



A STUDY OF THE PERFORMANCE OF INDIAN DAIRY INDUSTRY

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ABSTRACT

India is a developing economy having agriculture as its primary occupation of a considerably larger populace. Agriculture in India is monsoon-dependent, while it gives employment to almost 50% of the population, the farmers still live in pitiable situations. Poor and debt ridden farmers tend to commit suicides owing to them failing to adjust to the challenges posed by man and mother nature. In such a situation, making available to them a fitting alternative is vital for earning their bread and butter. Dairy facilitates thwarting such adverse conditions. This research article makes efforts to highlight the dairy business as a budding agriculture-sector ally.

KEY WORDS: India, Economy, Agriculture, Dairy.

INTRODUCTION:

The agriculture sector is among the foundational sectors of the Indian economy. Agriculture is a platform of survival for over two-thirds of India's employed human capital. As mentioned in the economic report of the financial year (FY) 2015-16, agriculture and its allied sectors have claimed 14.5% of India's GDP.

Indian agriculture sector has claimed over 43% of India's geographical area. While a stationary reduction of the agricultural sector in India's GDP share has happened, the sector still plays a vital role in the overall socioeconomic development of India.

The Indian agriculture sector is at crossroads, facing a prominent challenge of reverse deceleration in growth of agriculture. Primary reasons behind the deceleration in agricultural growth are reduced investment specially the public investment in agriculture research, development and irrigation, along with inefficiency of institutions giving inputs and services (such as rural credit and extension). Other factors, viz. Land fragmentation, outdated tenancy laws, absence of modern market, rural infrastructure, misfit input pricing policies, etc. are liable for agrarian and ecological shortcomings in India. The stagnation crisis in agriculture leads to an increase in the rural areas' poverty. Farmers in India are highly indebted and poor. The time to change is now as the plight of the Indian farmers is really pitiable. Improving the adoption of the allied activities of farming highly scientifically and also in an organized way. The allied business concept isn't a new concept. Animal husbandry, dairy, fishing, and other allied sectors have contributed, also including agriculture for over multiple centuries. Dairying is a highly promising allied sector of agriculture. The livestock population of India is one of the highest in the world. 50% of the buffaloes and 20% of the cattle in the world are located in India, a number of these are milk cows and buffaloes. It's only because of the "Operation Flood" that the ongoing and balanced efforts taken by the government led to make India the largest milk producer nation in the World. This research paper is directed towards evaluating the performance of India's dairy industry. The focus should be on all the ingredients of the sector.

OBJECTIVES OF THE STUDY:

1. To study the overall milk production in India.
2. To evaluate the performance of the dairy business in India.

Sources of Data:

This study is directed towards the secondary data. Data collection is done from various government reports and news is gathered from various newspapers and magazines. Certain references are also taken from various scholarly research articles.

Indian Dairy- A Promising Sector:

The livestock population of India is among the largest in the world. 50% of the buffaloes and 20% of the cattle in the world exist in India, a number of which are milk cows and buffaloes. Dairy development in India is acknowledged all over the world as modern India's highly successful developmental programme. Today, India is ranked among the largest milk-producing nations of the world.

Milk and milk products are rated among the highly promising sectors that deserve considerable applause. At the time when the global world milk production recorded a sluggish growth of 1%, India recorded a better performance with 4.5% growth. The total milk production touched 121 million tonnes in FY 2015-

16. As a result, the daily per capita milk access has also risen from 124 grams in 1961 to 281 grams in 2015-16. The livestock sector added 3.93% to India's GDP and 20.71% to agriculture GDP in 2014-15 (Economic Survey). Livestock acts as an integral component of the rural community's economic and social life.

Milk Production in India:

India is the world's largest dairy den, although India still sees a production shortage owing to a high demand from the rising population and also reduced productivity of Indian cows. India tops the milk production ranking. Indian dairy scenario is a prime illustration of production by masses as against mass production. India's milk supply emanates from millions of small producers, spread all over the rural areas. On an average, a herd of only two-three milch animals (having cows and or buffaloes) is maintained by these farmers. Having an overall gain of 121 million tonnes of milk in 2015-16 from cattle, buffaloes and goats, coupled with a per capita milk availability of 281 g/day, the Indian dairy story is continuously marching forward and makes a promise to reach higher echelons of success, increasing dairy remuneration for the farmer.

Although, with the rising population, it is projected that the total milk production must be close to 200 million tonnes by 2030 to satisfy the demand a shortfall would still exist in the supply. The table below exhibits the overall production and the per capita milk availability.

Livestock Population in India:

Dairy sector amasses economic and social significance in India owing to the dairy animals giving output, input, asset and socio-cultural functions in a multi-functional environment. The 2008-09 Livestock Census puts indigenous cattle quantity at 166 million, with 33 million crossbred cattle and 105 million buffaloes existing in India. Within this, the proportion of adult milch females is 19, 43 and 46%, respectively. The decade-wise trend in livestock population (1997-2007) exhibits a unique transformation in the composition of dairy animal stock, favouring buffaloes and crossbred cattle, since their quantity rose by 5.91 and 6.05 million. Indigenous cattle were reduced by 1.8 million.

Table 1: Livestock Population in India

Livestock Population in India by Species									
(In Million Numbers)									
Species	1966	1972	1977	1982	1987	1992	1997	2003	2007
Cattle	176.2	178.3	180	192.5	199.7	204.6	198.9	185.2	199.1
Adult Female	51.8	53.4	54.6	59.2	62.1	64.4	64.4	64.5	73.0
Buffalo	53.0	57.4	62.0	69.8	76.0	84.2	89.9	97.9	105.3
Adult Female	25.4	28.6	31.3	32.5	39.1	43.8	46.8	51.0	54.5
Total Bovines	229.2	235.7	242.0	262.2	275.7	288.8	288.8	283.1	304.4

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

Different breeds of cows and buffaloes used for milking in India:

India is rich in its livestock wealth. It accounts for nearly 15.8% of the world cattle population, more than half of the world buffalo population. Breeds of Buffaloes and cows of Indian Origin and Breeding Tracts are given below:

Table 2: The different breeds of the buffaloes:

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

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

Indian cattle breeds of cattle classified in to three types

- Milch breeds / Milk breeds
- Dual Purpose breeds
- Draught breeds

Scenario of feed and fodder requirement & availability:

There is tremendous pressure of livestock on available feed and fodder, as land available for fodder production has been decreasing. Scenario of feed and fodder availability till 2025 is as below: -

Table 3: The projected demand and supply of the fodder:

Year	Supply		Demand		Deficit as % of demand (actual demands)	
	Green	Dry	Green	Dry	Green	Dry
1995	379.3	421	947	526	59.95 (568)	19.95 (105)
2000	384.5	428	988	549	61.10 (604)	21.93 (121)
2005	389.9	443	1025	569	61.96 (635)	22.08 (126)
2010	395.2	451	1061	589	62.76 (666)	23.46 (138)
2015	400.6	466	1097	609	63.50 (696)	23.56 (143)
2020	405.9	473	1134	630	64.21 (728)	24.81 (157)
2025	411.3	488	1170	650	64.87 (759)	24.92 (162)

Source: Draft report of the working group on animal husbandry and dairying for five-year plan (2002-2007, Govt. of India, Planning Commission, August - 2001).

The above requirements have been worked out on the projected livestock population (equivalent to adult cattle unit) as below: -

Table 4: Projected livestock estimates when converted into adult cattle unit (ACUs) massing are of their expected age profiles are as under:-

Year	Cattle	Buffalo	Sheep	Goat	Equine	Camel	Total
1995	180.5	82.8	4.0	9.2	0.5	0.9	278.0
2000	187.1	87.7	4.1	9.9	0.4	1.0	290.0
2005	192.2	92.6	4.2	10.5	0.3	1.0	301.0
2010	197.3	97.5	4.3	11.2	0.3	1.0	312.0
2015	202.3	102.4	4.4	11.8	0.1	1.1	322.0
2020	207.4	107.3	4.5	12.5	0.1	1.1	333.0
2025	212.5	112.2	4.6	13.2	0.1	1.1	344.0

The estimated livestock population was converted to ACUs assuming that 350 kg of body weight = 1 ACU in cattle, 450 kg = 1 ACU in buffalo, 10 goats = 1 ACU, 10 sheep = 1 ACU.

Source: Draft report of working group for X plan for AHCD, Planning Commission, August 2001.

Quality of feed & Fodder:

Livestock rearing in India is changing with the requirement of time as is also evi-

dent that demand for milch breed of cattle is going up as compared to dual or draught breed. Population of indigenous breed like Haryana, Nagori, Khilar i.e. dual & draught purpose breeds has declined more than milch breeds. In this globalize / market economy dependent agri-economy, milk production has to compete for growing fodder on good or able land. Thus milch animals have to be of high productivity and reproductive efficiency

The most common livestock feed resources are: -

- Crop residues (Straw, stoves, haulms etc)
- Grass land, alpine, sub-alpine, pasture land
- Community lands, Common property resources, wasteland
- Cultivated fodder
- Forest lands
- Cut and carry grasses
- Novel unconventional feeds, top feeds, famine feeds
- Coarse grain
- Oil meals
- Cereal bran, hulls, husks
- Agro products
- Fish meals
- Bone meals

CONCLUSION:

Despite being the largest milk producer globally, India's per animal milk production is still at a low level. The milk cost of production is also high owing to the high fodder cost. The milch animals' quality in India isn't that good. Eliminating our deficiencies is a must to make the dairy industry a highly promising sector.

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