

Cooperatives in achieving Food Security and Sustainable Development: Indian Experience

Cooperatives are an economic and social force in the world. As may be widely known to cooperative scholars, this organization form hosts at least billion members' worldwide (International Cooperative Alliance, 2012a). These organizations provide more jobs than all multinational corporations put together. In 2013 an overall increase in the total turnover of the Top 300 co-operatives and mutual organisations. The largest 300 co-operatives and mutuals report a total turnover of 2,360.05 billion US dollars in 2013 compared with 2,205.70 billion US dollars the previous year. (World cooperative Monitor-2015)The cooperative movement in India is more than a century old with the first major impetus provided by the passage of the Cooperative Society Act in 1904. A large number of cooperatives cover segment like: agriculture, consumer, housing, thrift and credit, transport, banking, fisheries, workers, industrial and general services. Again, almost half of the cooperatives operate in the agricultural sector and a large number of them are production and its distribution through consumer cooperatives. The 2012 RIO+20 United Nations conference on Sustainable development that recognized the potential role of cooperatives in the realization of sustainable development. Cooperative enterprises are a model well suited the business to deliver sustainable Development Goals.

The following chain of action can be used to assess the role of cooperatives in sustainable development



These five stages rendering support to the cooperatives to achieve the goals. There are many cooperative organizations supporting to achieve the sustainable development. This paper analyses the role of AMUL , IFFCO and NCCF contribution towards the food security and sustainable development.

The Dairy sector in India has grown substantially over the years. As a result of prudent policy intervention, India ranks first among the world's milk producing nations, achieving an annual output of 137.68 million tonnes of milk during the year 2013-14 as compared to 132.43 million tonnes in 2012-13 recording a growth of 3.96%. This represents a sustained growth in the availability of milk and milk products for growing population.

Dr.XLX.Wilson(wilsonxavier7@gmail.com), is with the Postgraduate and Research Department of Cooperation, Sri Ramakrishna Mission Vidyalaya College of Arts and Science (Bharathiar University) Coimbatore, India and Visiting Scholar, University of Helsinki, Finland.

Dr.G.Thanikachalam, is with the Postgraduate and Research Department of Cooperation, Sri Ramakrishna Mission Vidyalaya College of Arts and Science (Bharathiar University) Coimbatore.

Dairying has become an important secondary source of income for millions of rural families and has assumed the most important role in providing employment and income generating opportunities particularly for women and marginal farmers. The per capita availability of milk has reached a level of 307 grams per day during the year 2013-14, which is more than the world average of 294 grams per day. Most of the milk in the Country is produced by small, marginal farmers and landless labourers. About 15.46 million farmers have been brought under the ambit of 1, 62,600 village level dairy cooperative societies up to March, 2014.

National Dairy Development Board:

The inception of National Dairy Development Board (NDDB) in 1965 was a major step towards the organisation of dairying on cooperative lines. This Board was entrusted with the responsibility of organizing dairy cooperatives on the 'Anand pattern' throughout the country which led to the launch of operation flood programme in 1970. During 2014-15, NDDB continued to provide technical and financial support to dairy cooperatives in the areas of strengthening cooperative business, productivity enhancement, quality assurance, building dairy infrastructure and for creation of national information network. Up to 31st December, 2014, investment plans of 102 dairy cooperatives, with a total outlay of R2, 377.08 crore had been approved by NDDB under the Perspective Plan. Of this, NDDB's financial assistance is to the tune of Rs1, 633.47 crore. This apex level organization guides the dairy Cooperatives in India.

Milk Procurement and Marketing

India continued to be the largest milk producing nation in 2014-15 with the milk production of 146.3 million tonnes. The country's share in world milk production stands at 18.5 per cent. The cooperative milk unions have procured an average of 34.2 million kgs of milk per day during the year 2013-14 as compared to 33.5 million kgs in the previous year recording a growth of about 2.1%. The sale of liquid milk by cooperative sector has reached 29.4 million litres per day during the year 2013-14 registering a growth of 5.8% over the previous year.

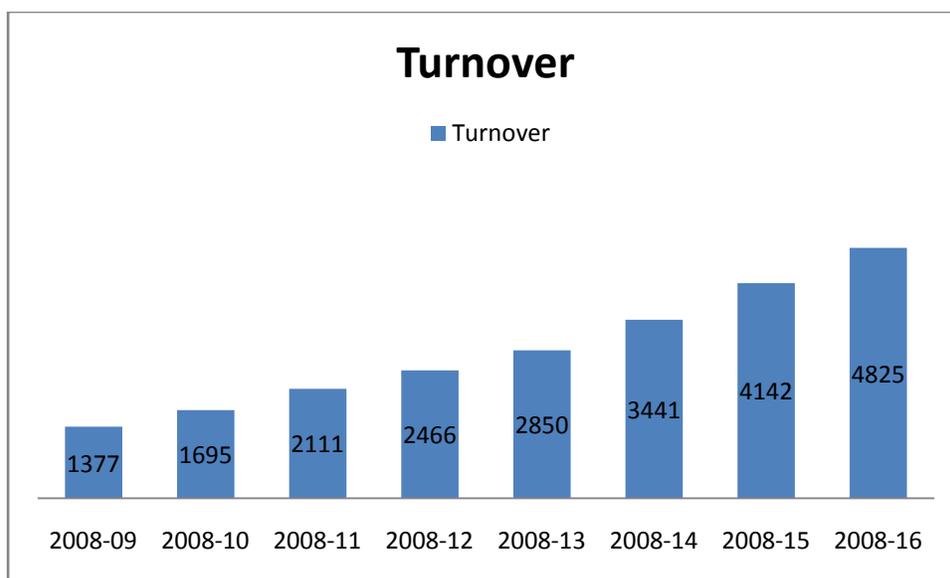
As on March 2015, the cooperative milk unions covered about 0.16 million village dairy cooperative societies, with a total membership of 15.4 million milk producers. The cooperative milk unions procured an average of 38 million kg of milk per day with a growth of about 11.1 per cent over last year. The sales of liquid milk reached 31.2 million litres per day, recording a growth of 6.1 per cent over the previous year. With increasing uncertainty in rainfall and its adverse effect on crop production, dairying is increasingly becoming a major source of income. Dairy cooperatives in India are owned and controlled by the milk producers, which have provided them with the necessary support structure to carve out a viable livelihood source for themselves.

The dairy cooperatives procure as little as one litre of milk from the members and provide them an assured market for selling milk. As the price paid to producers for milk collected from them is based on its quality, which is measured at the collection point itself, milk producers are assured of a fair price.

Various services provided by the dairy cooperatives like doorstep Artificial Insemination (AI) services, sale of cattle feed & mineral mixture and knowledge dissemination on better animal management practices enable the milk producers to increase productivity which helps reduce costs and increase income from milk production.

AMUL- Milk for all

Amul is one of India's most iconic brands. It's a dairy cooperative based in the town of Anand, in Gujarat state. The father of the White Revolution, Dr. Verghese Kurien and the World Food Prize and the Magsaysay Award winner, is responsible for the grand success of brand 'Amul' Dairy. Amul turnover during the financial year 2015-16 has reached Rs 4825 Crore which is the highest in the history. The turnover is 17% higher compared to 2014-15 Rs.4142 crores. The Amul has also made considerable progress in exporting various products.



Source; AMUL Annual Report 2015-16

Amul Dairy, a milk cooperative in India is, synonymous with quality of its milk and milk products as well as fair prices to both the consumer and producer. Milk consumption is quite high in India but the demand curve is oriented to the season. In the past, there were price fluctuations undertaken by private players to take advantage of the Indian milk environment. Unlike other milk-producing nations, Indian buffaloes and cows have a flush season (in winter), and lean season (in summer). The demand curve is the opposite, thus prices are depressed when producers are producing the most of milk, and vice versa. However, the union strove to smooth out this difference in prices by converting cow and buffalo milk into milk powder and reconstituting milk from milk powder during the lean months. This allowed the union to have a constant demand for producer's milk. However, a fact must be acknowledged that the Union does provide different prices during the lean and flush season, despite smoothing out the demand. This is due to the fact that private players will offer higher prices in the summer (if the

cooperative does not), and in this manner, milk producers will sell to the cooperative in the winter and private players in the summer making the entire operation unsustainable.

The milk cooperative has been able to further absorb additional supply (at least in the beginning years) by producing dairy products such as dry milk powder, butter and ice-cream, which offer higher prices than traditional milk. Milk production is, of course, only half of the story. The other half is the sale of milk and milk products that provides the highest returns to our dairy farmers. Here too, S&T have played an important role in development of products, processes, packaging, handling, transport and storage

Cattle Feed and Feed Supplement

Amul produced 3.75 lakh MT various types of cattle feed and feed additives with a view to meet the increased demand for feed from milk producers 'Amul' doubling the capacity of Kapadav plant. In order to meet various National demands and milch animals and to improve the health for better reproduction, Amul team has developed various feed supermarkets. All the products are well accepted by animals resulting in overall improvement in productivity.

Dairy Demonstration Farm

As part of Amul's continuous effort to improve the socio-economic conditions and livelihood of dairy farmers, Amul has come out with various schemes to increase cattle holding per farmer thereby their income. A Dairy Demonstration Farm (DDF) has been set up at Mogar to demonstrate scientific methods of dairy farming. The project envisages encouraging the farmers to use high yielding animals and modern aids to increase milk production. The Union provides technical support to milk producers on Scientific Animal Husbandry practices and also facilitates loan disbursement from banks to the needy by guaranteeing the loan repayment on behalf of farmers. The Dairy Demonstration Farm is generating overwhelming interest in milk producer members because of its success and viability.

When dairy farmers of Gujarat have planted more than 312 lakh trees in just five years and are planning to plant more trees every year, they are doing an invaluable service to the society as the brand "Amul" means priceless service to mankind. In an era of global warming, Amul is contributing its share in making Gujarat lush green. In this way, the milk producers of Gujarat are ushering in a silent revolution of greening Gujarat.

IFFCO- Indian Farmers' Fertiliser Cooperative Limited

Indian Farmers' Fertiliser Cooperative Limited (IFFCO) was established in 1967 to produce and distribute fertilisers through cooperatives. Presently, over 40,000 cooperative societies are members of IFFCO. Initially, IFFCO commissioned an ammonia – urea complex at Kalol and the NPK/DAP plant at Kandla both in the state of Gujarat in 1975. The ammonia – urea complex was set up at Phulpur in the state of Uttar Pradesh in 1981. The ammonia – urea unit at Aonla was commissioned in 1988. Moreover, IFFCO

has acquired an NPK/DAP and Phosphoric acid fertiliser unit at Paradeep in Orissa in September 2005. The marketing of IFFCO's products is channeled through cooperative societies and institutional agencies in over 28 states and union territories of India. In term of plan nutrient, it holds about 20% share in nitrogen and 30% in phosphorus production of the country. During 2013-14, it produced total 75.86 lakh MT and supplied 96.42 lakh MT fertilisers for the country. The annual turnover of IFFCO for year 2013-14 was Rs 20,853.45 crores.

At IFFCO, the thirst for ever improving the services to farmers and member co-operatives is insatiable, commitment to quality is insurmountable and harnessing of mother earths' bounty to drive hunger away from India in an ecologically sustainable manner is the prime mission. All that IFFCO cherishes in exchange is an everlasting smile on the face of Indian Farmer who forms the moving spirit behind this mission.

Indian Farm Forestry Development Cooperative (IFFDC)

IFFCO had promoted a separate Multi-State Cooperative Society named 'Indian Farm Forestry Development Cooperative Limited' (IFFDC) in 1993 with the prime objective of development of wasteland for tree plantation and to enhance the socio-economic status of rural poor through sustainable Natural Resource Management by collective action.

To achieve this, IFFDC initially implemented afforestation and rural development projects in the States of Uttar Pradesh, Madhya Pradesh and Rajasthan with an objective to improve degraded land, generate employment and provide fuel and fodder to the community. Afforestation in about 29,419 hectare Wasteland had been achieved by promoting 150 village level Primary Farm Forestry Cooperative Societies (PFFCS). Today, these PFFCS cover about 28,500 members and implemented projects worth more than Rs. 223 crores. Presently, it is implementing over 25 projects on livelihood and Natural Resource Management in about 9,490 villages across 12 states and Watershed Projects on 15,661 hectare area. IFFDC has developed 8,431 wadis (families) under the Agri-Horticulture Programme in various states in partnership with NABARD. Under various projects, IFFDC is nurturing 1,934 Self Help Groups (SHG) with a total membership of 21,942 of which 92% are women members.

IFFDC- Empowering Farmers.

- Since 1993, IFFDC has been improving environmental conditions and promoting rural livelihoods through natural resource conservation and regeneration in some of the poorest districts in the country. It engages men, women and children in promoting socially and environmentally relevant changes in the countryside with measurable results. IFFDC has a multi-disciplinary team of 226 professionals working in 9,410 villages across 14 states covering all the agro-climatic zones in the country.
- IFFDC has implemented rural development projects worth over Rs. 220 Crore and has an annual turnover in excess of Rs 470 Crore. This has empowered women to enhance capacity of village-

level institutions to handle both small and large projects with equal ease. This has promoted 148 Primary Farm Forestry Cooperative Societies with over 28,000 members (38% women) for managing and maintaining community forests on a sustainable basis.

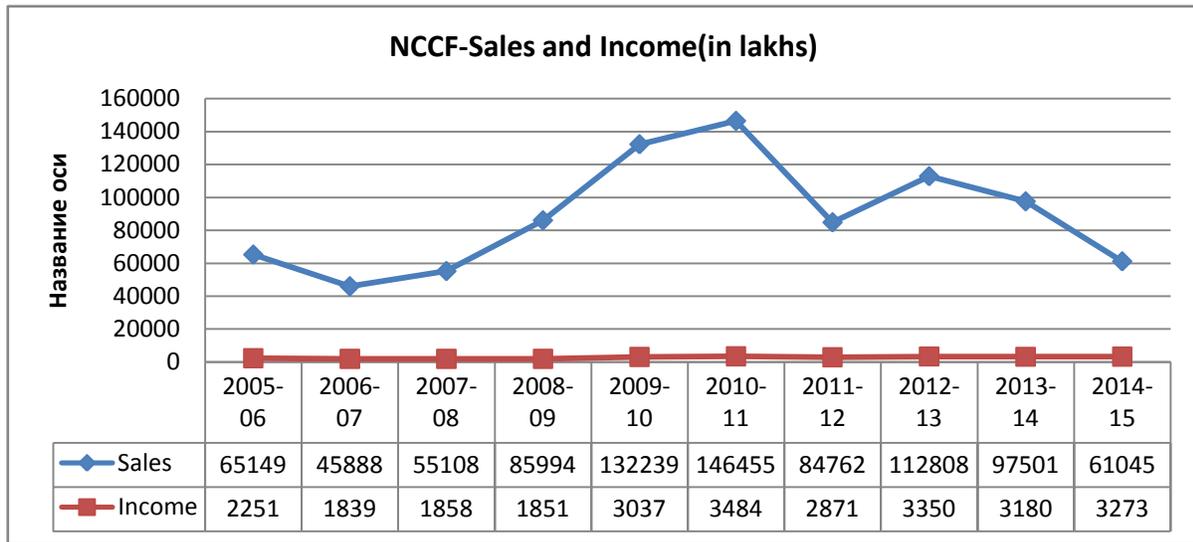
- IFFDC has supported 78 Primary Livelihood Development Cooperative Societies with over 2,500 members for providing managerial and resource inputs for generating local livelihoods. IFFDC green cushion of ecological resilience covers more than 500 villages, restoring degraded lands with tree cover for enhancing economic harvest. It's farm forestry has created cushion to mitigate climate change impacts, helping encash carbon credits by sequestering 14.27 metric tons of carbon per ha/year.
- IFFDC enhances 'Green Rating' of its investors by directing corporate investment in addressing the threats of climate change through farm forestry. IFFDC has showcased its expertise in women's empowerment and skill development, mainstreaming gender as a component of inclusive development. It promotes drudgery reducing activities/technologies for improving rural economy aimed at improving lifestyle of the family, particularly women.
- IFFDC has endowed landless farmers and women with employment opportunities through various soil moisture conservation activities. It has developed cost-effective, appropriate and community-managed modules for fighting water scarcity. It has treated 13,316 ha. area with effective soil & water conservation measures like farm bunds, gully plugs and continuous contour trenches.
- IFFDC has built 193 check dams and anicuts, constructed 26 wells and deepened 953 village ponds for improving groundwater status and brought additional area under irrigation. It uses a right mix of software and hardware inputs for institutional development for creating new opportunities for income generation and employment. IFFDC's approach places people at the centre of development and focuses on building assets and skills, developing robust institutions and influencing supportive policies.
- IFFDC builds capacity of local communities for collective action towards successful management of Common Property Resources. It has committed itself to addressing local food and nutrition security by providing quality and quantity of farm inputs.
- IFFDC has been implementing National Vegetable Initiative (NVI) and Pulse Programme and promoted 30 Farmers Producer Organisations in five states. It has initiated projects to provide nutritional and economic security for tribal and marginalised communities through orchard development.

Despite initiatives aimed at inclusive growth in the country, poverty persists because of limited access to productive resources, such as land, water, improved inputs, technology and microfinance, as well as vulnerability to drought and other natural disasters. IFFDC's rural livelihoods approach places people at the centre of development and focuses on building assets and skills, supportive policies, robust institutions and regulatory structures that both encourage growth and protect the most vulnerable, so that women and men together can access new opportunities for income generation and employment.

NCCF- National Co-operative Consumers Federation of India Ltd

The NCCF was established in 1965 to function as the apex body of consumer cooperative societies in the country, it is registered under the Multi-State Co-operative Societies Act. NCCF operates through a network of 29 Regional offices located in different parts of the country. The National Co-operative Consumers Federation of India Ltd (NCCF) is governed under the Multi-State Co-operative Societies Act, administered through the Central Registrar of Co-operative Societies appointed by the Government of India.

Chart-2



Source;NCCF,Annual Report-2015

The chart-2 depicts the sales and income level of the NCCF. During the year 2007-08 it occurred lost rest of the years it earned profit.

Public Distribution System

The Public Distribution System (PDS) evolved as a system of management of scarcity and for distribution of food grains at affordable prices. Over the years, PDS has become an important part of Government's policy for management of food economy in the country. PDS is supplemental in nature and is not intended to make available the entire requirement of any of the commodities distributed under to a household or a section of the society.

PDS is operated under the joint responsibility of the Central and the State Governments. The Central Government, through Food Corporation of India (FCI), has assumed the responsibility for procurement, storage, transportation and bulk allocation of food grains to the State Governments. The operational responsibility including allocation within State, identification of eligible families, issue of Ration Cards

and supervision of the functioning of Fair Price Shops (FPSs) etc., rest with the State Governments. Under the PDS, presently the commodities namely wheat, rice, sugar and kerosene are being allocated to the States/UTs for distribution. Some States/UTs also distribute additional items of mass consumption through the PDS outlets such as pulses, edible oils, iodized salt, spices, etc. Almost all the Primary Agricultural cooperative Credit society runs the PDS shops in Tamilnadu. It paves the way to reach customers easily and supply the products in time.

Strategies to leverage cooperatives:

Even though these cooperatives are rendering services to the members, it faces many challenges. These must be addressed with the help of following strategies

1. The network between the members and other stakeholders must be intact.
2. They have support organizations that share resources (knowledge, training, research, insurance and mutual guarantees, etc) creating a system of cross-checks and balances, and last but not least,
3. There is constant education and training, with transparent flows of information that allows for active participation of members in the governance of their cooperative, cooperative network, consortia or group.
4. Building multi-stakeholder governance to revive the local economy.
5. There is a clear legal framework that allows for a learning process to build trust and accountability, avoiding misuse of the business model.
6. Cooperatives have specific governance challenges that need careful thought and support, as they must be democratic, accountable and dynamic with a long term vision.

Cooperatives have been particularly praised for adopting a participatory way of working and putting people at the heart of their business, therefore representing a vehicle for human development. Moreover, evidence from the field shows that when strong rural organizations provide a full range of services to small producers, they are able to play a greater role in meeting a growing food demand on local, national and international markets.

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Acronyms

Amul : Anand Milk Union Limited

FCI ; Food Corporation of India

IFFCO: Indian Farmers Fertilizer Cooperatives

IFFDC: Indian Farm Forestry Development cooperative

Kg;b Kilogram

NABARD: National Bank for Agricultural and Rural Development.

NCCF: National Cooperative Consumer Federation

NDDDB; National Dairy Development Board

PDS: Public Distribution system

PFPCS: Primary Farm Forestry Cooperatives

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