



A Monthly e Magazine
ISSN:2583-2212
May 2024 Vol.4(5), 1856-1859

Popular Article

Advantages of Sheep and Goat Farming in India

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<https://doi.org/10.5281/zenodo.11363925>

Abstract

Sheep and goats hold significant importance in the Indian economy, providing livelihoods and employment opportunities to millions of rural households, particularly in arid, semi-arid, and mountainous regions where traditional farming practices may not be viable. They are integral to mixed farming systems, especially in a country like India where per capita land holdings is minimal. Typically, sheep and goats in India graze on natural vegetation, crop stubble, and supplementary feeds. These animals contribute to various sectors including meat, milk, fiber, skin, and manure production. This paper emphasizes the benefits of sheep and goat rearing in India, underscoring their multifaceted contributions to the agricultural landscape.

KEY WORDS: Livestock, livelihood, mountainous, rearing, ruminants, per capita

INTRODUCTION

Sheep and goat with its multi-facet utility for meat, milk, wool, skins, manure occupy an important place in the agricultural economy of many countries including India. Apart from being a source of livelihood, they provide nutritional, economical security and social status to millions of rural households especially in the arid semi-arid and mountainous area where crops and other livestock farming are not economical. They are better adapted to adverse climatic conditions. Land, labor and other infrastructure requirement is very less. Foundation stock is relatively cheap compared to other kinds of livestock. In tropics, they are non-seasonal breeders thus flock can be multiplied rapidly with

minimal foundation stock. They are also good choice as pets due to their small size in nature.

ADVANTAGES

1. Nutritional security

- Sheep and goats are economical converter of weeds, low-quality roughage into meat compared to other kind of livestock animals
- Mutton and chevon are kind of meat which is consumed by all community in India
Meat is major source of nutrition in people of arid, semi-arid and hilly region where people can't rely on agriculture

Table:1 Nutritional comparison of mutton with meat from different animals

Nutrient	Chicken	Mutton	Beef	Pork
Energy (kcal)	117	145	160	170
Protein %	23.4	19.5	21.5	19.5
Fat %	1.9	7	8	9.5
Water %	63.8	71.5	69.5	60.5
Ash %	1	1.5	1	1

- Nutritional composition of mutton and chevon is almost similar except for fat where Chevon has low fat and low cholesterol, greater unsaturated to saturated fatty acid ratio thus reduce risk of causing obesity associated metabolic diseases like insulin resistance, type II diabetes mellitus, cardiovascular diseases
- Compared to beef, pork, and chicken, chevon is characterized by having comparable more essential amino acid concentration.

Table:2 Comparison of amino acid composition (grams/100gm) in meat of various species

Amino acid	Chicken	Mutton	Pork	Beef
Histidine	0.67	0.69	0.58	0.04
Isoleucine	1.07	1.11	1.13	0.98
Leucine	1.76	1.67	1.67	1.53
Lysine	1.87	2.38	2.05	0.66
Methionine	0.65	0.63	0.66	0.19
Phenylalanine	0.82	1.1	0.9	0.49
Threonine	0.95	1.15	1	0.76
Tryptophan	0.23	0.3	0.24	0.08
Valine	1.01	1.12	1.21	0.88
Average availability	1.00	1.13	1.05	0.62

- They are the major source of micronutrients particularly,



- Iron, selenium, zinc
- Vitamins like thiamine, riboflavin, niacin, pantothenic acid. Vit B6, B12

Table:3 Comparison of Vitamin Composition (Per 100g) of Various Livestock Products

Nutrient	Chicken	Mutton	Beef	Pork	Fish	Egg	Milk
Vit.A(IU)	60	-	60	-	70	1180	140
Vit.B1(mg)	0.04	0.15	0.07	0.51	0.03	0.11	0.03
Vit.B2(mg)	0.10	0.20	0.15	0.23	0.18	0.30	0.17
Vit.B3(mg)	11.60	4.80	4	4.6	8	0.10	0.10

A. MILK

- Goats are called the foster mother of human, as their milk is considered better for human nutrition than other species of livestock.
- Goat milk is finer than cow milk i.e. the fats and proteins are present in a finer homogenous state and are more easily digestible, especially by children and invalids.
- It has lesser allergic problems than other species of livestock.
- It is used as a ayurvedic medicine for persons ailing with asthma, cough, diabetes etc.
- It has higher buffering qualities and this enhances its value for patients suffering from peptic ulcers, liver dysfunction, jaundice, biliary disorders and other digestive problems.
- It has a higher content of B-complex vitamins.
- Goats can be milked as often as required, preventing milk storage problem.

Table :4 Comparison of nutrient composition of milk of various livestock species

SL NO	Composition	Sheep	Goat	Cow
1	Fat%	7.9	3.8	3.6
2	SNF%	12	8.9	9.0
3	Lactose %	4.9	4.1	4.7
4	Protein %	6.2	3.4	3.2
5	Casein %	4.2	2.4	2.6
6	Albumin, Globulin %	1	0.6	0.6
7	NPN %	0.8	0.4	0.2
8	Ash %	0.9	0.8	0.7
9	Calories/100 ml	105	70	69

2. Socio-Economic status**A. Meat/ Whole animals**

- Dressing percentage is 40-50%
- Accounts the major proportion of farm income



- Return to investment ratio is more compared to other livestock (50% return on capital)

B. Wool

- A ram produces 2kg of wool per season while ewe produce 1.77kg.
- Indian carpet wool and carpet still hold sway in the international market

C. Manure

- Their manure has 2.5 times richer in nitrogen and phosphoric acid than cow manure thus, can be used as a fertilizer for enriching soil fertility and crop yield.
- Sheep droppings which are high in cellulose have been sterilized and mixed with traditional pulp materials to make paper

D. Other slaughter products

- Visceral fat can be used in candle and soap making
- Protein from rendering unit is used to manufacture pet food
- Skin is used for making footwear, clothes, rugs and other products.
- Sheep lanolin the waterproof fatty substance found naturally in sheep's wool and used as a base for cosmetics and other products.
- Medicinal uses; Blood is for the manufacture of Blood Agar Plates, Haematinics
Intestine is used in manufacturing of catgut, sausages casings etc

E. Renting live animals

- By providing rams/buck on rental service for breeding.
- For competition in agricultural shows.
- For grazing leftovers in postharvest lands.

CONCLUSION

Sheep and goat farming offers a viable livelihood option for marginal and landless farmers, enhancing their socio-economic status and ensuring nutritional security. In today's context of urbanization, environmental challenges, and population growth, meeting daily nutrient needs, particularly protein, solely from plant-based foods is challenging. Integrating animal products like meat, milk, and eggs can address this nutritional deficit as they are rich in nutrients. Compared to plant-based sources, producing animal-based nutrients requires less land, labour, and resources. Sheep and goats, alongside poultry, are widely consumed across communities and offer advantages such as resilience to adverse climates, making them suitable for farmers in arid and semi-arid regions to integrate into their agricultural practices for improved profitability and sustainability.

