



## STUDY ON PERFORMANCE OF DAIRY INDUSTRY IN KARNATAKA

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### The Dairy Scenario

The future of India's dairy industry will have to be built on quality and quantity alone. The Indian dairy industry must have the latest modern technology for milk processing and product manufacture. We must define the standards necessary to achieve and maintain world-class quality. This been an eventful journey, Dairying in India has come a long way. From being written off as a basket case a few decades back, India has emerged today as the largest milk producer in the world with an annual production of more than 91 million tones. More than 70 per cent of our milk producers are small marginal farmers, the animals are low yielding, non-descript ones, and, land holdings are small. By any yardstick, this is a remarkable feat.

We could overcome our weaknesses because of our inherent faith in the Indian farmer whose skill as a farmer, and whose wisdom as a human being has transformed dairying in India. Our farmers have proved that given command over the resources they create, they can and will produce miracles. The success of India's dairy industry is not a story of the triumph of science and technology. There have been no miracles. The white revolution was possible because we created structures our farmers control over The resources they create.

These structures have first and foremost returned a greater share of the consumer's rupee to the farmers. They have built markets, supplied input, and created value-added products. These structures have forced others in the dairy business to compete fairly and they have helped turn the terms of trade in favour of the rural producer. This in turn has provided the incentive for the farmer to produce more and usher in the white revolution.

Over the years, milk has been transformed from insufficient production to self-sufficient production, from rationing to plentiful availability, from loose unhygienic milk to milk that is pure, from subjugation to a symbol of farmers' economic independence. Quality milk is now available in over 1000 cities throughout the length and breadth of our country. And this is milk with a difference- pasteurized, packaged, branded, owned by farmers-a symbol of quality.

We cannot forget that there is something very special about milk. It requires that any brand of milk and milk products to act not simply as a seller, but as a trustee. Milk is not a white good or a brown good. Milk is not a status symbol: rather it is the symbol of nutrition. Milk is not only, food, but an essential ingredient of life itself, and by its very indispensable nature, it has one of the biggest markets, both nationally and globally.8

The market scenario is changing fast. A rise in household incomes has led to a metamorphosis of rural and smaller markets. There has been a significant increase of middle class families and migration from rural areas to smaller developing towns. All this has resulted in the emergence of growing markets and demand in smaller towns across the country.

The requirements of our nation on the move must be met first. The needs of an ever growing population have to be met with sustainable economic development. India's population has risen from 350 million in 1950 to 1170 million today (2016). As cities draw people to new employment opportunities, the current urban-rural ratio of 33:67 in the year 2016.

Population gives us one picture. The other is provided by demand for household commodities. By 2010, requirement for food grains would touch 266 million tones rising to 343 million tones by 2020. For milk, the estimated consumption will be 153 million tones by 2016 and 271 million tones by 2020.

### **Dairy Co-Operatives**

The co-operative movement has been a balancing factor between the private and public sectors of the Indian economy. From a milk deficit nation in the 1950s and 1960s India has developed into not only a milk sufficient nation but the largest milk producer in the world. The credit for this goes to India's milk co-operatives whose story of success, growing pains, setbacks and opportunities is graphically presented by Dr R.S. Khanna in his book 'Indian Dairy Co-operatives', published by the Indian council of Agricultural Research (ICAR), New Delhi.<sup>10</sup> In 1964, then Prime Minister LalBahadurShastri was greatly impressed with a visit to an Annual dairy co-operative in Anand, Gujarat, which had made a difference to the National Dairy Development Board (NDDB), to replicate the "Anand Pattern" dairy co-operatives on a national level. How his led to spectacular growth in milk production and distribution through 'Operation Flood' is an account worth reading in the book.

The NDDB 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 co-operatives. It proved that co-operatives assisted by competent professional managers can attain levels of achievement far surpassing that of many an established enterprise in the Indian corporative sector.

The co-operative movement has been a balancing factor between the private and public sectors of the Indian economy. Management intervention by the NDDB in reviving sick dairy co-operatives has proven its merit. Through such intervention, the NDDB has successfully made dairy co-operatives in Punjab, Rajasthan, Maharashtra, Bihar and Karnataka commercially sound and financially viable business enterprises.

However, if the government's initiatives acted as catalysts in the co-operative movement, all the problems that hamper their efficient functioning can be blamed on government intervention. Many dairy co-operatives suffer because of control either by self-serving bureaucracy and/or by politicians.

Since economic liberalization in the 1990s, the dairy industry also underwent major reforms leading to its privatization and liberalisation. Prior to delicensing, the manufacture of dairy products was restricted through various measures. Cyber technology is also helping to transform the rural face of cooperatives like Amul. It is bridging the rural-urban digital divide by providing information kiosks at the village co-operative level.

### **District Co-operative Milk Unions**

All 30 Districts of the State are covered by co-operative dairying activity implemented through 13 Districts milk unions. The coverage is as below :

3 unions	– 1 District each	– 3
5 unions	– 2 District each	– 10
4 unions	– 3 District each	– 12
1 union	– 5 District each	– 5
13 unions	– total districts	– 30

## **The Union Functions in two Segments**

1. Field activity for scientific and economic milk production and procurement with holistic approach for upliftment of the producers .
2. Processing and marketing of milk and milk products.

The second step involved in the milk process is the grading work. The object of milk grading is to segregate milk into groups of defined characteristics and properties so as to obtain optimum utility by selling milk expeditiously at remunerative price and ensuring profitability of cattle rearing. In the State of Karnataka, grading of milk on the basis of quality especially by subjective assessment of fineness, length, yield etc., is not generally carried out. The reason is the cattle in the State mainly yield coarser milk variety, which is fit only for the manufacture of country milk products in the name of Nandini and not for other purposes. The milk is procured by the milk unions. Karnataka State has 13 milk unions for the process of milk and milk products.

### **1. Bangalore Milk Union**

The garden city turned into the silicon capital of India has made rapid strides in dairy activity. From 50,000 Liters a day 4 decades back under UNICEF, today it is a 6 Lakh litres/day. It covers 12 taluks with more than 1700 societies functioning. Hoskote on the outskirts of the city boasts of a 1.5 LLPD chilling plant, capacity comparable to many dairies in the state. **Speciality of the Union** Fully computerized dairy with no human handling of milk with the distinction of having highest procurement and highest sale of milk by any dairy in Karnataka.

### **2. Kolar Milk Union**

Kolar-The 'silk land' is now a 'milk land' this union became autonomous in 1987 and has now more than 1600 DCSs covering 11 taluks. Innovations include as follows.<sup>15</sup>

- a) Ultra high temperature treatment adopted for 'good life' a 60 days shelf life product without refrigeration.
- b) 'Smart & Slim' low fat, vitamins rich milk for health conscious sectors.
- c) Flavored drinking yoghurt.
- d) Ghee in pearlpet jars.
- e) Cheese plant.
- f) Makes MastiDahi for Amul.

**Speciality of the Union** First union to launch 'good life' milk in tetra finopackage, flavoured drinking yoghurt, ghee in pearlpet jars. 'MastiDahi' and to adopt community milking system, clean milk production as brand ambassador. Obtained primacy by having a first elected woman Director on the Board.

### **3. Mysore- Chamarajnagar Milk Union**

City of palaces and banana: Here was initiated by the Maharaja, the Artificial Insemination concept. This union reciprocated by organizing "Cluster Artificial Insemination (AI) Centres" covering 11 taluks and more than 950 functional DCSs. **Speciality of the Union: Union** has launched ground level water storage tanks during drought for cattle in more than 600 DCS.

### **4. Mandya Milk Union**

Tiny in size but huge in sugar & paddy production now turned into land of milk. An offshoot of Mysore & Tumkur unions, it covers 7 taluks & more than 1009 DCSs functioning. Union owns a 10 MT/ day powder plant taking care of surplus of Mandya and neighboring Hassan and Mysore unions. Also possesses an

export marketing license to market SMP. **Speciality of the Union:** Excellent skim milk powder packed in 50 gm in metalised polyester packs, 200 and 500 gm cartons, first union to export powder and to adopt rationalized price structure.<sup>16</sup>

### **5. Tumkur Milk Union**

The Tumkur District known for historical temples and Educational Institutions is known for its coconut, a major commercial crop apart from groundnut, adopting Dairying as one of the main occupations with initiation of dairy activities in 1975, today has more than 750 functioning DCS covering 10 taluks. **Speciality of the union:** First milk union to turn around after availing the financial assistance under rehabilitation scheme.

### **6. Hassan Milk Union**

Coffee, Potatoes, Oranges, Honey, Cardamom, Butter & Pepper used to be the talk of the districts covered by the union in this historical fame of Shravanabelagola, Belur, Halebid along with iron in Kudremukh. Today 78% of the 18 taluks are covered under more than 900 functioning DCSs. **Speciality of the union:** First union to record the growth of 100% increase in milk procurement. The union has been awarded by GOI with “ National energy conservation award” 4 times for implementation of energy conservation programmes.

### **7. Dharwad Milk Union**

The city oil crops, serene coastal line at Uttara Kannada district & green forests. The famous ‘Dharwadpeda’ . Here we have more than 475 DCSs covering 26 taluks almost all but for two & a powder plant unit taking care of other unions surplus as well. **Speciality of the union** First union to segregate buffalo milk from cow’s milk and market it, production of 10gm butter chiplets in meeting the needs of the entire state, produces and sells mudpot curds popularly known as ‘Kudike Mosaru’ and brownish Dharwadpeda which finds market even across Bangalore. Supplied whole milk powder (WMP) to Defence.

### **8. Belgaum Milk Union**

The ‘Mini Punjab of Karnataka’, the city of Rani Chennamma the freedom fighter, city famous for tobacco is one of the two milk union specializing in processing & marketing of ‘shubham’, high fat mixed milk. It has more than 350 functioning DCSs covering 10 taluks. Union markets substantial quantities of Nandini milk in the neighbouring State of Goa also. **Speciality of the union :** Produces ‘Kunda’ which also finds market in Bangalore, also known for delicious buffalo milk.

### **9. Bijapur Milk Union**

Union covering Bijapur and Bagalkot districts of perennial drought, boasting of perennial drought, boasting of the famous Golgumbuz monument, Sculpture of Chalukya dynasty and famous for variety of fruits. Here are more than 160 functioning DCSs covering 10 taluks. **Speciality of the Union:** Famous for Buffalo milk with Highest fat content in Krishna river basin of the union.

### **10. Gulbarga Milk Union**

The ‘scorching heat city’ famous for cement plants, shahabad stones and saint Basaveshwara has more than 200 functioning DCSs covering 14 out of 15 taluks in Gulbarga, Yadagiri and Bidar Districts. **Speciality of the union:** Union with resplendent of self-help groups and women societies with four women directors on the

union's board for the first time in the State.

### **11. Dakshina Kannada Milk Union**

The place of temples like Dharmastala, Udupi- a panorama of palm fringed beaches & enchanting forests between the western ghats& the Arabian Sea with popular crops like Arecanut , Cocoa & Coconut. There are more than 700 functioning DCSs covering Mangalore &Udupi Districts. **Speciality of the Union:** Highest per animal off take of Cattle Feed, much above the standards set by any nutritional Board. Its procurement and sale of milk is well balanced.

### **12. Shimoga Milk Union**

The origin of keladi dynasty, a junction of forest & drought areas covers 3 districts-shimoga, davanagere and chitradurga. Here in the vicinity of the famous jog- falls is situated, more than 750 functioning DCS in 18 taluks. **Speciality of the union:** Union which has promoted growing herbal medicinal plants by woman farmers.

### **13. Raichur-Bellary-Koppala Milk Union**

The Vijayanagarempire boasting of Hampi and Idols like Hakka & Bukka and neighbouring Sri Raghavendraswamy is also richly endowed with Manganese & iron ores. Here are more than 330 DCSs functioning in 90% of the 16 taluks in Raichur, Bellary and Koppala Districts. **Speciality of the Union:** First Union to avail Financial Assistance of Rs. 1 crore under Bellary special Scheme', GOK.

Above 13 milk Unions are working in our Karnataka. It has 11.20 lakhs liters chilling capacities /day in 45 chilling centers. 22.00M.T/day milk powder has been produced in 2 powder plants at Mandya and Dharwad milk unions and 22.10 lakhs liters / day milk processing in 17 Dairies. In this way milk unions are processing and procurement of milk for the dairy development .

### **Milk Product Sector-KMF**

Karnataka Milk federation which is most popular as KMF.<sup>22</sup> The Karnataka Co- operative milk producers federation Ltd., a cooperative apex body in Karnataka, has been implementing Dairy Development activities in the entire state since 3 decades in a phased manner through the 13 district milk union, ushering prosperity in the lives of rural Milk Producers.

- The first ever World Bank funded Dairy Development integrated project was launched in 1975<sup>23</sup> on co-operative principles covering 8 southern districts initially and KDDC was setup for implementation.
- KMF came into existence in 1984 and Dairy Development activities were extended to cover the entire state under Operation Flood-11.
- OF-11 ended in 1987 and the process of Dairy Development continued through 13 District Milk Unions under OF- 111 from 1987 to 1996.
- The post operation Flood and Perspective Plan works are carried out from 1996 in coordination with NDDB.

## **Objectives**

- To build primary Dairy Co-operative Societies in co-operative sector to manage the dairy activities.
- Providing assured and remunerative market for the milk produced by the farmer members.
- Providing quality milk & milk products to urban consumers.
- To ensure provision of milk production inputs, processing facilities and dissemination of knowhow.
- To facilitate rural development by providing opportunities for self employment at village level, preventing migration to urban areas, introducing cash economy and opportunity for steady income.

## **Affiliated Milk Unions**

The Federation in its fold has 13 District Milk Unions spread-over the entire State of Karnataka-Bangalore, Mysore, Tumkur, Hassan, Mandya, kolar, Dharwar, Belgaum, Bijapur, Bellary, Gulbarga, D. Kannada and Shimoga milk unions.

## **Units of KMF**

The following KMF Units are in operation to cater to the needs of centralized technical Input facilities.<sup>25</sup>

1. Mother Dairy, Yelahanka, Bangalore (including Ice Cream plant, powder plant )
2. Nandini Milk Products, KMF Complex, Bangalore.
3. Cattle Feed Plant, Rajankunte.
4. Cattle Feed Plant, Gubbi.
5. Cattle Feed Plant, Dharwad.
6. Cattle Feed Plant, Hassan.
7. Nandini Sperm Station, Hessarghatta.
8. Pouch Film Factory, Munnekolala.
9. Central Training Institute, Bangalore & regional training centers at Dharwad & Mysore.

## **Physical Achievements**

As at the end of December 2010, 11500 Dairy Co-operative Societies (DCS) have been organized covering 20193 villages in 13 milk Unions area. 9793 DCS are functioning with 97% of them in profit.<sup>26</sup>

19.92 lakhs farmers are members in these DCS out of which of 6.29 lakhs are women members, 7.43 lakhs are small Farmers, 5.70 lakhs are Marginal Farmers, 3.56 lakhs are landless labourers and 3.23 lakhs are others. In total 2.09 and 1.14 lakhs of them belong to SC and STs.

## **Milk Procurement**

Dairy Co-operative societies, in villages, are procuring milk from the member producers twice in a day. The average daily procurement is 42.85 lakhs kg during 2009-10 up to December 2010. The peak procurement was 45.22 lakh kgs. The surplus milk was converted in to milk products.<sup>27</sup>

Karnataka Milk Federation is in second position, as far as milk procurement is concerned at the National. Twenty dairies with a total processing capacity of 26.65 lakhs ltr.Per day. 44 milk chilling centers with chilling capacity 15.00 lakhs ltrs. Per day and 4milk powder plants with drying capacity of 62 MT per day, are functioning.

During the year 2009-10 an average of 22.49 lakhs ltrs per day is sold as fluid milk out of which, an avg. of 13.01 lakh. Ltrs is sold in Bangalore city. To meet the demand of consumers, milk products like, Goodlife,

UHT milk in different variants, Curds, Butter, Ghee, SMP, flavoured Milk (in 8 Flavors), Mysore pak, Nandini premium burfi, peda, Khova, Paneer, Chasheburfi, Rasgulla, Badam Powder, Jamoon Mix, Jammon Container, Nandini Bite and Yoghurt are produced and sold. In addition to these, other products like sweet curds, “**KudikeMosaru**” ( Curds in Pots), Butter Milk, Ice Cream and Kunda are also being produced and sold. In addition to these products flavoured milk and butter milk, in attractive tetra pack, has been released to the market.

### **Performance Highlights**

- State entirely covered by Dairy Development.28
- Elected board, in position, in all District Milk Unions & Federation.
- Low price spread between procurement and sale prices resulted in payment of higher price to the milk producers.
- 97% of the Milk producers Co- Operative Societies are earning profit.
- At present an average payment of Rs. 407 lakhs/day is made to milk producers.
- Implementation of ‘ Yashaswini Health Insurance Scheme’ to benefit farmer families of Dairy Co- Operatives.
- The four cattle Feed Plants Owned by KMF have been awarded with the ISO 9001:2000 certificate for best maintained quality standards by Indian Register Quality systems accredited by RVA.
- Nandini Sperm station has been awarded with ISO certificate & has been merited by Ministry of Agriculture, GOI as 2nd best A grade semen station in the country during 2005-06.
- KMF has exported SKIM Milk powder to Nepal, Bangladesh, Oman, Madagaskar, Burma, Singapore, Thailand&Phillipines.
- Mother Dairy, Bangalore has obtained clearance from Export Inspection Agency, Ministry of Commerce, and Govt. of India for export of Skim Milk Powder.
- Establishment of 6 lakh litres/day state of art, fully automated Mega Dairy in Bangalore expandable to 10 lakh litres/day.
- Kolar,Mysore, Dakshina Kannada & Tumkur Unions have obtained ISO 9001-2000. HACCP &CM certificates.
- B’ lore Milk Union has obtained ISO 2002005, which is the first dairy in south India to get the Certification. Mother Dairy has also obtained this certificate recently.
- About 6500 MTs of Nandini Ghee has been supplied during 2001-2010 to ThirumalaThirupathiDevasthanam.
- Dividend and bonus of Rs. 10.49 crores for the period 2001-2009 has been distributed by KMF out of profits made to share holders and unions.
- Area-specific Mineral Mixture production started in Gubbi Cattle Feed Plant with the technical guidance of NIANP Bangalore.
- Karnataka Milk Federation is successfully implementing Central Government Schemes, such as Clean Milk Production Programme, Special Package for suicide Prone Districts, Fodder Development etc., and State Government Schemes such as ‘AmrutaYojane’.
- Opening of ‘Nandini Dairy Farmers Welfare Trust’ Hostel for Farmers Children at the cost of Rs.12.96 Crore for higher education of 600 Boys and 400 Girls.

### **The Developmental Programmes**

- A New 300MTs balanced Cattle feed Plant, to meet burgeoning demand for balanced cattle feed in the state, is being constructed at Hassan with an outlay of 39 Crores.29
- Strengthening/Expansion of Mother Dairy, Bangalore adopting modern technology from 4 LLPD to 7LLPD of milk handling facilities at an outlay of Rs. 35 crores.
- A new state of the art product plant is being commissioned at Channarayapatna in Hassan district at a cost of Rs.72 crore to handle surplus milk of Mysore, Tumkur, Hassan and Mandya Milk Unions.
- To implement an Integrated Development Plan at Northern Karnataka in the areas of Dairying and Horticulture on partnership basis with one of the NDDDB designated/subsidiary company or with m/s. Tetra Pak.
- Establishing a modern Cattle Feed Plant of 500 MTs capacity near Bangalore.
- To provide support in establishing necessary chilling infrastructure in the form of Bulk Milk Coolers.
- Expansion of Bangalore Mega Dairy processing capacity and establishing value added product plant.
- Expansion of Kolar, Mysore, Tumkur, Mandya, Hassan and Shimoga Dairy processing capacities and strengthening of chilling facilities.
- Modernisation of Mandya Powder Plant strengthening of chilling facilities.
- Establishing new dairy at Davangere district of Shimoga Milk Union and Strengthening at Chilling facilities.
- Establishment of modernized Nandini Milk Products Plant at an estimated cost of Rs. 10.00 crores.

## **Conclusion**

While analyzing the various plans, it has come to the conclusion that animal husbandry sector is not received as much importance as that of agriculture, and sericulture etc,. Even the financial allocation made to the improvement of this sector is quite inadequate and sometimes neglected by Government concern. They considered this as un-remunerative sector, though it is a sizeable foreign exchange earner. Further adding that, the Karnataka Government has implemented several policies and programmes especially for the upliftment of weaker sections, rural landless poor and agricultural labourers of all community through the generation of rural employment like cattle rearing& Buffalo rearing. Many of the programmes implemented by the Government has failed to achieve its objectives. This is due to inadequate funds from Government and socio-economic conditions of rural poor are mainly responsible for this situation.

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