



Role Of Dairy Industary In Rural Development. New Challenges Before The Indian Dairy Industry

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Abstract:

The dairy sector in the India has shown remarkable development in the past decade and India has now become one of the largest producers of milk and value-added milk products in the world. The dairy sector has developed through co-operatives in many parts of the State. During 1997-98, the State had 60 milk processing plants with an aggregate processing capacity of 5.8 million litres per day. In addition to these processing plants, 123 Government and 33 co-operatives milk chilling centres operate in the State.

INTRODUCTION

With the increase in milk production. Maharashtra now regularly exports milk to neighbouring states. It has also initiated a free school feeding scheme, benefiting more than three million school children from over 19,000 schools all over the State.

INDIAN DAIRY INDUSTRY

Dairy is a place where handling of milk and milk products is done and technology refers to the application of scientific knowledge for practical purposes.

DAIRY INDUSTRY IN INDIA

More than 2,445 million people economically active in agriculture in the world, probably 2/3 or even more ¾ of them are wholly or partly dependent on livestock farming. India is endowed with rich flora & Fauna & continues to be vital avenue for employment and income generation, especially in rural areas. India, which has 66% of economically active population, engaged in agriculture, derives 31% of Gross Domestic Product GDP from agriculture. The share of livestock product is estimated at 21% of total agricultural sector.

Contribution of live stock sector to gross domestic product
(Percentage contribution)

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1950-51	1990-91
63.5	67.0
12.0	16.0
4.1	3.1
1.3	0.3
16.5	10.0

Live stock populations:
Number of animals (in thousand)
(Source: production yearbook 1995 /FAO statistics division)

Sheeps	Goats	Pigs	Chickens	Cattle
45000	119242	11780	435	194655
Buffaloes	Horses	Mules	Camels	
79500	990	1742	1520	

(Source Indian Dairy man, 50:1998)

Cattle (millions)	Buffalo	Total (1996)
196	80	276
0.68% / year	0.75% / year	

World		(1996)
1320	151	1471
0.64% / year	0.87% / year	

In India	In World
28 breeds of cattle	1997 520.6 mt 5.5-0.75%
7 breeds of buffalo	.2020.620 to 650 mt.

Milk Production
1950 – 17 million tonnes
1996 – 70.8 million tonnes
1997 – 74.3 mT
(Projected) 2020 – 240 mT
Expected to reach- 220 to 250 mT – 2020
India contributes to world milk production rise from 12-15 % & it will increase upto 30-35% (year 2020)
Average milk production / year

America	6874	Kg/ year
Denmark	6223	Kg/year
Holland	5751	Kg/year
India	552	Kg/year

- Average Productivity
- 2.4 kg/day or 732 kg/lactation/cow

China:	1600 kg/lactation
America	7200 kg/lactation

Percapita availability:
Recommended – 210 gm
India

1950	132 gm
1997	214 gm
2020	290 gm

India contributes 35% of total Asian milk
Dairy Industry profile 1997

Human Population	953 million (70 million dairy farmers)
Milk production	74.3 million tonnes (203.5 million 1 pd)
Average annual growth rate (1996-2000)	5.6%
Per capita milk availability	214 gm/day or 78 kg/year
Milch animals	57 million cows;
	39 million buffaloes

Milk yield per breedable bovine in milk	1,250kg
Cattle feed production (organized sector)	1.5 million tonnes
Turnover of veterinary pharmaceuticals	Rs 550 crores
Dairy plants throughout	20 mlpd
Throughout as percentage of total milk output	10
Value of output of milk group (1994-95) (Based on producers price)	Rs 50,051 crores
Value of output of dairy industry (Based on retail price)	Rs 105,000 crores

Projected milk production at different rates of annual growth 1995 to 2000

year	@5%	@5.5%	@6%
1995	66.3	66.3	66.3
1996	69.3	70.0	70.2
1997	73.1	74.0	74.4
1998	76.7	78.0	78.8
1999	80.6	82.3	83.5
2000	84.6	86.8	88.5

Milk Composition

Sr. no	Constituents	Buffalo	Cow	Goat	Liquid skimmed milk
1	Moisture (gm)	81.00	87.50	86.80	92.10
2	Protein (gm)	4.30	3.20	3.30	2.50
3	Fat (gm)	6.50	4.10	4.50	0.10
4	Minerals (gm)	0.80	0.80	0.80	0.70
5	Carbohydrates (gm)	5.00	4.40	4.60	4.60
6	Energy calories (kcal)	117.00	67.00	72.00	29.00
7	Calcium (mg)	210.00	120.00	170.00	120.00
8	Phosphorus (mg)	130.00	90.00	120.00	90.00
9	Iron (mg)	0.20	0.20	0.30	0.20

Indian Buffaloes: (Dairy business Directory 1996)

Buffaloes are classified into two categories;

- 1) reverine (depending upon variation in their habitat & genome)
- 2) swamp

Swamp buffaloes: - 48 chromosomes

South east asian countries

Stocky animals, marshy land habitat

River Buffaloes: - 50 chromosomes

- massive in size and curled horns

- Prefer to enter clear water

World's Buffalo population:

147 million

about 142 millions in Asia & Pacific

India:

leading most buffalo populated country

78 millions most of reverine

Milk production: About 95% of world buffalo milk (45.3 million tonnes) is produced in Asia & Pacific, while 64.4% is produced in India (FAO. 1992)

From 1950 to 1992 milk production in the world increased by 4.26%

The % of total bovines slaughtered;

Total bovine slaughtered (%)

World 17.1 to 17.4% or - 1.6% per annum

India 15% per annum

Asia 6.6%

Increasing trend of buffalo population in most of the Asian countries in Brazil and Italy

BREEDS

Classified on phenotypic & geographic locations;

Cockril (1982) = Buffalo river type; two sub groups;

1. Horns are closed and set close to head & are down swept ;eg. Murrah, Ravi, Mehasana, Jaffarabadi,

Sambalpur

2. Horns are sickle shaped and unswept: e.g. Bhadawari, Kalahandi, Kanara, Manda, Nagpuri, Pandharpuri, Surti, Tarai & Toda Breeds of Buffaloes of Indian Origin and Breeding Tracts:

Group	Breed	Breeding tract
Murrah type	Murrah	Rohtak, Jind,Hisar, Bhiwari, Sonapat
	Nili Ravi	(Hariyam) Ferozepur (Punjab)
Gujarat	Surti Jaffarabadi Mehsana	Kaira and Baroda Kutch, Jungarh & Jamnagar dist Mehsana, sabarkantha, Banaskantha Dist.
Uttar pradesh	Bhadawari Tarai	Bhadawari estate, Beh Tehsil in Agra, Gwalior & Etawah dist. Tarai region of U.P.
Central India	Nagpuri Pandharpuri Kalahandi Sambalpur	Nagpur, Akola, Amravati dist. South maharashtra, west A.P., north Karnataka Hilly region of Andra Pradesh and Orissa Bilaspur dist.
South India	Toda South Kanara	Nilgiri Hills West coast in Kerela

Buffaloes found in the north –eastern states and the eastern coastal region of India & in China South east Asian countries e.g. Philippines, Thailand, Malaysia, Vietnam, Srilanka, Burma, Laos, Kampuchea, Bangladesh etc. have been classified as swamp buffaloes on the basis of their genetic constitution (2n=48) & natural habitat. The breeds includes in these groups are Manda & Palakhemundi.

Production performance

Growth: The average birth wt.(Indian buffaloes) low 21 kg High 41 kg
Higher in male calves than in females
Average daily gain of 548 gm between 3-6 months
404 gm between birth to 36 months
Body weight at first calving- ranges from
367 kg (Dharwati) to
531 kg (Nili Ravi)
Higher growth rate in reverine breeds than swamp

MILK PRODUCTION

Production performance of different breeds of Buffaloes:

	Age at 1 st calving (months)		Lactation. Yield (kg)		Lactation Length (days)
	Avg.	Range	Avg.	Range	Avg (Range)
Buffalo					
Murrah	43.0	39.9-54.5	1850	1476-2515	315(267-365)
Nili Ravi	42.0	41.4-47.3	1765	1596-2808	2808 (09)
Surti	39.0	26.5-45.0	1364	1304-1693	313(300-373)
Bhadawari	46.0	44.3-54.2	1181	-	276 (-)
Nagpuri	48.0	44.3-55.6	1103	926-1175	270 (-)



REPRODUCTION PERFORMANCE:-

Most of the buffaloes are considered to be seasonal breeds with maximum calving taking place from July to November in almost all breeds

Buffaloes come in oestrus in cold month and are sub-fertile during hot month

Sub-fertility-> due to poor thermoregulation in buffaloes and

Poor nutrition -> poor heat symptom-low heat detection (only ligno-cellulosic material straw /dry roughages)

	Calving interval (days)	Dry period (days)	Service period (days)
Murrah	454	148	133
Nili Ravi	530	198	211
Surti	410	165	103
Bhadawari	460	156	-
Nagpuri	-	-	98

Indian Dairy has been involved in the dairy business since many years. We take pride in introducing as one of India's leading manufactures, exporters and suppliers of dairy products, We at Indian Dairy have shown a new way of living- a healthy way of living. We have wide range of product catering to people of all age. We are continuously striving for synergy between technology, system, and human recourse to provide product and service that meet the quality, performance and pride aspiration of customers.

Indian Dairy ,one of the leading manufacture & exporter of skimmed milk powder ,desi ghee ,condensed milk ,casein, full cream milk powder, dairy whitener, palm kernal oil, white butter, lactose, glucose, dematerialized whey powder and all kind of dairy products, has emerged as the indubitable winner of dairy industry.

Indian Dairy is a “full-service” dairy that processes and fills gallons of milk a week. It operates around the clock, 365 days a year, to provide the freshest dairy products to customers every day. Known for our adherence to strict quality norms, we are on the edge for further growth in our core competency areas - dairy products.

We are also in the process of massive production and marketing of value added dairy food products. Under the brand name of "indian Dairy" we manufacture skimmed milk powder, whole milk powder, dairy whitener and pure ghee and many more.

At Indian Dairy, supreme quality is accomplished by state-of-the-art manufacturing procedure in the most hygienic conditions with a profound understanding in every stage of processing. This heavenly part of the world was deprived of good quality milk.

"The indian Dairy Group is an food group with a multinational strategy that seeks to increase the well-being of consumers throughout the world.

The ultimate purpose of the Group is to create value for its shareholders while adhering to ethical principles of business conduct, perform a useful social function by prompting the professional development of its employees and associates, and serve the communities in which it operates by contributing to their economic and social progress.

We have in mind to establish Indian Dairy as one of the top players in the global market for functional foods with high value added, which deliver improved nutrition and wellness to consumers, and attain a clear leadership in selected product categories and countries with a high growth potential for the Group.

Milk & dairy products and fruit-based beverages, foods that play an essential role in everyone's daily diet, will be key categories for the Group”

The safety, wholesomeness and nutritional value of our products are of paramount importance to Parmalat and are emphasised in the company Quality Policy. Our policy is to be in complete compliance with National and State Health Department Food Standards

Indian Dairy is also committed to maintaining a high level of corporate governance by ensuring good business practices are utilized and licenses other than above are kept up-to-date.

Indian dairy industry to reach Rs 5 lakh crore by 2015: ASSOCHAM
 \Friday, November 18, 2011

With rapid increase in domestic demand for milk and milk-based products, the dairy industry in India is likely to reach about Rs five lakh crore by 2015, apex industry body ASSOCHAM said today.

Milk production is likely to reach about 190 million tonnes in 2015 from current level of about 123 million tonnes according to a study titled 'Indian Dairy Industry: The Way Ahead' released by The Associated Chambers of Commerce and Industry of India (ASSOCHAM).

“India is world's largest milk producer and accounts for nearly 20 per cent of total milk production of the world but almost all of it gets consumed domestically,” said Mr D.S. Rawat, secretary general of ASSOCHAM while releasing the study.

“Growing at about 10 per cent annually, the Indian dairy industry is predominantly controlled by the unorganised sector which accounts for nearly 85 per cent. About eight crore rural families across India are engaged in dairy production and the rural market consumes over half of the total milk produce,” said Mr Rawat.

Owing to conventional dietary habits of Indian households, about 60 per cent of milk produced is consumed in the liquid form and the remaining is consumed in the form of butter, clarified butter (desi ghee), cheese, curd, paneer, ice cream, dairy whiteners and traditional sweets.

There is enormous scope seen ahead before the dairy industry for value-added products including custards, desserts, puddings, sauces, mousse, stirred yogurt and nectars.

Demand for processed and packaged dairy produce in urban centres is going to see a phenomenal growth due to growing population with higher disposable income and greater health conciousness.

However, upward spiralling prices and lack of fodder resulting in low yield from cattle together with lack of trained and skilled dairy farm labour, lack of proper infrastructure like cold storage facilities and lack of transparent milk pricing system are certain key problems affecting retail consumption of milk and leading to escalating milk prices in the domestic market points out the ASSOCHAM study.

“Private sector can play a pivotal role in reducing the cost of production by employing advanced techniques to enhance productivity, provide breeding facilities for cattle and improving the health of the dairy animals apart from developing proper dairy production, processing and marketing infrastructure,” said Mr Rawat.

Characterised by high growth rate, the domestic dairy industry provides a multi-billion dollar potential for foreign companies especially those in New Zealand and Australia. But tariff and regulatory barriers are proving to be a hindrance for foreign companies to enter Indian dairy segment, said ASSOCHAM.

Andhra Pradesh, Bihar, Haryana, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh are leading milk producing States in India.

REFERENCE:

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