

Goat Farming: Benefits and Challenges

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Introduction

Goats are one of the most common meat-producing animals in India, and their meat (chevon) is one of the most popular cuts with a large local market. Goat rearing with intensive and semi-intensive systems for large scale production has been gaining traction in recent years because to its favourable economic prospects. Many innovative farmers, business people, professionals, ex-servicemen, and educated adolescents have been drawn to the goat business because of the high demand for goats and their products, as well as the opportunity for substantial economic rewards. Entrepreneurs are also attracted to the emergence of attractive opportunities and easy access to upgraded goat products. A number of commercial goat farms have sprouted up in various parts of the country. Commercial goat farming will be a game changer in India's animal production after COVID-19. This is an area where India has a huge amount of potential. Goats also offer milk, skin, fibre and manure in addition to meat. The goat is an important part of the agricultural economy. From an economic standpoint, it has great feed conversion efficiency (FCR) and a high reproductive capacity required trait (Lad *et al.*, 2017). Goats are an essential part of the agricultural economy, especially in the country's dry, semi-arid and mountainous regions. It is due to the wide system of natural vegetation on degraded common grazing areas and tree lopping that they are preserved. Even the damaged grazing resources are rapidly dwindling.

The goat, often known as the poor man's cow, is extensively dispersed and obviously connected with impoverished people; its economic contribution is vitally crucial for their security and livelihood in developing countries. This contribution is diverse, and its significance is expressed in terms of revenue production, cash security, and improved human nutrition quality. According to the 2019 livestock census, the country's goat population is 148.88 million, up 10.1 percent compared to the earlier census (Table 1).

Table 1. Goat population in India according to 2019 census

Category	Population (In million) 2012	Population (In million) 2019	% Change
Male goat	37.62	32.10	-14.65
Female goat	97.56	116.78	19.71
In-milk	36.25	41.83	15.38
Dry	25.31	27.82	9.95
Milch animals (in milk+ Dry)	61.56	69.65	13.15
Total	135.17	148.88	10.14

Goats account for around 27.8% of total livestock. Every year, 41% of the population is slaughtered, despite the fact that the country's population growth rate is only 4-5 percent. As a result, goats must be reared in intensive and semi-intensive systems employing enhanced techniques for commercialization, not only to realize their full capacity but also to meet the growing demand for chevon in both domestic and foreign markets. More than 70% of overall meat output comes from poultry, cattle, buffalo, and other similar animals, and demand for these animals is limited due to socio-religious issues. As a result, goat and sheep meats bear the brunt of the strain. The availability of good commodities such as meat is increasing as per capita income goes up, urbanization expands, and globalization unfolds. As a result of these rapid socioeconomic developments in the recent past, a significant shift in eating habits in favor of non-vegetarian diets has occurred. As a result, demand for goat and sheep meat has surged rapidly, and the domestic market price for chevon/mutton has climbed from Rs 60 per kg to Rs 500-600 per kg in less than a decade.

Feeding management

Goats are picky eaters who can withstand a greater amount of bitterness than other animals. As a result, they may survive on agricultural waste, garbage, and other sources of food. They are also more durable, allowing them to resist a variety of weather situations. Goat tongues are designed for grazing and have a movable top lip. As a result, they may graze on grasses, bushes, shrubs, and trees that are extremely short. Leguminous fodder, in addition to cereals such as pulses, wheat, and maize, should be supplied to the goats. Leguminous crop feed is usually preferred over straw or maize silage. They also require feed with a protein content of at least 14 to 15%, as well as a high mineral content, such as iodized

salt, bone meal, zinc oxide, ferrous carbonate, high-grade limestone, copper and vitamins. Growers receive 100 gm of concentrate mixture per day, while adult does and bucks receive 200 to 250 gm of concentrate per day. Each goat consumes 5 to 7 kilogrammes of green grass and a litre of water each day on average. According to statistics, an acre of fodder can feed 35 goats. There are several varieties of goat food that are considered to be ideal for goats, as listed below: Top mixtures and natural processes to make bulky include oats, crash corns, and sunflower black seed(**Risko and Csapo, 2019**). Because it is high in protein, fibre, carbohydrate hydride, oils, and other essential nutrients. This aids in the attainment of a healthy body. It aids in the normal digestion of food. Barley and field peas are good foods, but they need to soak for at least two days. Then it'll be ready to eat, and other livestock grasses will know it as the best goat meal. Minerals are also essential for goats, particularly female goats.

Benefits of goat farming

- Domestic or commercial goat rearing has some advantages. If you wish to start a goat farming business, you need first learn about the advantages of goats.
- Goats are multi-purpose animals that generate milk, meat, fibre and skin all at the same time.
- Goat farming requires less acreage and additional amenities than cow and other livestock farms. They have a lower demand for housing and other administrative services. They can also share their houses with their owners and other livestock in small-scale farming.
- Infrastructure, food, and treatment expenditures are all lower.
- You are not required to consider how to market your farm products. Because there is already an established market for your items in the country. They are smaller in size but reach slaughter age faster.
- The goat is a multipurpose animal that produces meat, milk, hide, fiber and manure, among other things. Goats are frequently utilized to pull modest goods in mountainous terrain.
- Goats have very few housing and management requirements. They don't require separate housing and happily live with their owners or his other animals.

- Marginal farmers, agricultural laborer's, women, and children can grow goats since they can survive on a variety of leaves, shrubs, bushes, and kitchen trash.
- Goat farming may be a lucrative business for a farmer, and it fits in nicely with mixed farming.
- Goats are less expensive to keep, are readily accessible and have a sociable demeanor.
- Goats can adapt to a variety of agro-climatic conditions, including arid dryness, cold aridity, and hot humidity. Plains, hilly areas, sandy zones, and mountaintops are all good places to raise them.
- Goats are more tolerant to hot weather than other farm animals.
- Goats are less afflicted than other large animals.
- Goats have improved crude fibre digestibility and can feed even on low-quality roughages.
- Goats produce more per unit of investment than other livestock.
- Goats are smaller and slaughtered at an early age.
- Goat meat has no religious connotations and is enjoyed by people from all walks of life.
- Goat meat is less fattening and therefore more popular.
- Goats are known as man's foster mother since their milk is regarded to be better for human nourishment than that of other animal species.
- Goat milk is inexpensive, healthy, easy to digest and nourishing (**Getanehet *al.*, 2016**).
- Goat milk is finer than cow milk, which means the lipids and proteins are present in a finer state and are easier to digest, especially for children and the elderly (**Ranadheeraet *al.*, 2019**).
- Goat milk causes fewer allergy reactions than milk from other animals.
- Ayurvedic medicine uses goat milk to treat asthma, cough, diabetes, and other ailments.
- Goat milk has better buffering properties, which makes it more beneficial to individuals with peptic ulcers, liver dysfunction, jaundice, biliary disorders and other digestive issues.

- Goat milk has higher buffering qualities and this enhances its value for patients suffering from peptic ulcers, liver dysfunction, jaundice, biliary disorders and other digestive problems (**Hokmollahi and Ehsani, 2020**).
- Goat milk has a greater phosphate content, which is advantageous to vegetarians.
- Goat milk contains more B-complex vitamins than cow's milk.
- Goat milk can be used to make a variety of milk products.
- Goats may be milked as frequently as needed, which eliminates milk storage issues and refrigeration costs.
- The hide of a goat is often used to make leather products.
- The hairs of goats are used to make rugs and ropes.
- Pashmina shawls, Mohair and Kashmere carpets are all in high demand and sell for a lot of money.
- Goat manure has 2.5 times the amount of nitrogen and phosphoric acid as cow manure.
- Goats are a great animal to use in physiological and biological research (**Lund and Ahmad, 2021**).
- There are no religious restrictions on goat products such as meat and milk. And it's widely accepted for ingestion around the globe.

Challenges of Goat Farming

70% of farmers have trouble identifying pure breed animals due to a lack of information. A key barrier is the difficulty of obtaining high-quality breeding animals. The best animals (especially males) from traditional flocks are sold to traders/butchers for slaughter. As a result, good breeding animals have become scarce. This problem has been exacerbated by the lack of coordinated attempts to enhance goat breeds. Due to the scarcity of big goat flocks of various breeds for commercial production, the entrepreneurs were forced to pick breeding animals from existing traditional flocks, primarily through middlemen. As a result, establishing a good flock takes time. Another key barrier is the lack of vaccinations, particularly PPR. In many regions, including Jharkhand, Uttar Pradesh, Orissa, Chhattisgarh, and Bihar, even the ET vaccine, which has been developed for decades, is not accessible in time. Veterinary doctor is not available 24 hours a day, seven days a week. There is no longer a low-cost full feed available. All commercial goat farmers require identifying tags, but they



do not have access to a cost-effective tagging material. Another big stumbling block is obtaining poor prices for surplus live goats. The unstructured live goat trade, which is dominated by a huge number of middlemen, traders, and butchers, does not benefit goat producers (Kumsa, 2019).

In livestock markets, live goats are not sold on the basis of their body weight, resulting in an underestimation of the value of live animals. Farmers receive a very low price for their animals before establishing a reputation as a producer of high-quality breeding goats. Commercial farmers, on the other hand, have begun to insist on determining the price of their live goats based on body weight as a result of greater awareness and connections. More serious obstacles include a lack of availability to high-quality breeding animals and veterinary services. Institutional credit is relatively easy to come by for large goat farming ventures, but it is a major stumbling block for small entrepreneurs with operations of 50-100 goats and little funds to put up as collateral. Due to its economic feasibility under intensive and semi-intensive management systems for commercial production, goat rearing, which was once the economic activity of rural resource-poor people, has attracted large and progressive farmers, businessmen, and manufacturers. The involvement of resource-rich people, such as poultry farmers, who have better access to technical knowledge, resources, and markets, would aid in the realisation of this enterprise's potential. It would also help aspiring commercial goat producers who don't have access to grazing land.

Conclusion

As a result of COVID-19, India's economy has been badly harmed. A pandemic has resulted in a full economic stalemate. Many people have lost their jobs as a result of this, and have returned to their hometown to look for work. Goat farming will undoubtedly become a source of income for them. State and federal governments should develop commercial goat farming projects that would not only alleviate unemployment but also enhance the socioeconomic position of poor people.

References

Getaneh G, Mebrat A, Wubie A, Kendie H (2016). Review on goat milk composition and its nutritive value. *J. Nutr. Health Sci.* 3: 401-409.



- Hokmollahi F, Ehsani MR (2020). Characteristics of Nодоoshan Goat Milk and Identification of Volatile Compounds in Traditional Nодоoshan Goat Cheese during Ripening. *Iranian J. Nutri. Sci. Food Technol.* 14(4): 67-76.
- Kumsa S (2019). Carcass characteristics of yearling male borana goats supplemented with protein and energy feed resources. *Int. J. Adv. Res. Biol. Sci.* 6(5): 91-97.
- Lad SS, Aparnathi KD, Mehta B, Velpula S (2017). Goat milk in human nutrition and health—a review. *Int. J. Curr. Microbiol. Appl. Sci.* 6(6): 1781-92.
- Lund A, Ahmad M (2021). Production potential, nutritive value and nutraceutical effects of goat milk. *J. Anim. Health Prod.* 9(1): 65-71.
- Ranadheera CS, Evans CA, Baines SK, Balthazar CF, Cruz AG, Esmerino EA, Graça JS (2019). Probiotics in goat milk products: Delivery capacity and ability to improve sensory attributes. *Comprehensive Rev. Food Sci. Food Safety.* 18(4): 867-882.
- Risko TC, Csapo Z (2019). Goat Keeping and Goat Milk Products in Human Nutrition-Review. *Appl. Stud. Agribusiness Commerce.* 13(1-2): 24-36.