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DAIRY FARMING THE RURAL CASH COW

Dairy farming has the prospects to offer quality lifestyle to rural India. Proper investment structure and strategies are required in this sector to turn it into an organised and profitable business.



Dairy industry is of crucial importance to India. The country accounts for more than 15 per cent of world's total milk production. It is the world's largest consumer of dairy products, consuming almost 100 per cent of its own milk production. Dairy products are a major source of cheap and nutritious food to millions of people in

India and the only acceptable source of animal protein for large vegetarian segment of Indian population, particularly the landless, small and marginal farmers and women.

Dairy development programmes play a vital role in the socio-economic conditions of the rural people. Higher demand for milk means adding larger number of high-breed milk producing cattle to the milch population. A

large part of this cattle population is owned and reared in rural areas. Thus, small/marginal farmers and landless agricultural labourers play a very important role in milk production of the country. Dairy farming can also be taken up as a main occupation around big urban centres where the demand for milk is high.

The cooperative movement for milk was started in India in the last decade of the nineteenth century with two objectives in view—protecting the farmers from the hands of the private money lenders and improving their economic condition. Madras province was the birthplace of this movement. With the setting up of agricultural cooperative banks there, the movement took root and slowly gained strength.

However, the growth of cooperative movement in India during British rule was very slow and haphazard one. In most of the cases, the provincial governments took the lead. The foreign ruler had only made some committees or framed a few rules and regulations. But they did not take up any wide-ranging programme to spread the movement all over the country.

The history of dairy development movement in India is a new one. During the pre-independence period

this movement was limited to a few pockets of Calcutta, Madras, Bengaluru and Gujarat. The most notable of this venture was Kaira District Cooperative Milk Producers' Union of Anand, Gujarat.

After independence the government took great initiative in setting up new dairy cooperatives in many parts of the country. The golden era of cooperative movement began after India's independence. Within two decades of independence the membership of primary societies increased four times while the share capital and working capital increased 23 and 31 times, respectively.

The National Dairy and Development Board (NDDB) was founded in 1965, with the mission of organising poor milk producers, thereby transforming dairying into an instrument for the economic development of India's rural people. The formation of the NDDB stemmed from the vision of the then prime minister of India, Lal Bahadur Shastri, to extend the success of the Kaira Cooperative Milk Producer's Union (in the state of Amul) to other parts of India. NDDB was set up to make the ambitious project a success.

However, organising illiterate farmers into a large cooperative network proved to be a challenging task. Other major issues were the quality and the hygiene maintenance of the milk being distributed; taking into account the combined effect of milk's perishability and the fact that milk was supplied by a large number of small milk producers.

Dairy farming

Dairy farming is a major livelihood followed by many households in rural areas. This includes rearing milk cattle—cows, buffaloes, goats and sheep. There is a shortage of milk in the country as consumption in both urban and rural areas has risen sharply.

Table I
Milch Animals Population in India

<i>(million)</i>		
Year	Cows	Buffaloes
1951	46.37	21.01
1961	51.01	24.24
1971	53.41	28.61
1981	55.40	33.07
1991	57.32	38.65
1997	64.42	38.65
2003	64.51	50.97
2007	73	54.5

Source: Department of Animal Husbandry, Dairying

Dairying has been considered as one of the activities aimed at alleviating the poverty and unemployment, especially in the rural areas, rain-fed and drought-prone regions. In India, about three-fourth of the population lives in rural areas and about 38 per cent of them are poor. Dairying is an important source of subsidiary income to small/marginal farmers and agricultural labourers. They play a very important role in milk production of the country. In 1986-87, about 73 per cent of rural households owned livestock. Small and marginal farmers accounted for three-quarters of these households owning livestock, raising 56 per cent of the bovine and 66 per cent of the sheep population.

According to the National Sample Survey of 1993-94, livestock sector produces regular employment to about 9.8 million persons in principal status and 8.6 million in subsidiary status, which constitute about 5 per cent of the total work force. The progress in this sector will result in a more balanced development of the rural economy.

The manure from animals provides a good source of organic matter for improving soil fertility and crop yields. The *gober* gas from the dung is used as fuel for domestic purposes and also for running en-

gines for drawing water from wells. The surplus fodder and agricultural by-products are gainfully utilised for feeding the animals. Since agriculture is mostly seasonal, there is a possibility of finding employment throughout the year for many persons through dairy farming. Thus, dairy also provides employment throughout the year.

Milk processing

The milk processing industry is small compared to the huge amount of milk produced every year. Only 10 per cent of all the milk is delivered to some 400 dairy plants. A specific Indian phenomenon is the unorganised sector of milkmen and vendors, which handles around 65-70 per cent of the national milk production. They collect milk from local producers and sell it in both urban and non-urban areas.

In the organised dairy industry, the cooperative milk processors have a 60 per cent market share. Cooperative dairies process 90 per cent of the collected milk as liquid milk, whereas private dairies process and sell only 20 per cent of the milk collected as liquid milk and 80 per cent for other dairy products with a focus on value-added products.

Domestic consumption

The huge volume of milk produced in India is consumed almost entirely by the Indian population itself in a 50-50 division between urban and no-urban areas. Increasingly, important consumers of the dairy industry are fast-food chains and food and non-food industries using dairy ingredients in a wide range of products.

National importance of dairy farming

More than 15 per cent of the total world production of milk is con-

Table II
Milk Production and Per Capita Availability

Year	Per capita availability (gram/day)	Production (million tonnes)
1950-51	132	17.00
1960-61	127	20.00
1970-71	112	22.00
1980-81	131	31.06
1990-91	176	53.09
2000-01	220	80.06
2005-06	241	97.01
2006-07	246	100.09
2007-08	252	104.08
2008-09	258	108.05
2009-10	263	112.05
2010-11*	—	116.2

*Projection

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

tributed by India. The large Indian vegetarian sector feeds upon the dairy products of India. This part of the industry has also helped the economy in many ways. The sector has addressed some of the glaring problems of unemployment and the rates of poverty. The industry has seen rapid growth in recent years. The best possible technologies are undertaken and resources are used to the fullest extent so that the sector reaches the booming phase. India houses the largest livestock in the world. Milk and milk products of India are highly acclaimed in different parts of the world.

Some of the past reports found that when the production of milk was 72 million, its demand reached 80 million. So the country under the regulatory bodies have gone far to increase the production of milk and other milk products to higher extent.

With high milk production, the scope of milk processing industry has also increased. This is further pushed as the purchasing power of the consumer has increased and

transport facilities are much readily available. Apart from the cooperative and public milk sectors there are certain up-coming private sectors, which require trained and wide recourse of manpower.

This natural resource gives scope for further widening with the production of other value-added products like condensed milk, cheese, *khoa* and baby foods. The chocolate and ice-cream industry can also enhance exports with its increasing production. The country should focus on exporting quality goods to meet the level of international market.

Production and scope of dairy farming

The total milk production in the country reached 100.09 million tonnes at the end of the tenth five-year plan (2006-07) as compared to 53.90 million tonnes in 1990-91. The per capita availability of milk has increased from 233 grams per day in 2004-05 to 263 grams per day in 2009-10. The share of milk production in 2009-10 by exotic/cross-bred cows, indigenous/non-descript cows, buffaloes and goats was 25.3 million tonnes, 22.5 million tonnes, 59.2 million tonnes and 3.9 million tonnes, respectively.

Table II shows the production of milk from 1950-51 to 2010-11. Milk production in 2009-10 was 112.05 million tonnes, which followed a growth rate of 4 per cent. The country is stressing on the milk product industries to increase their production rate. All the public and the private sectors of milk production are taken into grant.

The projected estimate of milk

production for 2010-11 was 116.2 million tonnes. The projected rate of production of milk in 2020 is around 240 million tonnes. If these figures are achieved then India would be able to contribute 30-35 per cent to the world's milk production.

Annual milk production in India has grown more than six times since independence. The average annual growth rate in the production of milk in recent years has been close to 4 per cent. Even though the level of per capita availability at 263 grams per day for India in 2009-10 is much lower than that in developed countries, it is well above the developing country average. The eleventh five-year plan envisages an overall growth of 6-7 per cent per annum for this sector.

As per an assessment made by the Planning Commission, the domestic demand for milk by 2021-22 is expected to be 172.20 million tonnes. This is due to higher consumption rate. As projected under the proposed National Dairy Plan, the production of milk in the country is required to increase to 180 million tonnes by 2021-22 to meet the demand. However, the country has not been able to keep pace with the domestic demand for milk. The domestic demand for milk is growing at about 6 million tonnes per year, whereas annual incremental

Table III
Value of Output from Milk Group

(at current prices in Rs billion)

Year	Value
2004-05	1239.07
2005-06	1328.12
2006-07	1449.99
2007-08	1652.54
2008-09	1856.85
2009-10	2288.09

Source: National Accounts Statistics 2011; Central Statistical Organisation, government of India



duction in the last six decades, the productivity of the animals is still low. The marketing systems are also not modernised or developed to a satisfactory level. Other issues in this sector are ineffective breeding programmes, limited availability and affordability of quality feed and fodder, improper veterinary infrastructure, lack of vaccinations, inadequate access to formal credit mechanisms, inadequate research capacity and limited processing capacity.

Considering that the requirement of milk in 2021-22 is expected to be 180 million tonnes and the

production over the last ten years has been about 3.5 million tonnes per year.

Matters of concern

With higher growth of the economy, increase in population and increased health consciousness, it is only natural that the demand for milk and milk products will increase leading to an increase in the proportion of income spent on milk and milk products. Further, the demand for processed and packaged dairy products will increase in the urban centres. However, in rural areas people may still prefer to purchase from the local milkmen. About 80 per cent of milk produced in the country is still handled in the unorganised sector and only the remaining 20 per cent is equally shared by cooperatives and private dairies.

Despite the growth in milk pro-

duction in the last six decades, the productivity of the animals is still low. The marketing systems are also not modernised or developed to a satisfactory level. Other issues in this sector are ineffective breeding programmes, limited availability and affordability of quality feed and fodder, improper veterinary infrastructure, lack of vaccinations, inadequate access to formal credit mechanisms, inadequate research capacity and limited processing capacity.

Considering that the requirement of milk in 2021-22 is expected to be 180 million tonnes and the current level of milk production is 112 million tonnes, the milk production must increase at around 5.5 per cent per annum in the next 12 years. If it fails to do so, India may need to resort to imports from the world market. A large consumer like India entering the international market would have the potential to cause international prices to spurt. Hence it is prudent to depend on the domestic market and develop the milk sector with the right attention and focus and the required investment.

Recent hikes in prices of milk and milk products have been a matter of concern. The gap between domestic demand and production of milk has put upward pressure on milk prices. Only a strong supply response with focus on production and productivity can keep the prices stable.

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