

# Livestock and Wellbeing: A Social Indispensability

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## Abstract

Livestock plays significant socio-economic and cultural roles in the wellbeing of the farmers. Such as food, source of income and employment, livelihoods, asset saving, transport, and sustainable agricultural production are the key attributes. Livestock in India is raised under animal husbandry to yield major products like milk, meat, eggs, fibre, and other products. Livestock wealth is significant for developing countries like India in general and marginal farmers in particular. Many small farmers in India depend on animal husbandry for their livelihood and sustenance. Animal husbandry offers better scope for marginal farmers whose income from agriculture is dwindling fast due to vagaries of monsoon, fragmentation of landholdings, pest problems, poor pricing. Farmers treat farm animals as companions. The environment created during the interaction of farm animals and farmers in their farming ground is very amiable in India.

**Keywords:** Animal husbandry, Livestock, Marginal Farmers, Rural Economy, Draught Animals, Cattle, Poultry.

## Introduction

India is a predominantly agricultural country, and more than half of the population is dependent on agriculture. Agriculture is vital in India's economy as 54.6 percent of the population is engaged in agriculture and allied activities (Census 2011). Animals serve as our companions, food, employees, and eyes and ears. They can be found in prehistoric cave drawings as well as on commercial farms also. Some of them have been tamed, while others are still wild and are occasionally endangered by our activities. They give us company and might be amusing at times; they are also valuable helpers. They are also, in other words, considered as livestock. Agriculture and livestock production are intrinsically linked and interdependent, and both are crucial for food security. Animal husbandry is considered an allied agriculture branch concerned with livestock animals, rearing, and management. A vast population is engaged in this sector, and it contributes to the country's national income and GDP (4.81 percent).

Along with agriculture, animal husbandry, dairying, and fisheries activities continue to be an integral part of human life since the dawn of civilization. The Indian economy relies heavily on livestock. A total of 20.5 million people rely on livestock for their survival. Small farm households earned 16 percent of their income from livestock, compared to 14 percent for all rural households. Two-thirds of rural communities rely on livestock for their livelihood. It also employs approximately 8.8 per cent of India's population. India has an abundance of livestock. The livestock industry accounts for 4.11 percent of overall GDP and 25.6 percent of total agriculture GDP (DAHD, 2017). Livestock in India is raised under animal husbandry to yield major products like milk, meat, eggs, fibre, and other products. India is at the forefront in the production and consumption of milk. It occupies the second position in the global production of milk, the second-largest poultry market and fish and aquaculture producer. The combined share of milk and milk products, egg, fish and mutton accounted for 10.6 per cent of total monthly per capita expenditure in urban and 12.8 per cent in rural areas in 2011–2012 (NSSO, 2014).

In addition, India is ranked the first position in the world in buffalo population (109.85 million), second in goat population (148.88 million), third in sheep population (74.26 million), sixth in duck and chicken population (851.81 million), and the tenth position in camel population (2.5 lakhs). (Census 2019). Therefore, animal husbandry and backyard farming play a significant role in the lives of rural people, rural development, and rural economy, and it helps small/marginal farmers for livelihood and uplifting their socio-economic status (Bettencourt, et.al., 2015). Further, they also play a significant role in



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creating employment in the rural sector among the landless, small and marginal farmers, and women. Cattle and domesticated hoofed animals are served as assets (*Pashudhan*) for small and marginal farmers during emergencies. It serves as a supplement to and complements the enterprise. India also has a vast resource of poultry, which plays a vital role in improving the socio-economic conditions of rural masses.

In this backdrop, the paper discusses the following through secondary data.

#### **Objective/Aim of the study**

This paper aims to deliberate and discuss how small and marginal farmers engaged in livestock farming to earn a decent living and improve their socio-economic condition; additionally, it also aims to examine how cattle farming, poultry farming, and fisheries all contribute to poverty reduction among small and marginal farmers in India.

#### **Livestock: Definition and Importance**

Domesticated animals raised in an agricultural context to provide labour and commodities such as meat, eggs, milk, fur, leather, and wool are generally referred to as livestock. Sometimes the term livestock refers simply to those bred for human consumption, while other times, it refers only to farmed ruminants like cattle, sheep, and goats. The livestock industry is an integral part of the global food system, contributing to poverty alleviation, food security, and agricultural development. According to the FAO, livestock contributes 40 per cent of global agricultural output and strengthens the livelihoods and food and nutrition security of about 1.3 billion people. Simultaneously, there is much room to enhance livestock sector practices to make them more sustainable, equitable, and less hazardous to animal and human health. Livestock plays a vital role in sustainable food systems; for example, animal manure is a crucial source of natural fertiliser, and livestock utilised as draught animals can help enhance production in areas where automation is limited.

Moreover, for vulnerable communities, livestock is a valuable resource. Around 500 million pastoralists rely on livestock herding for food, income, and as a source of wealth, collateral, or a safety net in times of need worldwide. Livestock farming systems also help preserve biodiversity and carbon sequestration in soils and biomass locally. Moreover, the livestock sector has become one of the fastest-growing agricultural sub-sectors in the middle- and low-income nations because of rising incomes, changing diets, and population growth. As a result, it represents a significant potential for smallholders, agribusiness, and job creators throughout the livestock supply chain.

#### **Review of literature**

Livestock species perform an essential economic, social, and cultural roles and responsibilities or functions for rural families through contributing to the farm family's income and well-being. Food security, family nourishment, family income, asset savings, soil productivity, livelihoods, transportation, agricultural traction, agricultural diversity, and long-term agricultural production, family and community employment, ritual reasons, and social status are all aided by livestock (MOYO et al., 2010).

Livestock contributes significantly to the food supply for rural and urban people, as well as to family nutrition by providing animal protein. As household income rises, so does protein consumption, primarily of animal origin, allowing vegetable protein to be replaced by animal protein. Other livestock products, like skins, hides, and horns are used for domestic consumption and marketing while milk, eggs, and meat are consumed as food. Livestock serves as assets and savings accounts that would be converted into cash at a time when the family needs it, as well as a security asset that influences access to informal loans. Livestock are a source of asset accumulation and prosperity in many rural areas, particularly where financial markets are few or non-existent. Livestock assets can be used at any moment to meet planned expenses such as children's school and tuition fees and bride wealth, and unanticipated expenses like family members' illness or death. This livestock asset can be viewed as a "bank account," and it is also an essential source of family savings which can be utilized in years of low crop production, diminishing income insecurity and household vulnerability, and serving as a

risk reduction and security enhancement tool(Bettencourt, et.al., 2015).

### Demography of livestock

India has enormous and diverse animal wealth-generating livelihood opportunities for millions. Livestock species such as cattle, buffalos, sheep, goats, pigs, horses and ponies, mules, donkeys, camel, Mithun and yak are covered in census. According to the All-India Livestock Census (Table:1), the country's overall livestock population in 2019 was over 536 million, making it the world's highest, showing an increase of 4.82 per cent over 2012. The total livestock population in rural areas has increased by 4.56 per cent, and in urban areas, it has an increase of 11.19 per cent. As a result, the total number of cattle, buffalo, goats in the country is 1.3 per cent, 1.1 per cent and 10.1 per cent in 2019, showing an increase over

2012, respectively. Animal farming in India is primarily pursued as a complementary or supplementary activity and integrated with farming activity. Crop production rose quicker due to the crucial support during the 1960s to tide over the food crisis. Several entrepreneurs have recently started livestock enterprises as a stand-alone business.

**Table: 1 Livestock Population in India**

Species category	Population (In millions) 2012	Population (In millions) 2019
Cattle	190.90	193.46
Buffalo	108.70	109.85
Sheep	65.07	74.26
Goat	135.17	148.88
Pig	10.29	9.06
Mithun	0.30	0.39
Yak	0.08	0.06
Horse & Ponies	0.62	0.34
Mule	0.20	0.08
Donkey	0.32	0.12
<b>Camel</b>	<b>0.40</b>	<b>0.25</b>
<b>Total livestock</b>	<b>512.06</b>	<b>536.76</b>

**Source:** Annual Report 2017-18, Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture and Farmers Welfare, Govt. of India.

### Economy, Culture and Transport

The livestock plays an essential role in the economy of marginal and small farmers. The marginal farmers in India maintain a mixed farming system, agriculture and livestock where the output becomes the input. The livestock serves the farmer's life in various ways such as income, employment, food, social security and many more. Many Indian families, especially the poor who keep a few animals, rely on livestock as a secondary source of income. Cows and buffaloes will provide livestock farmers with a consistent source of income through milk selling. Sheep and goats are used as emergency capital to cover costs such as weddings, medical treatment, children's education, and housing repairs, among other things. The animals also function as moving banks and assets for the owners, providing financial security. Many people in India, being less literate and unskilled, depend upon agriculture for their livelihoods.

Moreover, agriculture being seasonal, could employ a maximum of

180 days in a year. The landless and fewer land people depend upon livestock for utilising their labour during the lean agricultural season. The products such as milk, meat and eggs remain essential sources of animal protein to livestock owners. Large animals such as cattle and buffaloes offer social security to the owners regarding their status in society. Animal-owning families, particularly the landless, are in a better position than those who do not. The gifting of animals during marriages is a widespread phenomenon in different parts of the country. The rearing of animals is a part of Indian culture. Animals are used for various socio-religious functions. Cows for housewarming ceremonies; rams, bucks and chicken for sacrifice during festive seasons; Bulls and Cows are worshipped during many religious functions.

Many owners develop an attachment to their animals. The bullocks are the backbone of Indian agriculture. The farmers, mainly the marginal and small, depend upon bullocks for ploughing, carting, and transporting both inputs and outputs. Dung is utilised for a variety of things in rural areas, including fuel (dung cakes), fertiliser (farmyard manure), and plastering material (poor man's cement). The livestock provides the people with food and non-food products. It also includes food products such as milk, meat, and eggs for the consumption of humans. India is the world's leading milk producer. Wool, hair, hides, and pelts are all produced by livestock. Leather is an essential product with high export potential. Bullocks are the backbone of Indian agriculture. Despite many advancements in agriculture, the Indian farmer, especially in rural areas, still depend upon bullocks for various agricultural activities. The bullocks save fuel, which is required when using mechanical power such as tractors and combine harvesters. In addition to bullocks, pack animals like camels, horses, donkeys, ponies, and mules are often used to transport products across the country. Dung and other animal wastes serve as excellent farmyard manure, and it is also used as fuel (biogas, dung cakes) and for construction as poor man's cement (dung). Livestock is considered as 'moving banks' because of their potentiality to dispose of during emergencies. They are the only capital resource for landless agricultural labourers. Livestock serves as an asset, and in case of emergencies, they serve as a guarantee for availing loans from local sources such as money lenders in the villages. Livestock offers security to the owners and adds to their self-esteem, especially when they own prized animals such as pedigreed bulls, dogs and high yielding cows/ buffaloes

### **Rural Women**

Animal farming provides a substantial chunk of livelihoods in rural and urban areas at the grassroots level. For example, an average rural household earned about 12 percent of its net income from animal farming. Here it is shown that 22.9 percent of the landless and 9.6 percent of marginal and small farmers (up to 2 hectares) depend on livestock for income resources. Women's participation in livestock sectors is marginally higher than men (Sarkar, 2020). Animal husbandry fits well with the family's economic struggle against unemployment, poverty, and unreliable income flows from the primary business for such farmers. A group of the public whose lives have been entwined with animal farming is rural women. Successful homemakers are immediately identifiable, and they can use their animal stock to meet the family's and farm's needs. Furthermore, women have a particular affinity with animals that serve as their ATMs. Women are employed in this sector today on a significant scale. 1.6 percent of males and 9.5 percent of females employed in animal farming on a secondary basis, according to the 66<sup>th</sup> round of the NSSO survey (2009-10). Additionally, there are 0.3 percent and 0.6 per cent males and females involved in service activities related to animal husbandry performed on-farm, respectively. According to the 70<sup>th</sup> round of the NSSO survey (2013), around 1.75 per cent of the total rural households derive income from livestock farming, comprising approximately 2.7 million rural households owning 0.489 hectares of land. 0.75 percent of Schedule tribe, 1.50 percent of scheduled castes, 2.17 per cent of other backward caste households, and 1.67 percent of other reported self-employment in livestock farming. Periodically NSSO surveys on assessing the participation of women in household work and specified activities revealed that a sizable proportion of rural women are engaged in livestock-related works, including cow dung cake making and other activities. In addition, 12.1 per cent of rural women other than those already

involved in dairy, poultry and other animal husbandry related works expressed their willingness to accept those works. Income augmentation for farmers, mainly of small landholders and the landless, is the livestock segment's primary contribution towards the farmer's economy. Animals are an integral part of farming where they help to cope with the risks associated with crop cultivation besides smoothening the income flow during the year. Therefore, animals are an essential aspect of farming since they help mitigate the dangers of crop cultivation while smoothening the income flow throughout the year.

### **Sustainability**

Animals in our society benefit us, from the small farmer raising livestock to the police officer fighting crime in the city. Beyond providing the primary food and clothing products, animals play vital roles in more than just our agricultural industry. Animals help people in four main ways: companionship and pleasure, service, conservation, and stabilisation of the economy. The role of livestock in conserving soil and soil fertility is perhaps one of the essential benefits of animals. Soil-conserving grasses and legumes are utilised to feed cattle. They help to prevent wind and water erosion by forming protective coverings on the ground. Crops that are grown deplete nutrients from the soil. Around 80 per cent of the produce's nutritious value is excreted in the manure when fed to cattle. The loss of soil fertility is reduced when manure is reintroduced into the soil. Finally, livestock help brings stability to farm businesses. Raising livestock animals makes efficient use of a farmer's resources such as land, labour, money, and managerial skills and can also boost agricultural income. Incorporating livestock into a farm business helps to disperse risks across multiple businesses. In addition, both labour and income are more evenly divided throughout the year. The livestock can also supply clean fuel through biogas. Bio CNG can go a long way in improving our environment. Investment in animal wealth and integrating it with crop production systems can contribute to income growth and equity. The National Livestock Mission (NLM), launched during the 12th Five-Year Plan, working towards achieving sustainable development of the sector by providing greater flexibility to states in formulating and implementing the schemes as per the local needs for the benefit of the farmers. NABARD has been a partner in NLM and, on its own too contributed to the betterment of people through supporting animal farming activities. Therefore, all the stakeholders should join hands to bring out total synergies.

### **Conclusion**

Farmers, who comprise most of the world's farms, rely heavily on animals for a viable agricultural system. Farm animals provide economic diversity and risk distribution by providing a source of high-quality food that improves nutritional status and additional resources such as manure for fertiliser, on-farm electricity, and other by-products. Furthermore, greater efficiencies in animal production have saved a significant amount of resources over the last several decades, including water and land. In addition, they have significantly decreased the carbon footprint of animal production. Animals also provide food and fuel for humans and manure for farms by consuming leftovers and by-products from agricultural cultivation that are generally discarded. The animal farm can be run at no cost with good income by-product management amongst various farm livelihood activities. Hence, the farming systems approach is the need for the hour in recent times, primarily on-demand organic products. The country achieved a high record in milk production, and per capita, milk production improved with Operation Flood. India also made significant progress in poultry and fisheries. Milk availability increased per capita more than doubled over the last 60 years. Hence, India could almost reach the standard nutritional requirement norm during the last one and a half decades. Likewise, egg production and meat production in the country increased significantly in 2018-19.

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