

## **Review on the role of animal husbandry in rural development**

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### **Abstract**

Livestock production plays a major role in the life of farmers in developing countries. It provides food, income, employment, and many other contributions to rural development. In India, more than two-thirds of the population lived in rural areas and engaged in farming. Day by day, the size of farms is decreasing so the rural people start diverting toward the livestock sector as the primary source of income for families. India's livestock population is characterized by a vast population comprising of world 14.6 percent cattle, 57.6 buffalo, 16.7 goats, and 6.8 sheep. Those species are disease resistant and highly adapted to the local climate. The vast population of livestock in India not only provides milk and meat as food but also employs rural youth. In rural areas animals are mostly reared along with farming so that they consume crop residues and serve as an additional source of income for the rural poor. Animals also enhance the productivity of farms in two ways first by direct working in the field as draught animals and secondly by providing manure to increase the fertility of the land. Animals help in rural development in several ways as a source of nutritious food for children and pregnant women by providing milk and meat, a source of power in the form of draught animals, provide a medium for transportation, a source of income for a livelihood, and also serve as a bank for rural poor.

**Keywords:** Employment, Income, Livelihood, Livestock production, Rural development, Rural poor.

### **Introduction**

The animal Husbandry sector plays an important role in the national economy and the socioeconomic development of developing countries (Delgado et al 1999). This sector also plays a significant role in supplementing family incomes and generating gainful employment in the rural sector, particularly among landless laborers, small and marginal

farmers, and women, besides providing cheap nutritional food to millions of people.

Livestock is the best insurance against the vagaries of nature like drought, famine, and other natural calamities. Livestock provides a major additional contribution to agriculture through draft power, fuel, manure, and fertilizer. Animal products such as meat, milk, and eggs provide daily cash income and much-required nutrition to the rural population (Sugiyama 2000).

Livestock production is a major component of the agricultural economy of developing countries and goes well beyond direct food production. It is practiced in various forms, such as mixed farming, nomadic herding, commercial grazing, etc. This activity is very closely related to agricultural activity/production, as cultivation receives input from livestock and, in turn, provides output from livestock in the form of animal feed (Khan et al 2006).

Sales of livestock and their products provide direct cash income to farmers. Livestock is the living bank for many farmers and has a critical role in the agricultural intensification process through the provision of draught power and manure for fertilizer and fuel. They are also closely linked to the social and cultural lives of millions of resource-poor farmers for whom animal ownership ensures varying degrees of sustainable farming and economic stability. Official statistics often underestimate the overall contribution of livestock and especially their multipurpose contributions to agricultural production and the development of rural poor (Anonymous 1992).

An important form of diversification of agriculture has recently emerged in the livestock sector in many developing countries like India. Employment generation for millions of poor and small rural landholders is also served by this sector. It provides a significant contribution to the national economy. Approximately 75 per cent of the world's poor live in rural areas. For most of these people, livestock is an important part of their livelihood. In rural India, where over 15- 20 per cent of families are landless and about 80 per cent of landholders belong to the category of small and marginal farmers; livestock is their main source of livelihood. The unaffordability of modern inputs such as tractors and fertilizers for poor farmers is compensated by livestock husbandry (Akila 2009). The livestock sector supports the livelihood of over 200 million rural poor in India. A large majority of livestock-owning households comprise small and marginal farmers and landless households. Overall, the distribution of livestock is much more equitable than that of land, leading to a more equitable distribution of gains from livestock production (Ahuja and Sen 2002.).

The livestock sector plays a crucial role in the Indian economy and contributes over 4% to the total GDP and about 30 per cent of the value of the output of agriculture and allied activities which is almost double of 13.88 per cent contribution in 1980-81 (Economic Survey 2008-09). This sector is the main source of family income in the arid and semi-arid regions. Moreover, this sector plays a vital role in providing nutritive food, rich in animal protein to the general public and in supplementing family income, and generate gainful employment in rural areas.

It also, clearly indicates that livestock and the livelihood of the rural people are very intimately related. The productive potential of animals depends crucially on the quality of the animal health system and in this respect; India has a poor record (Ahuja and Sen 2002). Although the country has emerged as the largest milk producer in the world, the quality of livestock support services remains poor. So there is a good opportunity for the rural poor, to uplift their lives through engaging themselves in the livestock sector (Rollefson 2001).

The present study was undertaken to evaluate the importance of the livestock sector in the development of the rural economy and in empowering the rural poor. The main objectives of the study were to show the present scenario of animal husbandry in India and utilization of human resources in this sector, importance, and functions of the livestock sector in rural development.

### **Livestock sector of India**

India's livestock sector is one of the largest in the world. According to the 18<sup>th</sup> livestock census (2007), there are 199 million cattle, 105 million buffaloes, 72 million sheep, 141 million goats, 11 million pigs, and 649 million poultry birds in India, contributing 57.6 per cent of the world's buffaloes, 14.6 per cent cattle and 16.7 per cent goats with a total livestock population of 529.4 million compared to last Animal census in 2003 the average growth rate is 1.83, 1.84, 3.1, 3.78 and -4.74 per cent respectively for cattle, buffalo, goat, sheep, and pig (Basic Animal Husbandry Statistics 2010).

### **Functions of livestock in rural development**

Term livestock production suggests that the ultimate aim is to produce commodities such as milk and meat which are utilized or sold by farmers. However, rural people keep the livestock to achieve a variety of aims, of which food production is only one (Ahuja et al 2000). The rural economy and development rest on the viability of economic factors i.e. on the ability

of rural households to use and maintain their resources. Livestock plays an important role in ensuring this viability with the following functions-

### **Food production**

Livestock products such as milk and milk products, eggs, and meat are foods of animal origin and relatively high in good quality protein and also the source of energy, minerals, and vitamins. Livestock and their products are also sold in the market by farmers and they generate additional income for the survival of their family or in exchange to obtain the required things. Total meat milk and egg production in India is 6.56 million tonnes, 127.6 million tonnes, and 63.5 billion, respectively (FAO 2012).

### **Provision of other raw materials**

Livestock is capable to produce several high-quality raw materials for various industrial use. Livestock provides not only foodstuffs but also various other raw materials like wool, hair, feathers, and hide for industrial use. These products are used for furnishing clothing and implements etc. both for household use and for sale. The added value of such raw materials can be a further source of income for both men and women within rural communities (Krishnamurthi 1969).

### **Provision of energy for work**

The livestock especially large animals are a very good source of generating energy in India. Animal traction in some areas in the country is used for various agricultural operations like ploughing, weeding, and pulling the load. Most widespread is the use of animals for riding and transporting loads on their back. Household goods, farm inputs and produces are generally carried, in this way. The male animals are sometimes used to operate irrigation and threshing types of equipment. Sometimes those are directly used in threshing through their hooves. Thus, draught animals provide a way to generate income for the family survival of the rural poor (Verma 2013).

### **Manure production**

Manure production and its utilization in the field are highly useful for sustainable crop production and reclamation of soils. Through manure production farmers in rural areas can get money by selling it and can get indirect benefits through an increase in the production of crops. Not only large but small animals, for example-goat sheep and poultry, are also providing good quality and quantity of manure for cropping. The nitrogen (N), phosphorus (P), and potassium (K) ratios were 8.8:1:6.5 and 8.3:1:6.9,

in goat and sheep manure respectively, and over 50 per cent of N and K were in the urine (Ogejo 2010).

### **Means of saving and investment**

Livestock serves an important function as a saving account and producing offspring as an interest. Income from cropping and other enterprises is often invested in livestock. In the Indian situation keeping livestock in rural areas is economic due to less requirement of input resources for them so the farmers get more benefits through their investment in the livestock sector. These animals are also serving as a bank for small farmers who can get ready cash at the time of requirement by selling the animals. Daily off-take from living animals such as milk and egg, provides a more or less regular flow of cash income, even if only part of the off-take is sold and absolute income per day is low, at least it is enough to pay small regular purchases of commodities of daily use (Swallow and Brokken 1987).

Animals can serve as an important source of income not only for full-time livestock farmers but also for crop farmers who keep only a few animals. Crop residue is utilized as feed for animals and animals are utilized as the economic backbone for those farmers (Khan et al 2006).

### **Raising employment opportunity**

In India, 70 per cent of the rural households own livestock. They are an important source of employment in rural India, especially for women. Even though the average holding of livestock is small, the livestock sector has considerable potential for generating additional employment through milk, meat, wool, and egg production. Milk production alone involves more than 30 million small producers (GOI 2008).

At the farm level, dairying is a labor-intensive activity, involving women in both production and marketing. Labour typically accounts for over 40 percent of total costs in smallholder systems. It has been estimated that for each 6 to 10 kg of additional milk processed per day in India, one working day is added for feeding and care. Goat, sheep, poultry, and rabbit husbandry, especially in backyard production systems, provides an important source of part-time job opportunities, particularly for landless women and children (Sansoucy 2007). Livestock represents at least a partial source of income and food security for 70 per cent of the world's 880 million rural poor who live on less than USD 1.00 a day (Neely et al 2009).

The level of employment generated or workforce absorption in the livestock sector is controlled by the size of the operational holdings of the

farmers. Farmers with marginal, small, and medium-sized holdings participated in a larger proportion of work, and more than 21 per cent of their total workforce in each category was employed in different operations of livestock husbandry (Iqbal 2010).

### **Utilization of women's labor**

The mode of utilization of women's labor in animal husbandry activities was also estimated, and it was found that, of the total input by female laborers, more than 90 per cent were unpaid i.e. they were women from the same household (Iqbal 2010).

Women's typical role within a livestock production system is different from region to region, and the distribution of ownership of livestock between men and women is strongly related to social, cultural, and economic factors. Generally, it depends on the type of animals they raise. In many societies, for example, cattle and larger animals are owned by men, while smaller animals – such as goats, sheep, pigs, and backyard poultry kept near the house – are more of a woman's domain (Grandin et al 2008).

Women are typically responsible for milking ewes, processing and selling milk products, providing feed/fodder and water, and caring for newborn lambs/kids and sick animals. Young girls are also involved in the grazing of goats and sheep, whereas married and young women are responsible for household activities (Anonymous 2008).

### **Conclusion**

The livestock sector plays a crucial role in rural economy and livelihood. Livestock can be raised on crop residues and agricultural byproducts in rural environments. The multiple livestock species rearing patterns are usually followed in rural India, which is environment friendly and plays a vital role in providing nutritive food, supplementing family income as well as in the generation of additional gainful employment in the rural sector, particularly among the landless, small, marginal farmers and women. Thus an increase in demand for livestock products can be a major factor in raising the income and living standards of rural households.

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