tonnes envisaging an annual growth rate of 6.0 per cent. The allocation for animal husbandry, dairying and fishery was Rs. 2500 crore during the Tenth plan. It was emphasized that use of technological and marketing interventions in the production, processing and distribution of livestock products will be the central theme of any future programme for livestock development. The generation and dissemination of appropriate technologies in the field of animal production as also health care to enhance production and productivity levels will also be given greater attention.

11) Eleventh plan (2007-2012)

Livestock plays an important role in Indian economy and is an important sub-sector of Indian agriculture. The contribution of livestock to the GDP is about 4.5% and the sector employs about 5.5% of the workforce. Livestock provides stability to family income especially in the arid and semi-arid regions of the country and is an insurance against the vagaries of nature due to drought, famine, and other natural calamities. Major part of the livestock population is concentrated in the marginal and small size of holdings. Growth during the Tenth Plan has been at the rate of 3.6%. 1.79 The goals for the Eleventh Five Year Plan for the livestock sector would be (i) to achieve an overall growth between 6% and 7% per annum for the sector as a whole with milk group achieving a growth of 5.0% per annum and meat and poultry group achieving a growth of 10% per annum; (ii) the benefit of growth should be equitable, benefiting mainly the small and marginal farmers and landless labourers and should benefit poorly endowed areas like draught prone, arid, and semi-arid areas; (iii) to provide adequate animal health services for effective disease control; (iv) the sector should generate additional employment opportunity to people in the rural areas especially to the female population; (v) livestock should provide major source of income in the selected areas having potential for mixed crop-livestock farming system; and (vi) the growth in the sector should result in the improvement of environment, specially in the rural areas. Market opportunities have opened up for the livestock sector following the economic liberalization. But the sector's ability to capitalize on new market opportunity is constrained by the availability and quality of support services which, at present, are mainly provided by the government. Moreover, these services are not available at the doorsteps of the producers. There is a need to restructure service delivery mechanism to become conducive to the requirement of the rural livestock producers. Lack of credit for livestock production has been a major problem. Public sector lending is very low. The strategy should be to correct these distortions and ensure timely availability of inputs and services including credit to livestock farmers.

Total Contribution to the Indian Economy/ Sales:

²The Indian Dairy Industry engages in the production and processing of milk & cream. This industry is involved in the manufacture of various dairy products like cheese, curd, yoghurt etc. The Indian Dairy Industry specializes in the procurement, production, processing, storage and distribution of dairy products. India as nation stands first in its share of dairy production in the international scenario. The industry contributes about Rs 1,15,970 crores to the national economy.

Milk Production in India:

³Indian dairying is characterized by very small - most producers own 1 to 3 milch animals - and largely a rural-based activity. Animal productivity is comparatively low. Dairying is based on family labour, crop residues and natural grasses and is mostly a supplementary source of income to producers. Thus, around 750 lakh rural families are engaged in dairying activities related to milk production, accounting for about 98% of the milk production. Only about 2% of the milk production is in urban areas. During the last 30 years since the launch of Operation Flood in 1970, the milk production in the country has increased from about 220 lakh tonnes in 1970-71. India's milk production has grown at around 4% annually in the recent years, which far exceeds the global average of about 1%. This sustained increase in the domestic milk production increased the country's per capita availability of milk. The major milk producing states in the country are Uttar Pradesh, Punjab, Rajasthan, Madhya Pradesh, Maharashtra, Gujarat, Andhra Pradesh and Haryana, which account for about 70% of milk produced in the country.

Year	Production (Million Tonnes)	Per Capita Availability (gms/day)
1991-92	55.6	178
1992-93	58.0	182
1993-94	60.6	187
1994-95	63.8	194
1995-96	66.2	197
1996-97	69.1	202
1997-98	72.1	207
1998-99	75.4	213
1999-2000	78.3	217
2000-01	80.6	220

² <http://www.indianmirror.com/indian-industries/dairy.html>

³ <http://www.nddb.org/information/stats/milkprodindia>

2001-02	84.4	225
2002-03	86.2	230
2003-04	88.1	231
2004-05	92.5	233
2005-06	97.1	241
2006-07	102.6	251
2007-08	107.9	260
2008-09	112.2	266
2009-10	116.4	273
2010-11	121.8	281
2011-12	127.9	290
2012-13	132.4	299
2013-14	137.7	307
2014-15	146.3	322
2015-16	155.5	337
2016-17	165.4	355

Source: Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture

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