



Socio-economic Impact of Livestock in Tribal Areas of Leh

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ABSTRACT

Livestock is not only an important source of food and income but also the sign of assets in rural areas for poor people. In order to estimate how social-economic factors influence livestock production and income with the help of empirical model, the authors used the data collected from 100 household selected from 24 villages of 6 localities in Leh region of Jammu and Kashmir. In Ladakh region overall 70 per cent people are dependent on livestock especially in areas of Zaskar and Nyoma, out of which about 80 per cent are women. Hence, it is strongly suggested that stakeholders should look forward to the livestock production system in Leh region of Jammu and Kashmir to have clear strategy and good policies.

Key Words: Empirical model, Household, Leh region, Livestock, Socio-economic factors

INTRODUCTION

Ladakh, land of high passes, is the largest in area among the three main regions of the Jammu and Kashmir State. It is a biogeographic region with extremely harsh climatic conditions. It is the coldest and most elevated inhabited region in the country with altitudes ranging from 2300 m to 5900 m above mean sea level. The temperature fluctuates from 30° C in summer to -30° C in winter. Average precipitation is very low i.e. around 9 to 10 cm. Majority of people (77%) live in villages and depend primarily on agriculture and livestock rearing. Being unique agro-climatic and biogeographic region on earth which is bestowed with rich natural animal biodiversity having unique characteristics features which can withstand harsh climatic conditions of this cold dry arid region. This contributes the uniqueness of livestock species in true sense.

The cold desert of Ladakh has huge barren lands where even agriculture is uncertain, therefore, people mainly depend on livestock resources. Because of unique animal biodiversity and

ecosystem integrity of this region it has been found that livestock contributes in income generation and poverty alleviation by means of multiple values which are associated with livestock. Direct value for example livestock sales, meat and milk, employment, transport, knowledge and indirect values such as inputs for agriculture, wildlife and tourism. The native livestock breeds are multipurpose with unique genetic characteristics and exhibit a distinct superiority over other breeds of the India which include adaptation to harsh or extremely cold arid dry climatic conditions, utilization of poor quality feed and better resistance to tropical diseases.

MATERIALS AND METHODS

Data Collection and Sampling Techniques

Both primary and secondary data were collected from three blocks namely Nyoma, Durbok and Leh of Ladakh region. Structured questionnaire based primary data were collected from a total of 100 randomly selected households in the year 2013-14. The data were verified from the Dept. of Animal

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Husbandry and Sheep Husbandry Govt. of J & K. In each of the villages sampling was done with the help of local authorities. List of all households in a village was taken as a sampling frame during assignment of primary data source (PDS). From the list the starting point was chosen at random using lottery technique.

RESULTS AND DISCUSSION

Impact of livestock on the economy of Ladakh

The estimated livestock Population of the state is 155.867 lakh comprising 31.185 lakh cattle, 37.788 lakh sheep, 7.704 lakh Buffalo, 16.748 lakh goat, 57.195 lakh fowl and 5.247 lakh duck. Out of the total livestock population 48.47 and 47.42 per cent is present in Jammu and Kashmir region, respectively. The contribution of Ladakh region depicts that livestock population of these two districts includes 0.964 lakh cattle, 2.081 lakh sheep, 2.900 lakh goats and 0.461 lakh fowls. The Total livestock Population of Ladakh Region is 6.406 lakh. Out of which 3.222 lakh in Leh and 3.184 lakh in Kargil district respectively. Ladakh Region contributes 3.83 per cent to the total estimated milk production of the State which is about 1609.247 thousand MT, total estimated meat production of State was worked out to be 309 lakh kg consisting of 80.30 per cent of red meat and 19.70 per cent of white meat. The Jammu region accounted for 51.45 per cent , Kashmir region (41.55%) while Ladakh Region (7.00%) of total meat production (Integrated sample survey 2010-11).

The agriculture including livestock contributes 25.94 per cent to the Gross State Domestic Product (GSDP) at constant prices of which livestock has a contribution of 11 per cent, which is about 40 per cent of the agriculture and allied activities. This contribution is excluding the draught power of the livestock used for ploughing and other transport. In absolute terms the sector contributes Rs. 3240/-crore to the state economy at current price as per GSDP. The contribution of livestock to the state economy is higher than horticulture and crop sector.

Major livestock resources found in Ladakh region

The agro-climatic conditions in the state are conducive for wool and mutton production. This is a primary occupation of migratory tribes. The contribution of livestock to the state economy is quite significant and the sheep and goat population constitutes about 56 per cent of the total livestock. The local Kashmiri wool which was primarily used for manufacturing of Namdas and coarse blankets obtained from cross breed sheep finds its way into the market for making of fine quality tweeds, pullovers and blankets etc. The estimated sheep and goat population of the Ladakh Region is 2.081 lakh sheep, 2.900 lakh goats. The main sheep breeds of this region are: Malluk breed and Merino-Malluk hybrids that produce better quality clothing wool. Changluk breed is prevalent in Changtang area which provide wool preferred for the carpet industry. Ladakh Region contributes 2.697 lakh kg to the total wool production estimated for the State (73.819 lakh kg) which consisted of 59.764 lakh kg (80.96%) from Cross-breed Sheep and 14.055 lakh kg (19.04%) of Local-breed Sheep. (Integrated sample survey 2010-11)

Goats

The biggest advantage of the Indigenous goat is its resistance to diseases and its adaptability in unfavourable grazing circumstances. Because of their small size, adaptive feeding behaviour and easy management, goats are a viable option in improving the household cash flow of rural people tribal communities which resolve the issue of food security. Apart from cash income from the sales of pashmina wool products, goats could also be a valuable source of milk ,meat , manure and skin for considerable number of rural people and tribal pastoral communities of Ladakh.

Changtangi goat primary raised for its valuable pashmina wool which is the costliest fiber on earth. Other breeds of goats are raised for meat and wool. Their hair is used for making ropes, baskets and coarse blankets, the skin used for garments in poorer

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households. The present scenario shifting towards livestock integrated farming based economy is the most burning issue of Ladakh and it is the high time to take livestock integrated farming system seriously so that we could cherish the dream of a sustainable, prosperous and a developed Ladakh.

Yak (*Bos grunniens*)

Yak is a unique bovine species of economic importance in high hill and snow bound areas of Indian Himalayas. This versatile bovine is a major source of livelihood for the highlanders living in difficult terrains. The range of products and services provided by yak include: meat, milk, wool and leather, draught power and soil nutrients besides serving as financial asset and security.

Yak a hardiest bovine species called as ships of snow that easily survives cold temperatures and require minimal care. It is the only animal which lives on the mountains at an altitude of 2500 to 6000 m above mean sea level with temperature well below 50°C kept for multipurpose uses such as meat, fibre, fuel, and transport. Yak-cattle cross (dzo and dzomo), the dzo kept for draught power and dzomo for milk production. Dzo are preferred for ploughing because they are much harder than the local bull or the cattle-jersey bull; The female yak (Dzomo) is better milch animal as compared to local cow, milk is very rich having 7 – 12 per cent fat & 5 -6 per cent protein. Milk is golden white in colour. The dressing percentage varies from 40 to 45 per cent. Produce undercoat of fine diameter (400 g/yr). In some areas, where the Dzomo cannot withstand the summer heat the cows are preferred. Here cows are of different breed than of plains and they can very well withstand the biting cold of winter months. With the very little grazing pastures open, hand feeding becomes must. The lactation period of cow and Dzomo is six and nine months respectively. Cows give three to four kg milk/day while as Dzomo produce five to six kg of milk/day. The calving period of cows is greater than Dzomo, in case of cows it is more than eighteen months but Dzomo reproduces almost every year. Jersey-local

cattle hybrids kept by families for increased milk yield provided they have fodder.

Out of six blocks of Leh district, Leh block has highest number of exotic breed of cows which determines that it produces maximum milk in the district in spite of least cultivable land. Durbok has got least number of exotic breed of cows. Khaltsi, kharuand Leh has highest number of indigenous breed of cows. The dairy production of Leh is the main sector of economy in the rural side. It fulfills their domestic needs and the surplus is sold in market. Out of total livestock 43.42% are cows and bulls only. It clearly indicates the importance of dairy production in arid region of Ladakh.

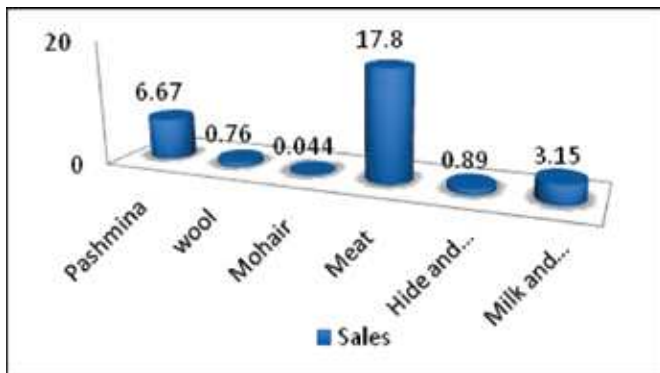
Asiatic double-humped camels (*Camelus bactrian*)

This is a unique animal species of economic importance in high hill and snow bound areas of Indian Himalayas. This versatile animal is a major source of livelihood for the highlanders living in difficult terrains. The range of products and services provided by camel include meat, milk, wool and leather, draught power and soil nutrients besides serving as financial asset and security. They are hairy double humped animals having historic importance of Central Asian trade capable of carrying 600 pounds. Bactrian camels can go a week without water and a month without food and they can endure extreme harsh climatic conditions and travel long periods of time without water has made them ideal caravan animals of cold dry arid region. Bactrian camels move on an average at about 5 km/hr and produce 5 kg of hair, 600 l of milk and 250 kg of dung a year. Camels serve humans as beasts of burden, transportation, desert companion, source of pride, measure of wealth and now kept for tourism purpose which plays a significant role in the rural economy of this region. It provides milk and for the occasional feast meat. From its wool women weave blankets and rugs, its hide is turned into sandals, candles, buckets. Camel dung fires are a source of heat and used for cooking during coldest nights of the winter.

Zanskari horse

This horse is a symbol of wealth and used in local polo matches and donkeys used along the upper Indus river for transport.

Estimated economic value of livestock produces during 2013-14) for Leh Region .(Total Rs. 29.314 Crores



CONCLUSION

It can be said that livestock sector plays an important role in socio-economic development as animals provide nutrient-rich food products, draught power, dung as organic manure and domestic

fuel, hides & skin, ensure food and nutritional security and are a regular source of cash income for rural households. It acts as natural capital which can be easily reproduced to act as a living bank with offspring as interest and an insurance against income shocks of crop failure and natural calamities. Rearing of livestock helps in women empowerment and the livelihoods of major chunk of poor rural households of cold arid dry region of Ladakh where livestock rearing are an integrated part of the smallholder production systems and play a significant role in poverty alleviation, socio-economic development particularly important to women, who often supplement family incomes and generating gainful advantages of employment in the tribal areas of this region. Therefore, livestock industry in the state has vast scope for development rendering quick economic returns and has been identified as critical to the overall economic and social development of this region.

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