



Livestock and dairy development in India: A study

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Abstract

Basically India is an agrarian economy and country of villages. In India more than half of the population is still engaged in agriculture. Indian agriculture is gambling with monsoon. So, that most of the farmers are relied on Livestock and dairy farming. In this article, we will come know to about the importance and role of livestock and dairy development in India, current position of India's Livestock and its contribution to the people.

Keywords: livestock, livelihood, dairy development and animal husbandry

Introduction

Livestock and Dairy Development play a prominent role in the rural economy in supplementing the income of rural household particularly, the landless and small and marginal farmers. It also provides subsidiary occupation in semi-urban areas and more so for people living in hilly tribal and drought prone areas where crop output may not sustain the family. Livestock output constitutes about 30% Of the country's agricultural output.

India is endowed with the largest livestock population in the world with a holding of 11.6%. It accounts for 57% of the world's buffalo population and 15% of the cattle population. According to livestock census (2003), the country has about 18.5 crore cattle and 9.8 crore buffaloes.

Importance of Livestock in India

Livestock is an important source of income for a nation. The share of livestock production in the agricultural output in some of the west European countries is about 60 to 80% in recent years. In India, however, the gross value of output from livestock sector i.e. animal husbandry and dairy development is placed at 6.5% of India's GDP (in 2002-03) at current prices.

The value of output of livestock was estimated at Rs. 1, 55,330 crores during 2001-02 at current prices which is about 25% of the value of milk alone (valued at 1,03,800 crores in 2001-02) was higher than paddy (Rs. 73, 970 crores), wheat (43,820 crores) and Sugarcane (Rs. 28,590 crores).

Contribution of livestock sector to the national economy in terms of GDP is 4.1%. Agriculture and allied sector contributed around 15.1% to the total GDP. Out of the total agricultural GDP, livestock sector contribute about 27.25% during 2014-15 (GOI, 2014).

Review of Literature

D.M.Broom (2017) ^[1] In world agriculture, there will be increasing demand from consumers for the avoidance of adverse effects on human welfare, animal welfare and the environment. A system or procedure is sustainable if it is

acceptable now and if its expected future effects are acceptable, in particular in relation to resource availability, consequences of functioning and morality of action. A production system might be unsustainable because of: inefficient usage of world food resources; adverse effects on human health and human welfare in general; poor welfare of animals; harmful environmental effects such as low biodiversity or insufficient conservation; unacceptable genetic modification; not being "fair trade" in that producers in poor countries are not properly rewarded; or damage to rural communities. Consumers might judge, because of any of these inadequacies, that the quality of the product is poor. Animal welfare has been developing rapidly as a scientific discipline. The welfare of an individual is its state as regards its attempts to cope with its environment. The welfare of cows in India is often very poor and policies should be changed to prevent this.

Elisa Maria Varela Bettencourt, Mário Tilman, Vanda Narciso, Maria Leonor da Silva Carvalho and Pedro Damião de Sousa Henriques ^[2]

The livestock species play very important economic and socio-cultural roles for the wellbeing of rural households, such as food supply, source of income, asset saving, source of employment, soil fertility, livelihoods, transport, agricultural traction, agricultural diversification and sustainable agricultural production. The aim of this work was to identify and characterize the different roles that livestock and livestock species play in rural communities of Timor-Leste, highlighting the importance of animal production for the wellbeing and rural development, and relate the functions performed by livestock production with economic, social and cultural attributes of the communities. The data used in this study were collected in 2011 through a questionnaire survey in three rural communities in the district of Bobonaro, namely in a mountain area, an irrigation plain and a coastal zone, and were complemented with secondary data. Livestock production in Timor-Leste is predominantly familiar being chickens, pigs, goats, cattle, horses, buffaloes and sheep the main species. Beyond the

¹ Role of Livestock in Sustainable Agriculture; IAHA Pre-Conference on Organic Animal Husbandry November 7-8, 2017

² The Livestock Roles in the Wellbeing of Rural Communities of Timor-Leste; <http://www.scielo.br>

economic function, each livestock species also performs social and cultural functions.

Michio Sugiyama, Arunasiri Iddamaloda, Katsuyuki Oguri and Nobuaki Kamiya ^[3]

Reports the results of survey conducted on livestock development in selected Asian countries. Livestock plays a vital role in economic development and play a major role in the life of farmers in developing Asian countries. In the Asian region, livestock provides major additional contribution to agriculture through draft power, manure, fuel, and as a fertilizer. Animal products such as meat, milk and eggs provide daily cash income to agricultural families and also provide much required nutrition to rural population. The outlook for the poultry farming is promising. The average consumption of animal products among these countries is well below the world average but with the growth in disposable income and purchasing power will increase the demand for animal products. This study found that the Asian share of the world meat production has been quite low when compared to its animal population.

S. Moyo and F.J.C. Swanepoel ^[4]

Livestock play multiple roles in the livelihoods of people in developing communities, especially the poor. They provide food and nutrition, work, economic and social status, and ensure environmental sustainability. With the livestock sector experiencing rapid change – mainly driven by the rapidly changing livestock production systems, demographics, environmental impacts, technologies, policies and institutions – this “multifunctionality of livestock” becomes an even more complex issue, intertwined with other research and development challenges. T. F. Randolph, E. Schelling, D. Grace, C. F. Nicholson, J. L. Leroy, D. C. Cole, M. W. Demment, A. Omore, J. Zinsstag, and M. Ruel (2007) ^[5]

Livestock keeping is critical for many livestock development issues related to these linkages. of the poor in the developing world, often contributing These beliefs limit the scope of intervention programs to multiple livelihood objectives and offering pathways to promote livestock and limit their potential contribuout of poverty. Livestock keeping also affects an indis-tion to poverty reduction. Recognition of the complexity pensable asset of the poor, their human capital, through of the role livestock play in household decision-making its impact on their own nutrition and health. This paper and of the opportunities foregone due to these miscon outlines the linkages between livestock keeping and ceptions can enhance the ability of livestock to contribthe physical well-being of the poor, and examines a ute to human well-being in the developing world. number of commonly held beliefs that misrepresent

Clem Tisdell and Jyothi Gal (1999) ^[6]

Since India’s independence some 50 years ago, it has experienced considerable economic growth and structural change; a trend accelerated by its structural reforms which began in 1991. These changes are also reflected in trends in its livestock sector which has shown considerable growth in

recent decades (especially since the late 1970s). There have also been major changes in the composition of the Indian livestock sector. The population of non-ruminants (particularly chickens) has expanded very rapidly and so their relative importance has risen substantially. Non-ruminant production (poultry and pigs) has increasingly become commercialised and industrial in nature. Trends and developments in India’s livestock industries since 1961 are outlined. Consequences and prospects for consumption of livestock products in India and international trade are discussed along with the environmental impacts of developments in India’s livestock industries. As observed, livestock developments in India have been significantly influenced by religious and cultural factors. Consequently, the nature of India’s livestock sector is to some extent unique.

Role of livestock in Indian economy

Livestock plays an important role in Indian economy. About 20.5 million people depend upon livestock for their livelihood. It is contributed 16% to the income of small farm households as against an average of 14% for all rural households. Livestock provides livelihood to 2/3rd of rural community. It also provides employment to about 8.8% of the population in India (GOI, 2014).Table 1 shows the livestock position in India according to the livestock census 2012 (taken once in 5years).

Table 1: Livestock population

No.	Species	Number (million)	World Rank status
1	Cattle	191.00	Second
2	Buffaloes	109.00	First
3	Sheep	65.00	Third
4	Goat	135.20	Second
5	Pigs	10.30	
6	Total Poultry	729.20	Seventh
7	Other	01.70	

Source: Livestock census 2012

Table 2: Production of livestock in India 2016-17

Sl. No.	Product	Quantity	Ranking in the world production
1	Milk in million tonnes	165.40	First
2	Eggs in billion tonnes	88.14	Third
3	Meat in million tonnes	7.40	NA
4	Wool in million Kgs	43.50	NA
5	Fish in lakh tonnes	114.09	Second

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

Contribution of livestock to people

The livestock provides food and non-food items to the people.

1. Food: The livestock provides food items such as Milk, Meat and Eggs for human consumption. India is number one milk producer in the world. It is producing about 176.34 million tones of milk in a year (2017-18). Similarly it is producing about 95.22 billions of eggs, 8.89 million tonnes of meat in a year. The value of output of livestock sector at current prices was Rs 8, 11, 847 crores in 2015-16.

2. Fibre and Skins: The livestock also contributes to the

³ Development of Livestock Sector in Asia: An Analysis of Present Situation of Livestock Sector and Its Importance for Future Development

⁴ Multifunctionality of Livestock in Developing Communities

⁵ Invited Review: Role of livestock in human nutrition and health for poverty reduction in developing countries

⁶ Trends and Developments in India’s Livestock Industry

production of wool, hair, hides, and pelts. Leather is the most important product which has a very high export potential. India is producing about 43.5 million Kg of wool per annum.

3. **Draft:** Bullocks are the back bone of Indian agriculture. Despite lot of advancements in the use of mechanical power in Indian agricultural operations, the Indian farmer especially in rural areas still depend upon bullocks for various agricultural operations. The bullocks are saving a lot on fuel which is a necessary input for using mechanical power like tractors, combine harvesters etc. Pack animals like camels, horses, donkeys, ponies, mules etc are being extensively used to transport goods in different parts of the country in addition to bullocks. In situations like hilly terrains mules and ponies serve as the only alternative to transport goods. Similarly, the army has to depend upon these animals to transport various items in high areas of high altitude.
4. **Storage:** Livestock are considered as “moving banks” because of their potentiality to dispose off during emergencies. They serve as capital and in cases of landless agricultural laborers many time it is the only capital resource they possess. Livestock serve as an asset and in case of emergencies they serve as guarantee for availing loans from the local sources such

as money lenders in the villages.

5. **Dung and other animal waste materials:** Dung and other animal wastes serve as very good farm yard manure and the value of it is worth several crores of rupees. In addition it is also used as fuel (bio gas, dung cakes), and for construction as poor man’s cement (dung).
6. **Weed Control:** Livestock are also used as Biological control of brush, plants and weeds.
7. **Cultural:** : Livestock offer security to the owners and also add to their self esteem especially when they are owning prized animals such as pedigreed bulls, dogs and high yielding cows/ buffaloes etc.
8. **Sports/ recreation:** People also use the animals like cocks, rams, bulls etc for competition and sports. Despite ban on these animal competitions the cock fights, ram fights and bull fights (jalli kattu) are quite common during festive seasons.
9. **Companion animals:** Dogs are known for their faithfulness and are being used as companions since time immemorial. When the nuclear families are increasing in number and the old parents are forced to lead solitary life the dogs, cats are providing the needed company to the latter thus making them lead a comfortable life.

Table 3: A Summary of benefits and products derived from livestock

Benefit	Products
Food	Milk; meat; eggs; blood; fish; honey; processed products.
Clothing	Wool; hides; skins; leather.
Work	Draught power – cultivation; transport of goods and people; threshing; milling; pumping water.
Monetary	Capital wealth; investment and savings; income from hiring working animals; sale of products and animals.
Social	Bride price “Lobola”; ceremonial; companionship; recreational; status.
Manure	Fertiliser (soil amelioration); fuel; flooring.
Other benefits	Feathers; bone meal; soap production.

Source: Stroebel *et al.*, 2010

Role of livestock in farmers’ economy

The livestock plays an important role in the economy of farmers. The farmers in India maintain mixed farming system i.e. a combination of crop and livestock where the output of one enterprise becomes the input of another enterprise thereby realize the resource efficiency. The livestock serve the farmers in different ways.

1. **Income:** Livestock is a source of subsidiary income for many families in India especially the resource poor who maintain few heads of animals. Cows and buffaloes milk will provide regular income to the livestock farmers through sale of milk. Animals 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. The animals also serve as moving banks and assets which provide economic security to the owners.
2. **Employment:** 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 land less and less land people depend upon livestock for utilizing their labour during lean agricultural season.
3. **Food:** The livestock products such as milk, meat and eggs are an important source of animal protein to the

members of the livestock owners. The per capita availability of milk is around 355 g / day; eggs are 69 / annum.

4. **Social security:** The animals offer social security to the owners in terms of their status in the society. The families especially the landless which own animals are better placed than those who do not. Gifting of animals during marriages is a very common phenomenon in different parts of the country. Rearing of animals is a part of the Indian culture. Animals are used for various socio religious functions. Cows for house warming ceremonies; rams, bucks and chicken for sacrifice during festive seasons; Bulls and Cows are worshipped during various religious functions. Many owners develop attachment to their animals.
5. **Draft:** The bullocks are the back bone of Indian agriculture. The farmers especially the marginal and small depend upon bullocks for ploughing, carting and transport of both inputs and outputs.
6. **Dung:** In rural areas dung is used for several purposes which include fuel (dung cakes), fertilizer (farm yard manure), and plastering material (poor man’s cement).

Future Prospects

The consumption pattern of Indians has to be changed. These developments can be expected in India in the future

but the only snag is the religious prejudices against the killing of cattle, even the most useless. The developments in animal husbandry will help the livestock enterprise to catch up with the increasing demand and consumption and consumer preferences.

Conclusion

Livestock is the main income generating sector to the rural people. Apart from agriculture, they are earning their livelihood through livestock and dairy development. It provides employment opportunities to the farmers and nutritious food to the people. It provides revenue to the government. Hence, the role of livestock in Indian Economy is significant.

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