

# Animal Husbandry and Dairying for Development



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### Abstract

Development of agriculture and animal husbandry holds the key to the development of Indian economy in general and rural economy in particular. Dairying has steadily emerged to be the harbinger of equitable justice, employment and a relatively stable source of income generation for the vulnerable sections of the rural community with little land base. India is the largest producer of milk and contributes 19 percent of the world's total milk production. For the purpose of the doubling the income of the farmer the target of milk production has been kept at 254 million tonnes by 2021-22. As India enters an era of economic reforms, agriculture, Particularly the livestock sector, is positioned to be a major growth area. It is more and more recognized that dairying could play a more constructive purpose in promoting rural welfare and cutting poverty.

**Keywords:** Animal Husbandry, Dairying, Development, Employment, Income.

### Introduction

Animal agriculture is an important source of subsidiary income and part time profession to small, marginal farmers and agricultural labourers. Animal husbandry provides multiple benefits to the farming community such as the manure from animals provides a good source of organic matter for improving soil fertility and crop yields.

Generated from the cow dung is used as fuel for domestic purposes. Since agriculture is mostly seasonal occupation, there is a possibility of finding employment throughout the year for many persons through dairy farming. The main beneficiaries of dairy programs are small, marginal farmers, agricultural labourers and landless labourers. The present paper discusses the importance of dairy farming in Indian economy; schemes and programs implemented for its promotion and conclude that dairy development is very much needed to eradicate poverty and unemployment in the rural areas.

### Aim of the Study

The overall objective of the study is to focused on the issues related to animal husbandry and dairying in India. For this the present study is intended;

1. To know the status of animal husbandry and to understand the magnitude of dairying industry in India.
2. To study the extent of milk production and
3. To know the institutional support to enhance the production and protection of dairy farming in India.

### Methodology of the Study

The present study is significantly based on the reports published by the Ministry of Animal Husbandry, Dairying and Fisheries, Government of India, All India 19<sup>th</sup> Livestock Census, reports and news published by the Food and Agricultural Organisation (FAO), new published on the web pages of the dairy times, the economic times, the business standard etc.

### Animal Husbandry and Indian Villages

It is mentioned in the 19<sup>th</sup> Livestock Census, according to the NSSO 66th Round Survey (July 2009-June 2010) on employment and unemployment 15.60 million workers (as per casual status, principal status plus subsidiaries Status) were engaged in farming of animals, mixed farming and fishing. Whereas as per estimates of the NSS 68th round (July 2011- June 2012) survey on employment and unemployment 16.44 million workers as per usual status (principal status, plus subsidiaries status) were engaged in the activities of farming of animals, mixed farming, fishing and aquaculture (GOI, 2017-18, p 3).

Rural women carry out both domestic and livestock related activities. Their routine household activities include cleaning of the home, cooking, stitching, raising children. While livestock management practices include cleaning of animals shed, taking care of sick animals, calf rearing, feeding, watering to animals, milking and making dairy products like ghee, yogurt and butter. General observations concerning rural family life and available studies show that male members are mainly responsible for agricultural Practices, while besides the household responsibilities, the females are said to actively participate in livestock care and management ( Zubair et al 1999).

India is a home for vast number of livestock which plays an important role in strengthening the standard of living of rural people. There are about 300 million bovines, 6507 million sheep, 135.2 million goats and about 10.3 million pigs as per 19<sup>th</sup> Livestock Census in India. Bovines are main source of readymade income to the rural people. Apart from providing dairy products, they are also main source of manure to the crops grown by small, marginal and medium farmers. Animal husbandry and livestock sectors are crucial to the development and empowerment of small and marginal farmers, who consists a large part of the rural economy of India. They contribute to their income and employment and acts as a very natural insurer during the critical time of the farmers.

The following varieties of bovines are seen in the Indian Dairy Industry.

#### **Indigenous Animals**

Animals which belong to distinct/non-distinct breeds of indigenous origin.

#### **Exotic Animals**

Animals which are developed in other countries are described as exotic animals. *The most important exotic dairy cattle breeds in India are Jersey and Holstein Friesian (HF).*

#### **Cross-bred Animals**

Animals which are produced by crossing indigenous animals with exotic breeds or indigenous animals which have exotic inheritance are described as cross bred animals.

#### **Animals in Milk**

Production are described as animals in milk.

The below table is derived from the 19<sup>th</sup> livestock census report published by the Ministry of Agriculture, Dairying and Fisheries, Government of India. The below table shows that the growth of exotic and crossbred cattle has increased from 33060 in 2007 to 39732 in 2012. That is a 20.18 percent change over the five years. Same time there is decreasing in the number of indigenous cattle from 199075 in 2007 to 190904 in 2012. That is -4.10 changes over the five years. The reason for the decreasing in the number of indigenous cattle is a milk production issue. It is known truth that growing indigenous cattle is not economical for a marginal and small farmer as it is yielding less milk.

**Table 1.Total Cattle and Buffalo in 2007-2012 (in Thousands)**

Cattle	2007	2012	% Change
Exotic/Cross			
Bread	6844	5971	-122.7
Male	26216	33760	28.78
Female	33060	39732	20.18
Total			
Indigenous			
Male	76779	71949	-19.32
Female	89236	89224	0.01
Total	166015	151172	-8.94
Total Cattle	199075	190904	-4.10
Buffalo			
Male	19597	16103	-17.83
Female	85745	92599	7.99
Total Buffalo	105342	108702	3.19

**Source:** 19<sup>th</sup> Livestock Census, 2012. Ministry of Agriculture, Dairying and Fisheries, Government of India. PP 13.1

The crossbreed or exotic cattle produce more milk and are more beneficial to the farming community. The difference between the growth rate of exotic/crossbreed cattle and indigenous cattle are almost 1 per cent. Among exotic /crossbreed cattle the number of females is more than male, among indigenous cattle, the difference between male and female is very narrow. The marginal and small farmers keep male cattle for cow dung and other agriculture related purpose as they also productive to the farmers. The main purpose of keeping the indigenous cattle is tilling the agricultural land and for bullock cart which is an essential means of transportation in the rural areas. Farmers use this bullock carts for transporting their agricultural produce and import agricultural essentials from nearby towns. Interestingly, regarding the number of Buffalo, the number of males is decreasing and female is increasing. The number of male buffalo during 2007 was 19597 reduced to 16103; nearly 17.83 percent change has been witnessed. The number of females has increased from 85745 in the year 2007 to 92599 in 2012. The change is almost 7.99 per cent over the years. The overall change in the Buffalo population between 2007 and 2013 were 3.19 per cent.

#### **Milk Production**

India ranks first among the world's milk producing nations, has produced 165.4 Million Tonnes during the year 2016-17 as compared to the 155.50 million tonnes during 2015-16. India has recorded a growth rate of 6.4 per cent in milk production during the same year. Same time, the Food and Agricultural Organization (FAO) has also reported a 2.1 per cent in the world milk production from 815 million tonnes in 2015 to 822 million tonnes in 2016. Per head availability of milk has reached 355 grams per day in the year 2016-17, which was 302 grams during 2016. As to support the statement, India is a country of villages. Most of the milk in the country produced by small, marginal and landless farmers. It is mentioned in the Annual Report of the Ministry of Animal Husbandry, Dairying, Fisheries there are 198 dairy cooperative milk union have covered about 16.30 million farmers under the ambit of 1.77.314 village

level dairy cooperative societies up to March, 2017. It is estimated that the cooperative milk union have procured an average of 428.40 lakh kg per day of milk during the year 2016-17 as compared to 425.6 lakh per day in the previous year.

The average yield of milk per day animals in milk at national level from different species during 2016-17 is given below.

**Table 2: The Average Yield of Milk per Day Animals in Milk at National Level from Different Species during 2016-17**

Exotic cows Kg/day	Crossbreed cows. Kg/day	Indigenous Cows. Kg/day	Non-discript cows.Kg/day	Indigenousbuffalos. Kg/day	Non-discript buffalos. Kg/day	Goat Kg/day
10.93	7.42	3.54	2.29	5.92	4.03	0.46

**Source:** Ministry of Animal Husbandry, Dairying, and Fisheries, Annual Report, 2017-18.

In India, species wise milk production in 2016-17 is like this. Indigenous Buffalo as contribute 35.4 per cent of the total milk production, followed by cross breeding Exotic Cows 25.4 per cent. The indigenous cows contribute 11.3 per cent, non-descript buffalo contribute 11.3 per cent. Exotic cows contribute 9.5 per cent and goat contributes 3.3 per cent to the total milk production.

The globalized world demand for more dairy products and same time consumption of food is increasing and the rate of consumption is growing more intense in the world. The increase in the income level of the people benefitting the dairy sector significantly. No doubt! Higher milk prices stimulate production and in some parts of the world bad weather and natural disaster disturbing the growth of the dairy production.

It is estimated that milk production needs to increase 200 million tonnes in the coming years. To meet the demand of forecasted 7.8 billion people by 2025, nearly 900 million tonnes of milk are required.

#### **Silver line in the Indian Dairy Industry**

The Hindu Business Line (2012) report pointed out that, while the dairy sector in India had seen significant growth over the decades, the growth rate of milk production has slowed down in recent years. A major concern in the country's dairy sector is low animal productivity; the average milk yield of Indian cows is only about 3.4 kilograms per day as against a world average of 6.3 kg. The productivity is low mainly for reasons such as poor nutrition, health and low genetic potential for milk production. In the circumstances, the primary focus of the dairy project is on increasing milk production by genetic improvement of the cows and buffalos and optimal use of feed and fodder.

Some of the steps taken by the stakeholders are mentioned below.

1. National Program for Bovine Breeding and Dairy Development has been launched in February 2014, with a budgetary provision of Rs 1800 cores with an objective to encourage conservation and development of recognized indigenous breeds of the country. The program will focus on creating, strengthening of infrastructure for producing quality milk and milk products.
2. The Dairy Entrepreneurship Development Scheme was launched in September 2010 to generate self-employment opportunities in the dairy sector in the country.

3. Supporting State Cooperative Dairy Federation from 2016-17 with a corpus of Rs 300 cores for providing soft loans to state dairy cooperative federations to provide a stable market access to farmers.

4. The Union Government has established Dairy Processing and Infrastructure Development Fund. According to the union agricultural ministry this fund will help 95, 00,000 farmers in about 50,000 villages. In addition to this, many skilled, semi-skilled and unskilled workers will get employment, directly and indirectly. Additional milk processing capacity of 126 lakh litres per day, milk drying capacity of 210 MT per day, milk chilling capacity of 140 lakh litres per day shall be created. Under this scheme, milk cooperatives will be provided financial assistance of Rs 8,004 crore in the form of a loan at 6.5 percent interest, which will be reimbursed over a period of 10 years. The government has also given a provision of interest subsidy on loans. Till now, 15 sub-projects with a total approved outlay of Rs 1,148.61 crore pertaining to states namely, Karnataka (Rs. 776.39 crore – 5 sub-projects), Punjab (Rs.318.01 crores – 4 sub-projects) and Haryana (Rs. 54.21 crore – 6 sub-projects) have been sanctioned so far (rural marketing.com).

5. World Bank-funded National Dairy Plan Phase- my scheme is also being done by the NDDB through the state government cooperative milk organizations and milk federations. The government is now implementing this scheme in 18 states from the earlier 14 states. On the other hand, the implementation of the National Program for Dairy Development (NPDD) is being done by the states' cooperatives and milk federations. Under this scheme, an assistance of Rs 560.46 crore in 2014-18 was given for the development of cooperative milk committees, incentives to increase the number of milk producers and increase processing and refrigeration capacity (Dairy times).

6. A leading indigenous firm established by Yoga guru Baba Ramdev has announced his entry into the dairy products segment, with cow milk, curd, and cheese and expects the category to generate around Rs 1,000 crore revenue by 2020. Patanjali has tied up with around 56,000 retailers and vendors to supply milk across Delhi-NCR, Mumbai, Pune and Rajasthan and expects to produce 10 lakh litres of cow milk every day in 2019-20. It claimed to have produced 4 lakh litres

on the very first day of operations, saying it will soon start selling dairy products in tetra packs, along with flavoured milk. Patanjali will procure the milk from around 1 lakh associate farmers and said it will provide employment to around 5 lakh by next year through launches. The milk, according to Patanjali, will be sold for Rs 40 per litre as opposed to the Rs 42 market price.

7. The central government to modernize the dairy sector in the country has set up a Dairy Processing and Infrastructure Development Fund at National Bank for Agriculture and Rural Development (NABARD) with a corpus of Rs. 80.04 billion. The first instalment of Rs. 4.4 billion has been disbursed to the National Dairy Development Board. Further the fund would be disbursed to the Dakshina Kannada Milk Union, Kolar-Chickballapur Milk Union, Mysore Milk Union, Karnataka Milk Federation, Karnataka Milk Union and Ropar Milk Union. It is estimated by the union agricultural ministry that the above fund will boost milk production to 254.5 Million Tonnes from the present 176.35 Million Tonnes (businessstandared.com).
8. One more objective of the DIDF is to bring more dairy farmers into organized milk marketing. By promising better price, milk processing capacity of a cooperative set to increase by 32 million liters per day and bulk milk chilling capacity of 14 million litres per day.

#### **Conclusion**

Indian economy is witnessing two important progressions. One is increasing population and the second is growing income level of the people. The present economic growth of the country is between 7.2 to 7.8 percent. The GDP growth will further

increase. India is one of the fastest growing economies of the world. More importantly, people are ready to spend more on to increase their standard of living. The increasing consumption level is always associated with more demand for food items. Dairy products have a special place in the consumer consumption decision. Keeping the above issue in mind various stakeholders in the nation are involved to capitalize the opportunities available in the dairy sector. Many research institutes, universities and union and state governments are involved in supporting the growth of the dairy sector.

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