



# A Review on Current Scenario of Goat Population and Production in Rajasthan, India

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## Authors' contributions

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## ABSTRACT

The present assessment focuses on the goat industry in Rajasthan, with an emphasis on population and productivity. In India, the goat industry produces 1.21 million tons of goat meat (13.8%), 0.18 million tons of skins, and 6.26 million tons of milk (3%). Goats make up 50% of the total livestock population in Rajasthan and are the dominant species. As of 2019, there were 20.84 million goats in Rajasthan, which represents a 3.81% decrease from the previous census in 2012. Rajasthan produced a total of 3.10 million tons of goat milk and 95.23 thousand tons of goat meat in 2022-2023. The purpose of this review is to shed light on the current goat situation in Rajasthan and encourage entrepreneurship to establish more goat farms to improve the economic status of goat farmers in the region.

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## 1. INTRODUCTION

Goat, sometimes known as "the poor man's cow," is a good fit for achieving the interdependent goals of reducing poverty, increasing food availability, generating employment, and boosting rural income (Kumawat et al. [1], Waiz et al. [2]). Goats are more resilient to disease and have a greater range of adaptation (Pulina et al. [3], Khan et al. [4]). Goats, when allowed to graze naturally, are reportedly less expensive than sheep and cattle (Sharma et al. [5], Tanwar et al. [6]).

Goats are mainly kept for meat, milk and fibre (Patbandha et al. [7], Sarothiya et al. 2017 [8], Choudhary et al. [9]). In an environmentally conscious society, goats could play a significant role in sustainable development if regional campaigns are effective in highlighting premium labels and innovative production (Kumar et al. [10], Nedumaran et al. [11]). Since goat farming requires less capital, it is an option for a sizable portion of the rural population. Approximately 9% of livestock GDP comes from goats (Sone et al. [12], Singh et. al. [13]).

Goats are a highly significant livestock species in India, mostly due to their short generation intervals, high rates of prolificacy, and ease of marketing both the goats themselves and their products Tyagi et al. [14]. A special kind of tiny ruminant with many uses, goats can survive in a

variety of climates, from high alpine locations to arid deserts (Kumar et al. [15], Yadav et al. [16], Kumar et al. [17]). Raising goats, one of the most popular livestock breeds, has the potential to become a very profitable venture for smallholder and marginal farmers in rural areas, particularly in less favorable situations, as well as a reliable source of food and work (Skapted et al. [18]). Goats provide a substantial economic contribution to India (Kumar et al. [19], Kamboj et al. [20], Lata et al. [21]).

This research paper aimed to assess the number and productivity of goats in Rajasthan, one of the regions in India that is known for having a significant population of goats. The study will help in gathering essential data for making policies, developing targeted initiatives to support goat farmers, and the overall growth of the goat farming industry in Rajasthan.

## 2. PRESENT SITUATION OF GOAT POPULATION IN THE WORLD, INDIA, RAJASTHAN

The world's goat population is currently estimated to be 1.2 billion. The number of goats globally has increased significantly in the last few decades (Table 1). This evolution is a result of the growing market for goat products, including meat and milk. Based on Food and Agriculture Organization Corporate Statistical Database [22], India has the highest number of goats

**Table 1. Year-wise goat population of the world, India, Rajasthan**

Goat population in world during 1960-2020 (FOASTAT)		Goat population in India during 1951-2019 (BAHS-2023)		Goat population in Rajasthan during 1956-2019 (DAHD,Rajsthan-2023)	
Year	Population (billion)	Year	Population (million)	Year	Population (million)
1960	0.34	1951	47.2	1956	8.73
1965	0.36	1956	55.4	1961	8.05
1970	0.37	1961	60.9	1966	10.32
1975	0.40	1966	64.6	1972	12.16
1980	0.48	1972	67.5	1977	12.30
1990	0.58	1977	75.6	1983	15.47
1995	0.66	1982	95.3	1988	12.61
2000	0.75	1987	110.2	1992	15.28
2005	0.88	1992	115.3	1997	16.93
2010	0.95	1997	112.7	2003	16.80
2015	1.04	2003	124.4	2007	21.50
2020	1.2	2007	140.5	2012	21.66
-	-	2012	135.2	2019	20.84
-	-	2019	148.88	-	-

(148.8 million), with China coming in second with 133.31 million, Pakistan with 80.33 million, Nigeria with 76.3 million, and Bangladesh with 5.95 million.

Based on the Basic Animal Husbandry Statistics [23], India has experienced a notable increase in the number of goats in recent decades, as indicated in Table 1. The 20<sup>th</sup> livestock census conducted in 2019 [24] revealed an overall growth rate of 4.6 percent in the total livestock population across the country compared to the 19<sup>th</sup> Livestock Census conducted in 2012 [25] (Sagamneshwaram et al. [26], Singh et al. [27]). The collective population of livestock, encompassing cattle, buffaloes, sheep, goats, pigs, horses and ponies, mules, donkeys, camels, mithun, and yaks, reached 535.78 million in 2019, whereas it was 512.05 million in 2012.

According to the findings of the Rajasthan Animal Husbandry department [28], the data spanning from 1956 to 2020 (Table 1) indicates a continuous growth in the goat population, both within Rajasthan and globally. This increase in goat population between 1961 and 1965 can be attributed to a number of factors, including consumer demand for chevon, easy handling and management and higher price of goat milk, meat and its products as compared to other livestock species (Lavania et al. 2008 [29]; Sharma et al. [30]). Rajasthan boasted the largest goat population in India, reaching approximately 20.84 million. West Bengal secured the second position with 16.28 million, followed by Uttar Pradesh with 14.48 million, Bihar with 12.82 million, and Madhya Pradesh with 11.06 million. The district-wise goat population is presented in Fig 1.



Fig. 1. District –wise goat population of Rajasthan in million

### 3. GOAT BREEDS OF INDIA

India has 37 distinct goat breeds, each with unique characteristics (NBAGR, 2024) [31]. The country's genetic diversity serves as a valuable resource for producing goats for meat, milk, fiber, and skin (Table 2). These goat breeds exhibit high levels of disease and climate resilience and perform well in their natural environments when fed appropriately [27]. However, some of the Indian dairy goats (Beetal, Jakhrana, Jamunapari, and Surti) are now classified as endangered due to a lack of systematic genetic improvement, poor breeding techniques, and the market (Singh and Singh) [32]. Based on their performance, the Indian goat breeds are briefly categorized as (Singh and Chauhan) [33].

**Milch (dairy) breeds:** With a lactation period of 150–200 days, Beetal, Jakhrana, Jamunapari, Surti, Zalawadi, and Gohilwadi produce 150–500 liters of milk [32].

**Dual Purpose Breeds (Milk and Meat):** Sangamneri, Osmanabadi, Malabari, Barbari, Sirohi, Sojat, Gujari, Karauli Marwari, Kuttchi, Mehsana, Kahmi, Rohil Khandi, and Berari with a lactation period of 90–160 days and 100–145 liters of milk [32].

**Meat Purpose Breeds:** It includes Bidri, Nandi-Dugra, Pantja, Black Bengal, Sumi-Ne, Kodi-Adu, Kana-Adu, Salem-Black, Black Attapady,

Konkan Kanyal, and Assam Hill. Ganjam breed have a lactation period that ranges from 40-75 days and produces 20-45 liters of milk [32].

**Meat and fibre purpose breeds:** Along with 200–350 g of fiber annually, Chegu, Changthangi, Gaddi, and Bhakarwali produce 20–45 litres of milk during 50–75 days of lactation [32].

### 4. PROPERTIES OF GOAT MILK

Goat's milk is high in vitamins and minerals and has a smooth, creamy texture. Goat milk is alkaline as compared to cow milk which is acidic in nature [13]. Goat milk has substantially smaller fat globules, which results in a homogenized product with inherently higher digestion (Dixit and Mohan, [34], Zulkifli et al. [35]. Higher amounts of medium-chain fatty acids viz, capric, caprylic and propionic found in goat milk have been shown to have antiviral and antibacterial properties as well as the ability to dissolve cholesterol deposits and prevent their growth Gamit et al. [36], Zulkifli et al. [35]. They are also quickly absorbed from the colon [27]. Conjugated linoleic acid (CLA), abundant in goat milk, lowers oxidative stress and atherosclerosis, enhances blood lipid profile, and inhibits the growth of skin and mammary gland tumors (Bashir et al. [37]). As compared to cow milk, goat milk has 4.1% less lactose (5.0% vs. 5.0%). Goat milk has larger casein micelles than cow milk (100–200 nm vs. 60–80 nm). Goat milk has a lower

**Table 2. Goat breeds of India**

S.No	Breed	Home tract	S.No	Breed	Home tract
1.	Bakarwali	Jammu & Kashmir	20.	Kutchi	Gujarat
2.	Changthangi	Jammu & Kashmir	21.	Khami	Gujarat
3.	Chegu	Himachal Pradesh	22.	Berari	Maharashtra
4.	Gaddi	Himachal Pradesh	23.	Osmanabadi	Maharashtra
5.	Beetal	Punjab	24.	Sangamneri	Maharashtra
6.	Pantja	Uttarakhand	25.	Konkan Kanyal	Maharashtra
7.	Barbari	Uttar Pradesh	26.	Black Bengal	West Bengal
8.	Jamunapari	Uttar Pradesh	27.	Ganjam	Orissa
9.	Rohilkhandi	Uttar Pradesh	28.	Assam Hill	Assam & Meghalaya
10.	Marwari	Rajasthan	29.	Bidri	Karnataka
11.	Sirohi	Rajasthan	30.	Nandidurga	Karnataka
12.	Jhakrana	Rajasthan	31.	Kanni Adu	Tamil Nadu
13.	Sojat	Rajasthan	32.	Kodi Adu	Tamil Nadu
14.	Gujari	Rajasthan	33.	Salem Black	Tamil Nadu
15.	Karuli	Rajasthan	34.	Atapady	Kerala
16.	Gohilwadi	Gujarat	35.	Malabari	Kerala
17.	Mehsana	Gujarat	36.	Sumi-Ne	Nagaland
18.	Zalawadi	Gujarat	37.	Terresa	Andaman & Nicobar
19.	Surti	Gujarat			

(National Bureau of Animal Genetics and Resources, 2023)

concentration of  $\alpha$ 1-casein and a higher concentration of  $\beta$ -casein than cow milk, which facilitates easier digestion and lowers allergenicity (Bhardwaj et al. [38]; Choudhary et al. [9]). Goat milk is higher in calcium, phosphorus, and potassium than milk from cows or humans. The gut may directly use a variety of free amino acids found in goat milk, such as taurine, glycine, and glutamic acid (Garval et al. [39]). According to Mehaia and Al-Kanhal [40], goat milk has 20–40 times the amount of taurine than cow milk. Taurine is involved in the synthesis of bile salts, osmoregulation, antioxidant, and calcium blood pressure control, transportation within the central nervous system, and relief from further cardiovascular conditions (Giambra et al. [41]). Polyamines, which are abundant in goat colostrum and milk (Ploszaj et al. [42]) have been demonstrated to be essential to proper development, the function of GIT cells, the maturation of GIT enzymes (Pegg and Mc Cann, [43]), and the prevention of food allergies (Dandriofosse et al. [44]).

**List 1. Milk composition of goat**

Parameters	Composition
Protein (%)	2.80- 3.70
Fat (%)	4.07
Lactose (%)	3.9-4.8
Solid not fat (%)	8.90
Water (%)	83.20
<b>Total solids (%)</b>	<b>12.50</b>

(Giambra et al. 2014; Kapadiya et al. 2016)

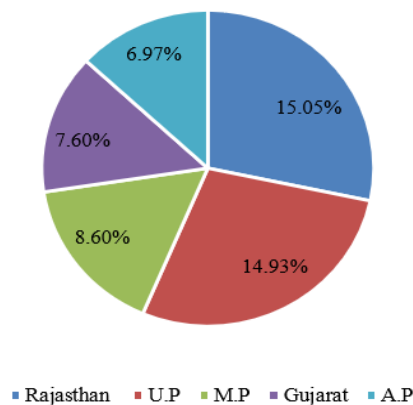
Goat milk is widely used for making varieties of milk products like cheeses, butter and butter oil, condensed goat milk, dried whole milk, dried granulated milk, ice cream, goat cream butter, whey protein concentrate (WPC), and traditional Indian items (Chilliard et al. [45]), Pandya and

Ghodke 2007 [46]; Kapadia et al. [47]. In addition to the above mentioned benefits, goat milk-based cosmetic beauty goods such as body lotions, shampoos, conditioners, and aftershave lotions are highly sought after in western nations (Ribeiro and Ribeiro [48], Lund et al. [49]).

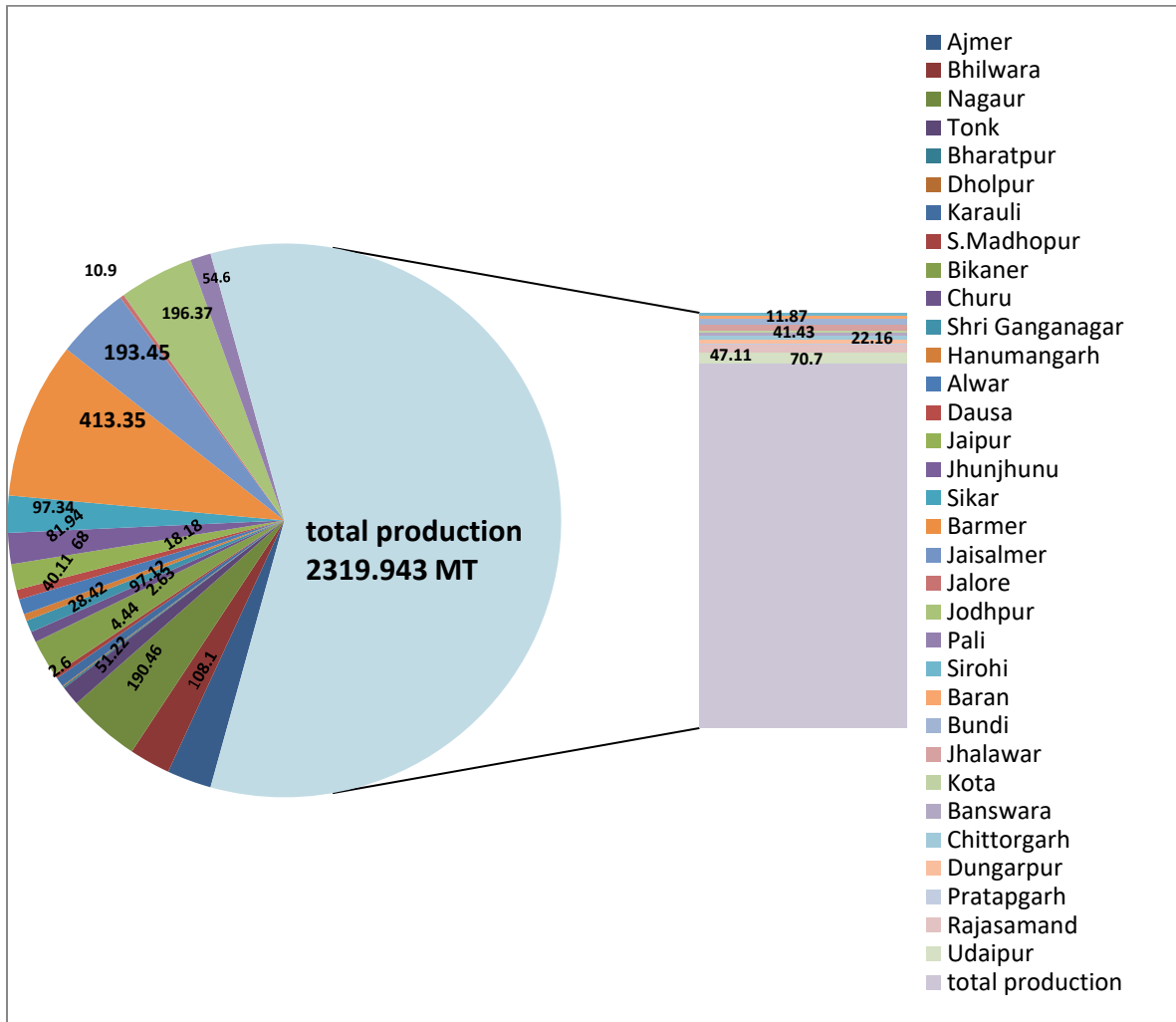
## 5. PRESENT SENARIO OF GOAT MILK PRODUCTION IN RAJASTHAN

With 53.12% of the world's goat milk produced worldwide, the leading goat milk producing nations are India, Sudan, Bangladesh, Pakistan, and France. But only 25% of the average milk yield per head (762 vs 2901 g/d) is produced in India that of Europe (Liang and Pinaengkoum [50]). Goat milk contributes 3.30% to the nation's total milk production, which is expected to reach 230.58 million tons in 2022-2023. India is the world leader in goat milk production, and in 2022-2023, the country produced 7.59 million tons of goat milk, up from 6.60 million tons the previous year (BAHS, 2023) [23]. The average yield per milk goat is 0.50 kg/day, indicating the high productivity of India's goat milk industry.

According to the 20th Livestock Census in 2019 [24], India has 41.83 million milking goats, with Rajasthan having the largest number of in-milk goats at 8908.90 thousand. Bhardwaj et al. [38] reported that the top five states produce 79.5% of the nation's goat milk, indicating their superior quality of production. Rajasthan leads the way in goat milk production, accounting for 15.05% of the total production in India, followed by Uttar Pradesh with 14.93%. Madhya Pradesh occupies third place, producing 8.6% of all goat milk produced in India. Gujarat and Andhra Pradesh are producing 7.6% and 6.97% (Fig 1) respectively [23].



**Fig. 2. Top milk producing states of India**  
(Basic Animal Husbandry Statistics, 2023)



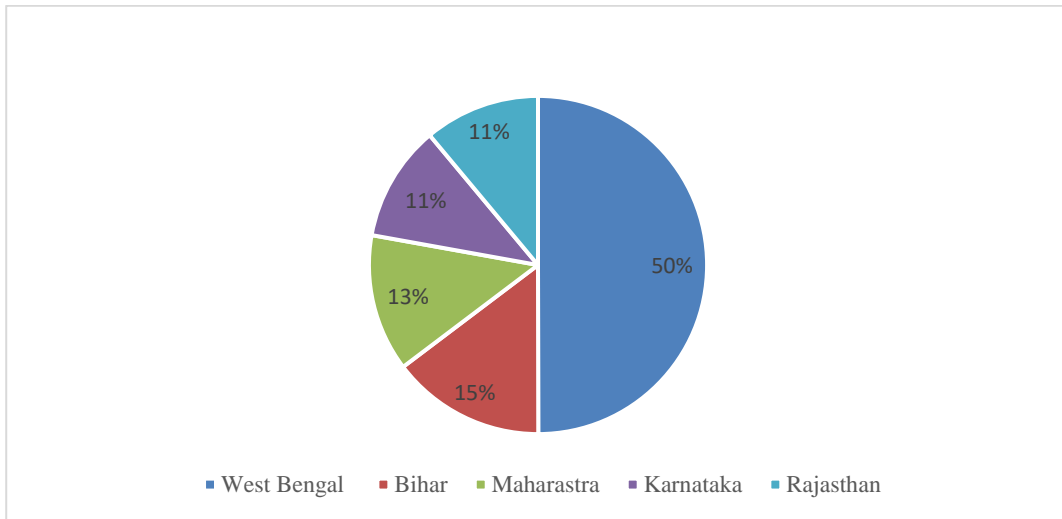
**Fig. 3. District-wise distribution of goat milk production in Rajasthan**  
 MT: Million Tons

As per animal husbandry department of Rajasthan (RAHD, 2022) [51], highest and lowest milk production was observed in Barmer and Dholpur district of Rajasthan. The district-wise milk production of Rajasthan is presented in Fig. 3.

### 6. PRESENT SENARIO OF GOAT MEAT PRODUCTION IN RAJASTHAN

According to APEDA statistics 2023 [52], India is the world's top exporter of mutton and chevon, with 9592.31 metric tons valued at 537.18 crores. The United Arab Emirates, Qatar, Kuwait, Maldives, and Oman are the top importers of small ruminant meat (Vahoniya et al. [53]). Over the past half-century, there has been a notable shift in the world's meat consumption patterns. Goat meat is preferred by most consumers

because it is leaner than meat from other domestic red meat species and is comparable in terms of its nutritional components (Singh et al. [54], Shashank et al. [55]). According to basic animal husbandry statistics [23], goats contribute to 14.47 percent of the total meat production in India. In the period of 2022-2023, the production of goat meat increased from 1.26 million tons to 1.41 million tons from the previous year (2021-2022). West Bengal is the leading state in goat meat production, accounting for 50% of the total production in India. Bihar comes second with 15%. Maharashtra ranks third with 33% of total goat meat production in India. Out of the states that produce 11% of the goat meat, Karnataka ranks fourth followed by Rajasthan at fifth position (Fig 4). The district wise goat meat production of Rajasthan is presented in Table 3 [51].



**Fig. 4. Top Goat meat producing states of India**  
(Basic Animal Husbandry Statistics, 2023)

**Table 3. District-wise distribution of goat meat production in Rajasthan (metric tons)**

District	Adult Goat	Young Goat
Ajmer	3.341	1.193
Bhilwara	3.485	2.356
Nagaur	4.002	3.129
Tonk	1.525	1.301
Bharatpur	0.983	0.379
Dholpur	0.737	0.137
Karauli	0.860	0.461
S.Madhopur	0.515	0.678
Bikaner	2.736	0.448
Churu	0.882	0.259
Shri Ganganagar	4.685	1.419
Hanumangarh	0.321	0.143
Alwar	0.577	0.399
Dausa	1.063	0.932
Jaipur	0.565	0.806
Jhunjhunu	3.756	1.621
Sikar	1.705	1.001
Barmer	1.256	1.870
Jaisalmer	5.462	1.591
Jalore	0.021	0.172
Jodhpur	0.251	3.506
Pali	0.091	0.401
Sirohi	0.213	0.082
Baran	1.188	0.067
Bundi	1.176	0.306
Jhalawar	4.489	0.774
Kota	1.231	0.288
Banswara	1.236	0.156
Chittorgarh	0.942	0.080
Dungarpur	0.639	0.089
Pratapgarh	0.689	0.062
Rajasamand	0.475	0.414
Udaipur	3.034	0.382
<b>Total</b>	<b>54.130</b>	<b>26.904</b>

## **7. SUBSIDIES FOR GOAT FARMING IN RAJASTHAN**

The state of Rajasthan's agricultural sector is greatly aided by government subsidies for goat rearing. Especially for small-scale farmers and rural communities, it is essential. These incentives give anyone who wants to get involved in the lucrative goat farming sector support and financial aid (Siyak et al. [56], Vishnoi et al. [57]).

The primary advantage of government subsidies is that they assist in lowering the initial financial load on those who wish to begin a goat farming enterprise. These subsidies enable people from economically disadvantaged backgrounds to enter the sector and make money by offering financial support. The financial support that comes with receiving a government subsidy is one of its main advantages. Eligible applicants may be able to receive project cost subsidies through programs like the Animal Husbandry Infrastructure Development Fund (AHIDF) and the National Livestock Mission (NLM). While the AHIDF offers interest subvention up to 3%, the NLM offers a capex subsidy of up to 30% (RAHD [51]).

## **8. TYPES OF GOVERNMENT SUBSIDIES FOR GOAT FARMING IN RAJASTHAN**

The Capital Investment Subsidy Scheme (CISS) is one sort of capital provided by the government. A subsidy on their investment in infrastructure, including sheds, fencing, water supply systems, and other necessary equipment, is available to eligible farmers under these schemes. The government also offers a breeding buck distribution program, which is a substantial subsidy. With the help of this program, registered goat producers receive discounted prices on premium breeding bucks. Further funding for fodder development is provided by programs like the Seed Village Program (SVP) and the Green Fodder Development Program (GFDP). Financial assistance is provided by these programs to build seed production units or fodder cultivation areas, respectively (RAHD [51]).

## **9. BENEFITS FOR AVAILING GOVERNMENT SUBSIDIES FOR GOAT FARMING IN RAJASTHAN**

### **9.1 Financial Support**

The primary advantage of government subsidies is the financial assistance they offer to

Rajasthan's goat farmers. Goat farming has become more accessible and inexpensive because to these subsidies, which assist farmers in covering a sizable amount of their investment expenditures.

### **9.2 Entrepreneurship**

The government promotes entrepreneurship in the animal husbandry sector, particularly in goat farming, by providing subsidies.

### **9.3 Infrastructure Development**

Infrastructure development is often a priority for the public sector, and these funds can be beneficial for various industries, including goat farming. Upgrading facilities such as sheds, feed storage units, water supply systems, and veterinary clinics can help improve the overall quality and productivity of the farm.

### **9.4 Improves Productivity**

Enhancing breeding stock and high-quality feed supplements are examples of subsidized resources that farmers can use to boost production. Goats produce more milk as a result, and their meat yield is of greater quality.

## **10. CONCLUSION**

It is now widely accepted that goat rearing has the potential to significantly enhance the food and economic security of rural populations, especially for small and marginal farmers in the state of Rajasthan. Hence, there is a lot of scope to improve the financial conditions of goat farmers by advising them to use indigenous goat breeds, quality feed and fodders, affordable housing, and adequate healthcare, as well as educating them about the various subsidies that the government of Rajasthan offers to assist them in improving their economic status.

## **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

## **REFERENCES**

1. Kumawat M, Uddin A, Bhinda R, Khichar SL, Jat GR. Constraints faced by farmers in goat rearing practices in Jaipur District of Rajasthan, India. International Journal of



- Current Microbiology and Applied Science. 2017;12: 942-944.
2. Waiz HA, Gautam L, Nagda RK, Sharma M. Growth performance of Sirohi goat under farm and field conditions in Southern Rajasthan. *International Journal of Livestock Research*. 2018;6:43-53.
  3. Pulina, G., Milan, M., Lavin, M .P., Theodoridis, A., Mprin, E., Capote, J., Thomas, D. L., Francesconi, A. H.D., Caja, G.. 2018. Current production trends, farm structures, and economics of the dairy sheep and goat sectors. *Journal of Dairy Science*, 101: 6715–29.
  4. Khan AA, Dar AA, Khan HMK, Mir MS, Malik AA, Afzal YA. Status of livestock production in Gurez valley of Jammu and Kashmir in India. *Indian Journal of Hill Farming*. 2013;2:54-58.
  5. Sharma MC, Jindal SK. Prospects of goat production in India. *Compendium of lectures, ICAR sponsored winter school November 25 to December 15, 2008 on Recent advances in improvement of productive and reproductive efficiency of goats through physiological and nutritional interventions*, CIRG, Farah, Mathura, U.P., 2008;13-18.
  6. Tanwar PS, Vaishanava CS, Sharma V. A study on socioeconomic aspects of goat keepers and management practices prevailed in the tribal area of Udaipur district of Rajasthan. *Indian Journal of Animal Research*. 2008;1:71-74.
  7. Patbandha T, Gamit V, Odedra M, Garg D, Sabapara G, Parikh S. Constraints in goat farming under extensive production system in western Gujarat. *Indian Journal of Animal Production and Management*. 2018;3:1-6.
  8. Sorathiya LM, Fulsoundar AB, Raval AP, Patel MD, Tyagi KK.. Goat rearing practices of Ahir community in high rainfall zones of south Gujarat. *Journal of Animal Research*. 2016;3:537-541.
  9. Choudhary, S., Yamini, Nitin Raheja, N., Kamboj, M.L., 2018 Present Status and Proposed Breeding Strategies for Goat Production in India. *Indian Dairyman*, 98-102.
  10. Kumar R Singh PK, Jain G. Sustainable genetic improvement in goat. *Indian Journal of Livestock and Veterinary Research*. 2023;1:168-179.
  11. Nedumaran G, Muthuveni M.. Analyzing the Role of Goat Rearing for Livelihood Improvement.” *Shanlax International Journal of Management*. 2023;2:17–24.
  12. .Sone P, Bardhan D, Kumar A. Constraints faced by goat farmers in Almora district of Uttarakhand. *Indian Journal of Small Ruminants*. 2015;2:325-330.
  13. Singh NJ, Jain G, Aslam, Chakraborty PS, Shukla AK. Valuable Role of Meat, Milk, & Fiber Production of Goat Farming in Indian Economic. *Indian Journal of Livestock and Veterinary Research*. 2023;1:2-4.
  14. Tyagi KK, Patel MD, Sorathiya LM, Fulsoundar AB. Economic introspection of traditional goat rearing by Ahirs of Valsad district in South Gujarat. *Indian Journal of Small Ruminants*. 2013;1: 71-74.
  15. Kumar, S. 2007. Commercial Goat Farming in India: An Emerging Agri-Business Opportunity. *Agricultural Economics Research Review*, 20:503-520.
  16. Yadav CM, Khada BS. Management practices and performance of goats in tribal belt of Dungarpur district in Rajasthan. *The Indian Journal of Small Ruminants*. 2023;1:131-133.
  17. Kumar, R., Sharma, M.C., Gurjar, M.L., Kumar, R., 2019. Socioeconomic characteristic of tribal goat keeper of Dungarour district of Rajasthan state. *Journal of Entomology and Zoology Studies*. 2019;4:1101-1104.
  18. Skapetas B, Bampidis V. Goat Production in the World: Present Situation & Trends. *Livestock Research for Rural Development*. 2016;11:200.
  19. Kumar U, Reader ML, Singh R, Balwada G, Chaturvedi D.. Economics of goat farming under traditional low input production system in Bikaner district. *Asian Journal of Animal Science*. 2014;2:160-163.
  20. Kamboj S, Rahman Z. Marketing capabilities and firm performance: Literature review and future research agenda. *International Journal of Productivity and Performance Management*, 2015;8:1041-1067.
  21. Lata M, Mondal BC. Role of goats in indian economy: major constraints and routine managemental practices for their well-being. *Vigyan Varta* .2021;24:41-46.
  22. FOASTAT,. Food & Agricultural Organization Corporate Statistical database, Food & Agriculture Organization of United Nations (FAO); 2023.

- Available:<https://reliefweb.int/report/world/ao-statistical-yearbook-2023-world-food-and-agriculture>. Accessed on 3.01.2024.
23. BAHS, Basic Animal Husbandry Statistics, 2023 Department of Animal Husbandry & Dairying Government of India; 2023. Available:[https://dahd.nic.in/default/files/B\\_AHS2023.pdf](https://dahd.nic.in/default/files/B_AHS2023.pdf). Accessed on 4.01.2024.
  24. Department of Animal Husbandry, Rajasthan, 19th Livestock Census Rajasthananimalhusbandry.rajasthan.gov.in/livestock\_census.aspx; 2012. Accessed on 1.12.2023.
  25. Department of Animal Husbandry, Rajasthan, 20th Livestock Census Rajasthananimalhusbandry.rajasthan.gov.in/livestock\_census.aspx; 2019. Accessed on 1.12.2023.
  26. Sangameswaran R, Sunitha P. Management practices followed by goat keepers of Attur block, Salem district. *International Journal of Science, Environment and Technology*. 2016;5: 3369-3375.
  27. Singh, A., 2023. Livestock Production Statistics of India. Available:<https://vetextension.com/livestock-production-statistics-of-india-2023> Accessed on 1.12.2023.
  28. Rajasthan Animal Husbandry Department (RAHD). 2023. <https://animalhusbandry.rajasthan.gov.in/ah/#/sm/jankalyan-category-and-entertype/23869/10/55/218/0>. Accessed on 11.02.2024.
  29. Lavania, P., Singh, P.K., 2008. Goat marketing practices in Southern Rajasthan. *Indian Journal of Small Ruminants*, 1:99-102.
  30. Sharma DK, Rout PK, Kuswah YK. Analysis of attributes of goat marketing in Haryana and Uttar Pradesh. *Indian Journal of Small Ruminants*. 2017;2:274-276.
  31. NBAGR, National Bureau of Animal Genetic Resources, Registered Goat Breeds; 2023. Available:<https://nbagr.icar.gov.in/en/registered-goat-breeds>. Accessed on 1.2.2024.
  32. Singh, S. K., Singh, M. K., 2012. Genetic Improvement of Small Ruminants Germplasm: Challenges and Opportunities: In Proceeding of Souvenir cum Abstract of National Seminar on Future Challenges and Opportunities to Improve Health and Production of Small Ruminants held on 22–23 December, 2012 at CIRG, Makhdoom, Mathura pp: 11 – 25.
  33. Singh, M. K., Chauhan, M. S., 2021. Exploring potential of small ruminant based dairy farming in India. XVIII Annual Convention and National Webinar: Harnessing Potential of Indigenous Animal Genetic Resources for Enhancement of Productivity and Profitability. Organized by ICAR-NBAGR and SOCDAB, pp 180–192.
  34. Dixit AK, Mohan B. Economics of goat production in Mathura district of Uttar Pradesh. *Indian Journal of Small Ruminants*. 2014;2: 96-98.
  35. Zulkifli TINTM, Syahlan S, Sali AR, Pahang JT, Ruslan NA, Suyanto A. Consumer Preferences towards Goat Milk & Goat Milk Products: A Mini Review, *Food Research*. 2023;2:57-69.
  36. Gamit VK, Patbandha TK, Bariya AR, Gamit KC, Patel AS. Socio-economic status and constraints confronted by goat and goat farmers in Saurashtra region. *Journal of Entomology and Zoology Studies*. 2020;1:644-648.
  37. Bashir BP, Venkatachalapathy RT, Mohan SK. A study on annual expenditure and income from goat farming in Kerala. *Journal of Extension Education*. 2017;4:5978-5983.
  38. Bhardwaj JK, Kumar V, Saraf P, Kumari P, Mittal M. Current status & changing national scenario of goat population: A review. *Agricultural Research Communication Center*. 2018;2: 91-103.
  39. Garval A. Status of goat marketing in India: A chorological review. *The Pharma Innovation Journal*. 2022;7:4805-4810.
  40. Mehaia, M.A., M.A. Al-Kanhal., 1992. Taurine and other free amino-acids in milk of camel, goat, cow and man. *Milchwissenschaft*, 47:351-353.
  41. Giambra IJ, Brandt H, Erhardt G. Milk protein variants are highly associated with milk performance traits in East Friesian dairy and Lacune sheep. *Small Ruminant Research*. 2014;121:382–94.
  42. Płoszaj, T., Ryniewicz, Z., Motyl, T., 1997. Polyamines in goat's colostrum and milk. *Comparative Biochemistry and Physiology Part B: Biochemistry and Molecular Biology*, 118: 45–52.
  43. Pegg, A. E., McCann, P. P., 1982. Polyamine metabolism and function. *American Journal of Physiology*, 243: C212–21.
  44. Dandrifosse, G., Peulen, O., El Khefif, N., Deloyer, P., Dandrifosse, A.C., Grandfils, C., 2000. Are milk polyamines preventive agents against food allergy? *Proceedings of the Nutrition Society*, 59: 81–86.

45. Chilliard Y, Rouel J, Ferlay A, Bernard L, Gaborit P, Raynal, Ljutovac K, Lauret A, Leroux C. Optimising goat's milk and cheese fatty acid composition in improving the fat content of foods (Woodhead Publishing). 2006;281-312.
46. Pandya AJ, Ghodke KM. Goat and sheep milk products other than cheeses and yoghurt. Small Ruminant Research. 2007; 68:193–206.
47. Kapadiya DB, Prajapati DB, Jain AK, Mehta BM, Darji VB, Aparnathi KD. Comparison of Surti goat milk with cow and buffalo milk for gross composition, nitrogen distribution, and selected minerals content. Veterinary World. 2016;9:710.
48. Ribeiro AC, Ribeiro SDA. Specialty products made from goat milk. Small Ruminant Research 2010;89(2-3):225–33.
49. Lund A, Ahmad M. Production potential nutritive value & nutraceutical effects of goat milk. Journal of Animal Health and Production. 2020;1:65-71.
50. Liang JB, Paengkoum P. Current status, challenges and the way forward for dairy goat production in Asia—conference summary of dairy goats in Asia. Asian Australasian Journal of Animal Sciences. 2019;32(8):1233–43.
51. Rajasthan Animal Husbandry Department (RAHD); 2022. Available:<https://animalhusbandry.rajasthan.gov.in/ah/#/sm/jankalyan-category-and-entry-type/23869/10/55/218/0>. Accessed on 11.02.2024.
52. APEDA, 2023. Agricultural & Processed Food Products Export Development Authority, Year Export Statement. Available:<https://agriexchange.apeda.gov.in/indexp/Exportstatement.aspx>. Accessed on 1.12.2023
53. APEDA, 2023. Agricultural & Processed Food Products Export Development Authority, Year Export Statement. Available:<https://agriexchange.apeda.gov.in/indexp/Exportstatement.aspx>. Accessed on 1.12.2023
53. Vahoniya DR, Nayak AK, Savaliya FP, Pundir RS, Mahera A, Patel J, Halpati J, Garval J. Status of Goat Marketing in India: A Chorological Review. The Pharma Innovation Journal. 2022;SP-11(7):4805-4810.
54. Singh MK, Singh SK. Goats for meat, milk, & fibre: A review, Indian Journal of Animal Sciences. 2005;3:349-355.
55. Shashank J, Ayodhya S, Nagaraj P, Krishnaiah N. Study on haemato-biochemical profile in goats suffering from gastrointestinal nematodiasis. The Pharma Innovation Journal. 2019;8:293-96.
56. Siyak S, Gurjar ML, Sharma MC, Kuma R, Bhal DD. Socio-Economic characteristic of goat keepers in Marwar region of Rajasthan State, India. International Journal of Current Microbiology and Applied Sciences. 2020;6:2795-2803.
57. Vishnoi S, Meena GL, Sharma L, Burrak SS. Socio economic status of goat farmer in tribal sub plan area of Rajasthan. The Pharma Innovation Journal. 2022;4:841-843.

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