

# SHEEP REARING IN INDIAN AGRARIAN ECONOMY: ISSUES AND FACTS

1. Mrs. Shilpa M.Wodeyar,

Research Scholar, Dept. of Economics Kuvempu University, Shankaraghatta, Dist Shivamogga

2. Dr. Ravindranath N. Kadam

Professor, Dept. of Economics Kuvempu University, Shankaraghatta, Dist Shivamogga

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**ABSTRACT**-Sheep and goats are important species of livestock. They are small ruminants which play an important role in Indian economy and they are a source of livelihood and employment to millions of rural households. Sheep rearing contributes around 8.5 percent of total value of output from livestock agrarian economy especially in the arid and semi-arid and mountainous area where crops and dairy farming are not economical. Sheep rearing in India is an inseparable component of mixed farming system in view of the prevailing socio-economic conditions in the country where per capita land holdings is hardly 0.2 hectares.

Sheep in India are predominantly maintained on natural vegetation on common growing lands, waste lands and uncultivated (follow) lands stubbles of cultivated crops and top feeds. The functional contributions of sheep are meat, milk, fibre, skin, etc.

Sheep occupy an important place in the agricultural economy of many countries. China, Australia, India and Iran have the largest modern sheep flocks. Sheep in India are predominantly maintained on natural vegetation on common growing lands, waste lands and uncultivated (follow) lands stubbles of cultivated crops and top feeds. The functional contributions of sheep are meat, milk, fibre, skin, etc.

The present paper intends to highlight the important issues related to sheep and its rearing in India.

**KEY WORDS:** Livestock, livelihood, mountainous, rearing, ruminants,

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## INTRODUCTION

Sheep and goats are important species of livestock. They are small ruminants which play an important role in Indian economy and they are a source of livelihood and employment to millions of rural households. Sheep rearing contributes around 8.5 percent of total value of output from livestock agrarian economy especially in the arid and semi-arid and mountainous area where crops and dairy farming are not economical. Sheep rearing in India is an inseparable component of mixed farming system in view of the prevailing socio-economic conditions in the country where per capita land holdings is hardly 0.2 hectares.

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Sheep husbandry is practiced throughout the world. In the modern era major sheep raising countries are Australia, New Zealand, the southern and central South America nations and the British Isles.

## ECONOMIC SIGNIFICANCE OF SHEEP REARING

Sheep occupy an important place in the agricultural economy of many countries. China, Australia, India and Iran have the largest modern sheep flocks. They serve both local and exportation needs for wool and mutton (Cuming, Marium – 2008). Other countries such as New Zealand have smaller flocks but retain a large international economic impact due to their export of sheep products. They play a major role in many local economies, which may be niche markets focussed on organic or sustainable agriculture and local food customers (Severson, Kim – 2005). In developing countries sheep flocks are a part of subsistence agriculture rather than a system of trade.

Sheep provide a wide array of raw materials. Wool was one of the first raw materials for textiles. However, in the late 20<sup>th</sup> century wool prices began to fall dramatically as a result of the popularity of and cheap prices of synthetic fibres. Fleeces are used as material for making alternative products such as wool insulation. Sheep industry is found most profitable enterprise in relation to sale of meat.

Sheep skin is used for making footwear, clothes, rugs and other products. Byproducts from slaughter of sheep are also of value, sheep fallow can be used in candle and soap making. Sheep bone and cartilage has been used to furnish carved items such as dice and buttons as well as rendered glue and gelatin. Sheep intestine is formed into sausage casings. Sheep droppings which are high in cellulose have been sterilized and mixed with traditional pulp materials to make paper. Of the byproducts of sheep lanolin is the most valuable; the waterproof fatty substance found naturally in sheep's wool and used as a base for innumerable cosmetics and other products.

Sheep farmers make profit from live sheep by providing lambs for youth programs and competition at agricultural shows. This is often a dependable avenue for the sale of sheep. Farmers also choose to focus on a particular breed of sheep in order to sell registered pure bred animals as well as provide a ram on rental service for breeding. Another option for deriving profit from live sheep is the rental of flocks for grazing. These services are hired in order to keep unwanted vegetation down in public spaces and to lessen fire hazard.

Sheep have distinct economic advantages when compared with other livestock. Sheep do not require expensive housing as in the case of chickens or pigs. Sheep consume plants such as noxious weeds that most other animals will not touch. Sheep produce more young at a faster rate. Compared to most of livestock species the cost of raising sheep is not necessarily tied to the price of

feed crops such as grain, soyabeans and corn. A small farmer can obtain higher profitability in view of these factors and lower cost of quality sheep with lower overhead for sheep producers. Sheep rearing is especially beneficial for independent producers including family farms with limited resources as the sheep industry is one of the few types of animal agriculture that has not been vertically integrated by agribusiness (Simmons, Paula, Carol E. Karius – 2001).

### **PRODUCTION AND FEEDING MANAGEMENT OF SHEEP SYSTEMS IN INDIA**

The traditional maintenance of sheep and goats in India was undertaken by people of particular communities in India. These people were either landless or small land holders, economically poor and socially backward. Sheep and goats have been their primary source of livelihood. Landholdings in general have negative association with sheep and goat rearing. It is observed that some medium and large herd/flocks were common in most of the villages. Sheep and goat farming has been undertaken by people across the income and social group during the last few decades. However, large size (50 to 300 animals) herd/flocks are reduced due to gradually shrinking of grazing land in almost all the regions. Sheep and goat rearing has the advantage of coping up drought because of better adaptability and mobility as compared to crops and large ruminants in arid and semi-arid parts of southern and western regions. Major forage sources in this region are range lands, common grazing lands and postharvest crop field or residues. Small herd and flock size are reared under extensive mixed farming systems.

The various feeding management systems are being practiced in all the regions. They relate to the following.

#### **1) EXTENSIVE SYSTEM**

Extensive system covers more than 80 percent of the sheep population for rearing. The system is based on low resource use and a low level of productivity. The system includes transhumance, free range and range grazing management. Grazing sheep on Common Property Resources (CPR) relate to hills, mountains, forests, waste lands, etc.

#### **2) SEMI-INTENSIVE SYSTEM**

This system is a combination of limited free range and feeding in stalls. The level of nutrition is just optimum. However, it is better than extensive system.

#### **3) INTENSIVE SYSTEM**

Intensive system is related to grazing of sheep on developed pastures and/or feeding completely in stalls on cultivated trees or conserved fodder, crop residues and concentrates. This system covers just less than 1 percent of total sheep population. Intensive system of sheep rearing suffers from poor adoption of production technologies. Sheep and goat contribute around 39 percent of total livestock population in India.

### **FARM ECONOMY LIVESTOCK AND SHEEP REARING**

The rural economy of most of the developing countries of the world is agro-based. Crop and livestock farming forms are the line sustaining activities of the majority of the rural poor. Livestock is crucial of rural economy as it contribute indirectly through plugging power transport and organic manure to crop production system and directly by way of high value food product such as milk, meat and eggs. Besides livestock provide wool, hide, skin, bone, horn etc. which are used as the raw material by the artisans of the cottage and rural industry.

Agriculture and livestock are interdependent in our economy and livestock has been recognized as an important approach for sustained livelihood. Livestock contributes manure and draught power to agriculture while crop residues from the major source of feed to the livestock and this system of interdependence has sustained for countries. Livestock are important source of income and employment in rural sector. They help to meet the equity objective in rural development through their contribution to the cash income of small and marginal farmers and landless laborers. India has made remarkable stride in the area of livestock population in the world. Animal husbandry has been an inseparable part of human civilization and culture from the very ancient period. It is also emphasized in Vedas and Puranas that possessing livestock is a symbol of prosperity.

The population of sheep and animal husbandry has increased because they are drought resistant animals and survive even on the dried blades of grass and leaves. This is the reason that farmers depending on animal husbandry have survived and not went to the extreme step of committing suicide unlike farmers who depended exclusively on agriculture in case of drought vagaries of monsoon and failure of agricultural crops and low prices of agriculture produce.

India being one of the foremost in sheep production, there is ample scope for economic improvement of the sheep as well as the poor shepherds. India is the sixth largest country in sheep population of the world having more than 48 million of them. The annual contribution of livestock to national economy is about ₹. 45,000 crore which is 10 percent of the N.G.P. Sheep with its multi-facet utility for wool, meat, skins and manure form an important component of rural economy particularly in the arid, semi-arid area of the country. It provides a dependable source of income to the shepherds through sale of wool and animals. The advantages of sheep rearing are as follows:

- Sheep do not need expensive buildings to house them and on the other hand require less labour than other kinds of livestock.
- The foundation stock is relatively cheap and the flock can be multiplied rapidly.
- Sheep are economical converter of grass into meat and wool.
- Sheep will eat varied kinds of plants compared to other kind of livestock. This makes them excellent weed destroyer.
- Unlike goats, sheep hardly damage any tree.
- The production of wool, meat and manure provides three different sources of income to the shepherd.
- The structure of their lips helps them to clean grains fallen or lost at harvest time and thus convert waste feed into profitable products.
- Mutton is one kind of meat towards which there is no prejudice by any community in India and further development of superior breeds for mutton production will have a great scope in the developing economy of India.

Economy in sheep rearing like other livestock farming is subservient to genetic cum production potential and judicious management so as to reduce feeding cost without lowering nutritional level, sheep meat or mutton is the main revenue earning source for the shepherd. Sheep milk contribution to the sheep production ranks after meat, wool, manure, making of dairy sheep rearing an economically viable entity. In sheep farming 20 to 40 percent of the income is from the wool to national income. Indian carpet wool and carpet still hold sway in the international market.

### **COSTS AND RETURNS OF SHEEP FARMING**

Profitability of any enterprise depends on the relation between costs incurred and the returns realized from the venture. A study of costs incurred and returns from the sheep rearing business is useful for planning the future sheep production programmes with a view to maximize net profits by adopting efficient resource management practices. Sheep farming has been inducting gradually modern technology. In view of this and the need for formulation of policies for sheep development the cost return study of sheep farming has assumed importance.

#### **COST STRUCTURE**

Cost structure consisted of fixed costs and variable costs. Fixed costs relating to sheep rearing included cost of equipment and cost of shed. Variable costs of sheep rearing relate to grazing, veterinary, medicines, tattooing and shearing and human labour.

#### **RETURNS**

The returns from sheep farming included imputed price of the live sheep and byproducts namely wool and skins and the price of manures prevailing at the village level. Net returns from sheep farming are estimated by deducting the variable costs from gross returns.

### **PRODUCTIVITY OF INDIAN SHEEP**

Productivity of Indian sheep is lower than those of agriculturally more advanced countries. However, taking into account the nutritional and physical environment of Indian sheep their productivity cannot be considered as inefficient. Major reasons for low productivity of Indian sheep are;

- Inadequate grazing resources
- Diseases causing high mortality
- Morbidity and consequent reduced production and
- Serious lack of organized effort for bringing genetic improvement.

### **CONCLUSION**

Sheep and goats are important species of livestock. They are small ruminants which play an important role in Indian economy and they are a source of livelihood and employment to millions of rural households. Sheep rearing contributes around 8.5 percent of total value of output from livestock agrarian economy especially in the arid and semi-arid and mountainous area where crops and dairy farming are not economical. Sheep rearing in India is an inseparable component of mixed farming system in view of the prevailing socio-economic conditions in the country where per capita land holdings is hardly 0.2 hectares.

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