

Review Article

<https://doi.org/10.20546/ijcmas.2020.908.050>

Role of Livestock in Indian Economy-A Review

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ABSTRACT

Livestock sector plays an immense role in the growth and sustainability of Indian economy. Animal husbandry is always considered as an important factor in supporting and uplifting the socio-economic status of the farmers, by bringing an additional and steady income throughout the year. Animal husbandry sector provides distinct employment opportunities for the entrepreneurs. Today, India is the number one milk producer country in the world and milch animals are providing a regular and steady source of income to the livestock farmers through milk sales and value addition. Livestock is always considered as a moving bank because of its potentiality to dispose off during emergencies and financial crises. The rapidly increasing demand for livestock products creates employment opportunities for the women and youth. Integrating farming system stabilizes and increases the farm income through the adoption of different enterprises at once and recycling of the residues decreases the cost of the overall farm expenses. The livestock products such as milk, meat and eggs are important source of animal protein and its replacement is very rare. Along with income and urbanization, food consumption pattern have changed and we can see a huge alteration in the consumption of livestock products both in rural and urban areas. Improving the productivity of farm animals is one of the major challenges as livestock improves food and nutritional security by providing nutrient rich food products, generate income as well as employment and contribute to foreign exchange through exports.

Keywords

Livestock,
Indian economy,
Milch animals,
Farm expence

Article Info

Accepted:
10 July 2020
Available Online:
10 August 2020

Introduction

Indian livestock sector is one of the largest in the world with holdings of 11.6 percent of the world (BAHS-Basic Animal Husbandry Statistics, 2014). In recent years, the livestock sector has emerged as an important segment of an expanding and diversifying agricultural sector in the Indian economy (Tisdell and Gali, 2000). The livestock farming is a very

important socio-economic activity in Indian agriculture, as milk is the second largest agricultural commodity contributing to GNP (Gross National Products), next only to rice (Sarkar and Ghosh, 2010). Goat and sheep are known as the poor man's cow or bank on hooves which can survive with least resources. The livestock provides main food items such as milk, meat and eggs for human consumption. Rural Poverty is largely

concentrated among the landless and the marginal households comprising about 70 percent of rural population (Kozel and Parker, 2003). Several empirical studies indicate that livestock rearing has significant positive impact on equity in terms of income and employment and poverty reduction in rural areas (Singh and Hazell, 1993). Livestock generates a continuous stream of income and reduces seasonality in livelihood patterns particularly of the rural poor (Birthal and Ali, 2005).

Income and employment generation

Animal husbandry is the backbone of socio-economic status of farmers as it provides an additional and steady income throughout the year. The growth rate of the livestock sector has been steady and is around 4-5 percent despite receiving less investment compared to the manufacturing and service sectors (Ali, 2007). A large number of people in India being less literate and unskilled depend upon agriculture for their livelihoods but agriculture being seasonal in nature could provide employment for a maximum of 180 days in a year. The landless and small farmers having less land holdings depend upon livestock sector during lean agricultural season. Around 70 percent of the population living in rural areas depend on agriculture and allied activities for livelihood hence, there is a need for a subsidiary occupation like poultry, sheep and goat farming (Kaware, 2017).

Livestock is a source of subsidiary income for many families in India, especially the resource poor who maintain few heads of animals. Milch animal are providing a regular source of income to the livestock farmers through milk sales and value addition. Animal husbandry sector provides large self-employment opportunities to the unemployed youth and budding entrepreneurs. According to the survey of National Sample Survey

Organization's (NSS 61st round) around 5.5% of the workforce in the country was engaged in animal husbandry sector in 2004-05 and the total employment in animal husbandry and fisheries is around 5.80%.

Socio economic security and women empowerment

Livestock like sheep and goat serve as sources of income during emergencies to meet exigencies like marriages, treatment of sick persons, children education, repair of houses etc. Livestock is considered as moving bank because of its potential to dispose off during emergencies and financial crises. Livestock serve as capital resource and in cases of landless agricultural laborers many times it is the only capital resource they possess (Dash, 2017). Livestock also serves as an insurance substitute, especially for poor rural households as it can easily be sold during time of distress.

Livestock acts as a storehouse of capital insurance against crop production risks (Rao and Hall, 2003). About 20.5million people depend upon livestock for their livelihood particularly youth and women. The major share of the credit for India's position as largest milk producing country in the world and a significant increase in the per capita availability of milk in the country goes to rural women dairy farmers (Patel, 1998). If we talk about small livestock, most of the goat farmers are either landless or small and marginal farmers and is usually looked after by the woman of the house (Nimbkar, 1993). The rural women play a significant role in the rearing of livestock and are responsible for most of the operations relating to feeding, breeding, management and health care of the livestock. The rapidly increasing demand for livestock products creates opportunities for the empowerment of women (Taneja, 2013).

Contribution of livestock sector to the food basket

The livestock products such as milk, meat and eggs are an important source of animal protein. Along with income and urbanization, household expenditure and food consumption pattern has changed. Livestock products account for up to 25% of food basket in India. Consumption of livestock products has been increasing both in rural and urban areas and livestock represents nearly 22 and 25% respectively of the food basket in 2009-2010 (Birthal, 2008 and NSSO- National Sample Survey Office, 2009-10). The per capita availability of milk is around 394 g / day and eggs are 79 / annum during 2018-19 (BAHS-Basic Animal Husbandry Statistics, 2019). Many Indian families in urban areas have begun to accept eggs as a regular supplementary part of their vegetarian diet (Hellin *et al.*, 2015). Livestock sector not only provides essential proteins and nutritious human diet through milk, eggs, meat etc. but also plays an important role in utilization of non-edible agricultural by-products.

Integrated farming systems and economic analysis

Adopting integrated farming system improves the profitability and also achieves sustainable production by effective recycling of natural resources (Netam *et al.*, 2019). Due to increased urbanization highly productive agriculture lands have been converted into residential areas and integrated farming is one solution to all these problems (Soni *et al.*, 2009). Farm integration could be partial or complete. Complete farm integration could involve crop cultivation, dairy farming, processing and bio gas units (Chan, 2006). The partial integration could be a combination of any two activities (Igbinnosa and Okporie, 2007). Integrated farming system is helpful in decreasing the cost of production, increases

income and productivity (Ugwumba and Orji, 2006). As farm integration may involve two or more than two farming activities at one farm so the benefits of enterprise integration could only be achieved if there are enough resources and same time success of the farm enterprise depends upon the skills of the farmer (Shahbaz *et al.*, 2017). Integrating farming system stabilizes and increases the farm income by having different enterprises at one farm and recycling residues for reuse thus also decreasing the cost of the overall farm.

Challenges faced by the livestock sector

Improving the productivity of farm animals is one of the major challenges. The frequent outbreaks of diseases like Foot and Mouth Diseases, Black Quarter etc. continue to affect livestock health and lowers productivity. Animal health services are important in reducing losses due to animal diseases. Technologies for disease control and cure are known but delivery problem exists (Upton, 2004). The indigenous or native stock has a poor performance relative to highly selected commercial lines but they have the ability to survive in challenging environments (Crawford and Christman, 1992). Promotion of indigenous high yielding cattle that are known for maintaining performance at higher ambient temperature is the need of time. Limited artificial insemination services owing to a deficiency in quality germplasm, infrastructure and technical manpower coupled with poor conception rate following artificial insemination have been the major impediments. Access to markets is critical to speed up commercialization of livestock production. Lack of access to markets may act as a disincentive to farmers to adopt improved technologies and quality inputs. Milk production during 2017-18 and 2018-19 was 176.3 million tonnes and 187.74 million tonnes respectively showing growth of 6.48 percent (DAHD- Department of Animal

Husbandry and Dairying, Annual report, 2018-19). More than 50% of the marketable surplus is still handled by the unorganized sector, (GOI- Government of India, Economic survey, 2018-19). Meat and poultry products accounted for 83 percent of total export earnings (Planning Commission, 2007-12). Except for poultry products and to some extent for milk, markets for livestock and livestock products are underdeveloped, irregular, uncertain and lack transparency. Further, these are often dominated by informal market intermediaries who exploit the producers.

Future prospects

Livestock improves food and nutritional security by providing nutrient rich food products, generate income and employment and act as a cushion against crop failure, provide draught power and manure inputs to the crop subsector and contribute to foreign exchange through exports (Birthal and Rao, 2002). Besides, providing great potential and outstanding contribution to the agricultural sector over the past years, the livestock sector is performing well in the manner of production, value addition and export of different livestock products. Livestock helps in women empowerment and provides livelihood to many marginal farmers. Both the national economy as well as the socio economic growth of rural India is backed by the livestock sector. So, in general we can clearly mention that the role of livestock is immortal and immense in today's scenario and in the coming future. It is going to pump-up the socio- economic status of the rural families and hence secure the national food and economic security. Livestock is already catering the various employment opportunities and the day is not far when livestock will be an essential asset for every agricultural farmer.

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How to cite this article:

Khushpreet Singh, Ravdeep Singh, Y. S. Jadoun, Bharti Deshmukh and Kansal, S. K. 2020. Role of Livestock in Indian Economy-A Review. *Int.J.Curr.Microbiol.App.Sci.* 9(08): 432-436. doi: <https://doi.org/10.20546/ijcmas.2020.908.050>