



Role of Animal Husbandry in Rural Economy of Kapkot Block A Study in Special Context

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Abstract: This study analyzes the role of animal husbandry in the rural economy, focusing specifically on the Kapkot Development Block of Bageshwar District. The objective is to evaluate the economic contribution and livelihood significance of animal husbandry. Data were collected through a primary survey of 80 selected households in Bageshwar District and subsequently analyzed to derive conclusions. The findings reveal that the income structure of the selected households is multi-sourced; while animal husbandry and agriculture are primary sources, other significant contributors include private and government employment, wage labor, handicrafts, and trade (shopkeeping). Income derived from animal husbandry activities is both direct and indirect: direct income comes from the sale of livestock, while indirect benefits arise from milk production and the imputed economic value of labor. It provides rural households with supplementary income, economic security, employment, and social empowerment. In summary, the data suggest that animal husbandry serves not as the primary source of income but as a self-reliant, supplementary economic activity that strengthens rural livelihoods.

Keywords: Animal husbandry, rural economy, Kapkot Development Block, rural livelihood, income diversification.

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Introduction

The rural economy is primarily based on agriculture and animal husbandry. Although animal husbandry does not provide complete self-reliance for rural households, it serves as a vital supplementary source of income, helping to mitigate economic instability. The animal husbandry sector holds a significant place in India's economy and is a key component of agriculture and allied activities. Beyond providing income, employment, and nutritional security to rural families, animal husbandry plays a crucial role in reducing agricultural risks. In this context, according to the

Government of India's report 'Basic Animal Husbandry Statistics' (BAHS), 2025, the livestock sector contributed approximately 31 percent to the total Gross Value Added (GVA) of the agriculture and allied sectors in 2023-24. Furthermore, India's total milk production was recorded at 247.87 million tonnes in 2024-25, maintaining its position as the world's largest milk producer.

In mountainous states like Uttarakhand, where arable land is limited, animal husbandry serves as a crucial means for income diversification, employment generation, and livelihood security for rural households. According to the 'Basic Animal Husbandry Statistics' (2025), Uttarakhand's

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milk production was estimated at approximately 19.57 lakh tonnes in 2024-25, highlighting the sector's significant contribution to the state's rural economy. Animal husbandry also forms a vital foundation for the rural economy and livelihoods in the Bageshwar district. According to the 20th Livestock Census (2019)—published in the 'Statistics Journal of Uttarakhand Government: Bageshwar District (2024)'—the total livestock population in the district was recorded at 243,826. This figure comprised 102,075 cows and bullocks, 20,800 sheep, 1,962 goats, and 17,876 pigs. Due to mountainous terrain and limited agricultural resources, animal husbandry serves as a vital source of income and employment for rural households in the district. Consequently, studying the role of animal husbandry in strengthening the rural economy and livelihoods is of particular importance. Animal husbandry is a key activity that ensures livelihood security, income diversification, and economic stability, offering both direct and indirect economic benefits to rural families. It serves as an effective means of income security and risk management, especially for small and marginal farmers. Furthermore, animal husbandry contributes significantly to women's empowerment by fostering their economic participation. It also aids in generating employment, curbing migration, and maintaining social stability in rural areas. The importance of animal husbandry is even greater in mountainous states like Uttarakhand, where arable land is limited and agricultural output is constrained by the terrain; in such a context, it becomes a reliable source of income, nutrition, and employment for rural households. Livestock is also viewed as a form of movable asset for rural families, utilized to cope with economic crises when the need arises. Thus, animal husbandry plays a crucial role in rural development and the strengthening of livelihoods.

Literature Review

According to Shanmathy Gopi and Beulah (2018), animal husbandry is a vital component of the Indian economy, providing rural households with employment, income, nutrition, and animal power for agricultural activities. The study highlights that indigenous livestock possess greater adaptability to climate change and diseases, offering economic security in the event of crop failure. However, technological backwardness, financial constraints, and inadequate veterinary services remain major obstacles to the development of the animal husbandry sector.

Leah et al. (2023), in their study titled “Elevating Rural Communities Through Agriculture and animal Husbandry” found that agriculture and animal husbandry form the cornerstone of the economic and social development of rural communities. The study indicates that adopting advanced agricultural techniques and improved animal husbandry

practices leads to increased production, income, and employment opportunities in rural areas. The researchers also concluded that animal husbandry not only strengthens the economic stability of rural households but also fosters social participation, community cooperation, and sustainable rural development.

Objectives

1. To evaluate the role of animal husbandry in the livelihoods, employment generation, and economic security of rural households in the Kapkot development block of Bageshwar district.
2. To analyze the direct and indirect economic benefits (such as milk production, livestock sales, etc.) derived from animal husbandry in the Kapkot development block.
3. To analyze the current status of animal husbandry, livestock composition, and traditional rearing methods in selected rural areas of Bageshwar district.
4. To study the contribution of animal husbandry to the total income of rural households in the Kapkot development block and conduct a comparative analysis with other sources of income

Research Methodology

The present study aims to analyze the role of animal husbandry in the rural economy of the Kapkot Development Block in the Bageshwar district of Uttarakhand. The study area was selected based on its characteristics as a mountainous, rural, and remote region where the majority of the population relies on agriculture and animal husbandry. The villages of Pothing, Guler, Jagthana, and Toli were selected using the convenience sampling method, taking into account the prevalence of animal husbandry in the area, geographical representation, and the availability of necessary information.

Respondents from the selected villages were chosen using the simple random sampling method. Based on the village populations and the number of available livestock-rearing households, 20, 15, 20, and 25 households were selected respectively, resulting in a total of 80 households included in the study. Only those rural households directly or indirectly engaged in animal husbandry activities were included in the study.

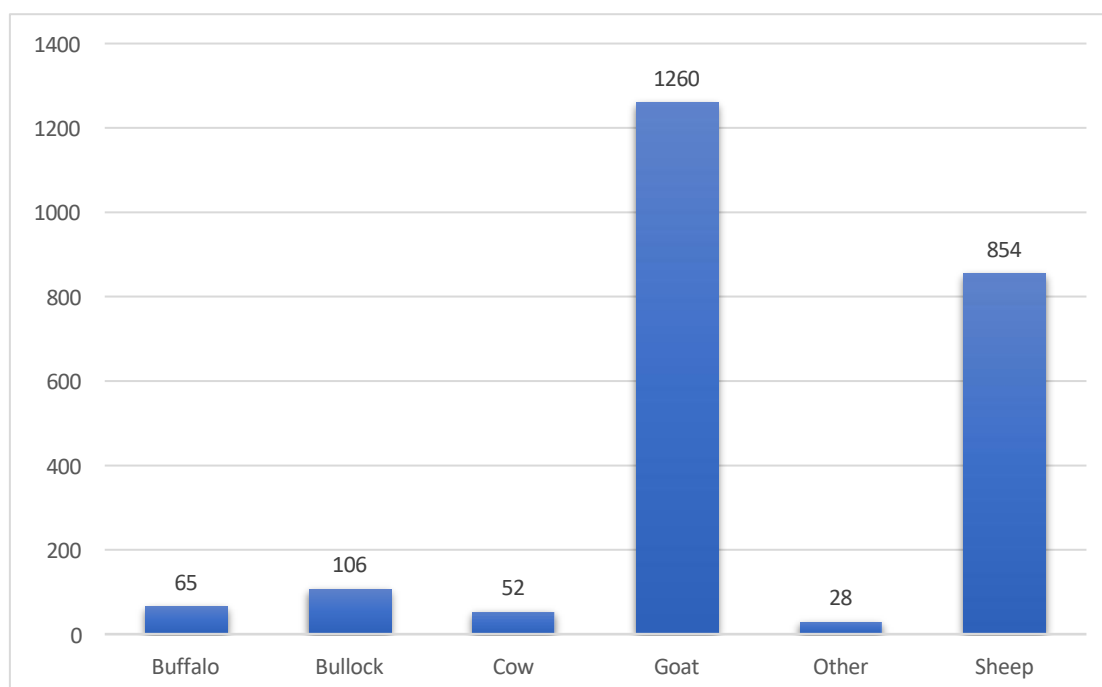
Primary data for the study were collected through structured questionnaires, interviews, and direct observation, while secondary data were obtained from research papers, books, government reports, statistical publications, and other authentic sources. The collected data were analyzed using Microsoft Excel through methods such as percentage calculation, averaging, and tabulation.

Results and Discussion

1-Livestock Status in the Study Area

Type of Animal	Number	Percentage (%)
Cow	52	2.20%
Buffalo	65	2.75%
Bullock	106	4.48%
Goat	1260	53.28%
Sheep	854	36.11%
Other	28	1.18%
Grand Total	2365	100.00%

Source: Primary Survey, 2025



Source: Primary Survey, 2025

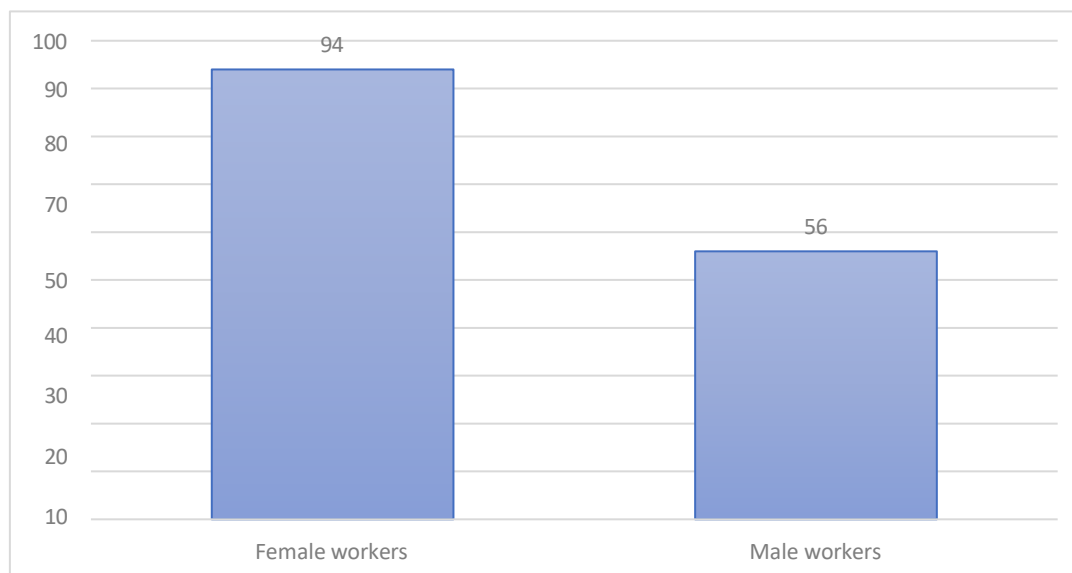
A total of 2,365 livestock were found across the 80 selected households in the study area. Goats constituted the largest share (1,260), accounting for approximately 53.3 percent of the total livestock. This was followed by sheep, numbering 854 (36.1 percent). In contrast, the numbers of bullocks (106), buffaloes (65), cows (52), and other animals (28) were relatively lower. An analysis of the livestock composition reveals that goat and sheep rearing are the primary livestock-related activities for rural households in the study area. Interviews indicated that the key reasons for this include the region's mountainous terrain, limited agricultural land, the relatively low maintenance costs associated with these animals, and their utility as a means to quickly generate cash for urgent needs. Goat and sheep

rearing provide rural households with regular income, meet cash requirements, and offer economic security; this is because they are in higher market demand compared to other livestock and represent a more flexible asset. The significant number of bullocks indicates that animal power remains relevant in agricultural operations. Meanwhile, the presence of cows and buffaloes highlights their crucial role in milk production and household nutritional security. Overall, the study demonstrates that livestock rearing—particularly goat and sheep rearing—serves as a vital foundation for the income, employment, and livelihood security of rural households. It not only ensures economic stability but also contributes significantly to strengthening the rural economy.

2 - Gender distribution of workers engaged in livestock rearing activities

Item	Number	Percentage
Male workers	56	37.33%
Female workers	94	62.67%
Total number	150	100%

Source: Primary survey, 2025



Source: Primary survey, 2025

The table reveals that out of the 150 workers engaged in animal husbandry activities in the study area, 56 (37.33%) are men and 94 (62.67%) are women. This indicates that women's participation in animal husbandry tasks is higher than that of men. In rural areas, most daily tasks related to animal husbandry—such as feeding and watering livestock, milking, animal care, manure management, and cleaning animal sheds—are primarily performed by women. Consequently, animal husbandry serves not only as a source

of employment and income for rural women but also as a vital means of their economic empowerment. The study further highlights that animal husbandry activities play a significant role in enhancing women's economic participation within rural households. Thus, animal husbandry can be viewed as a woman-centric livelihood activity within the rural economy, contributing significantly to increased family income, economic security, and social empowerment.

3 - Comparative distribution of income from livestock sales and other sources

Item	Annual Income Received (₹)	Percentage
Income from livestock sales	9,52,500	42.26%
Income from other sources	13,01,620	57.74%
Total	22,54,120	100%

Source: Primary Survey, 2025

The table shows that income from livestock sales contributes 42.26% to the total income of the selected households in the study area, whereas income from other sources (private jobs, government jobs, local wage labor, handicrafts, old-age pensions, government assistance, and other sources) accounts for 57.74%. This indicates that although the major share of rural household income is derived from agriculture, wage labor, government and private employment, trade, and other economic activities, animal husbandry remains a crucial component of their income structure. Income generated from the sale of livestock serves as a vital resource for rural households in meeting unforeseen needs, funding agricultural inputs, and providing financial support during economic crises. Particularly in mountainous regions, where employment and income opportunities are limited, animal husbandry offers a reliable means of earning supplementary income.

Therefore, while animal husbandry may not be the primary source of income in the study area, it yields indirect economic benefits that are somewhat difficult to quantify due to their diverse nature—perhaps explaining why rural communities continue to maintain livestock alongside crop farming. Thus, it plays a crucial role in ensuring the economic stability, income diversification, and livelihood security of rural households.

4- Assessment of the indirect economic contribution of animal husbandry to the rural economy

Item	Estimated Value (₹)	Annual
Estimated value of livestock assets	₹1,44,31,250	
Estimated savings from milk consumption and animal labour (bullocks)	₹36,67,300	
Estimated opportunity cost of workers engaged in animal husbandry	₹1,30,70,000	

Source: Primary Survey, 2025

Note: *The estimated value of livestock assets has been determined based on local market rates. Factors such as the animals' age, breed, health status, and productivity were considered during the valuation. Due to the mountainous and marginal nature of the study area, the market value of the animals was found to be relatively lower compared to that in plain regions. Furthermore, the total livestock includes non-milking, young, and working animals; therefore, this value represents only an estimated economic assessment.*

Note: *The annual value of milk consumption was estimated based on data obtained from the primary survey. Information regarding the estimated daily quantity of milk obtained by each household was collected, and its annual economic value was determined based on the prevailing local market price per litre. Similarly, the economic*

contribution of bullocks was assessed based on the cost savings achieved through their use in ploughing fields. Due to limited tractor availability in the study area, households possessing bullocks ploughed their own agricultural land, thereby eliminating the need to hire bullocks or tractors. Households without bullocks paid for ploughing services at prevailing local daily or contract rates. Consequently, the economic contribution of bullocks was estimated based on local prevailing ploughing rates.

Note: *The opportunity cost was estimated based on data obtained from the primary survey. A total of 150 individuals were found to be engaged in animal husbandry activities in the study area. Since family members engaged in animal husbandry did not receive direct cash income in return for their labor, the income they could have earned—had they devoted that same labor and time to other income-generating activities at prevailing local wage rates—was considered the opportunity cost. Variations in wage rates for men and women were observed across the villages in the study area, although in some villages, the wages were equal. Therefore, the opportunity cost was estimated based on the actual wage rates prevailing in each village. This estimation was calculated using the formula (Total Persons × Daily Wage Rate × Work-days), factoring in the total number of individuals engaged in animal husbandry, the local daily wage rate, and the number of work-days invested in the activity.*

The contribution of animal husbandry is not limited to direct income alone; it also provides numerous indirect economic benefits to rural households. The total estimated value of livestock held by the 80 selected households in the study area was found to be ₹1,15,45,000, averaging ₹1,44,313 per household. This indicates that animal husbandry serves as a significant movable asset for rural families. Additionally, estimated savings of ₹3,667,300 were realized through milk consumption and the utilization of animal labor, thereby reducing daily household expenses and enhancing economic security.

The study also revealed that the estimated annual opportunity cost for the 150 workers engaged in animal husbandry activities is ₹1,30,70,000. Had these workers sought employment outside the area instead of engaging in animal husbandry, the local agricultural and rural economy could have been adversely affected. Thus, by providing local employment, animal husbandry plays a crucial role in curbing migration, sustaining agricultural activities, and strengthening rural livelihoods.

Therefore, it can be concluded that animal husbandry is not merely a source of income for rural households but also a vital foundation for livelihood security, economic stability, asset creation, and hidden economic value.

5 - Respondents' perceptions regarding the social and economic impacts of animal husbandry (N = 80)

S. No	Statement	Number of Respondents	Percentage
1	Most respondents in the study area consider animal husbandry a socially and economically beneficial activity.	52	65
2	Positive response from respondents regarding the improvement of women's social and economic status.	50	62.5
3	Animal husbandry does not have a negative impact on education.	39	48.75
4	Animal husbandry is a significant means of generating income and employment.	62	77.5
5	Most families consider animal husbandry a significant source of income.	41	51.25
6	Animal husbandry is a respectable and viable occupation.	54	67.5

Source: Primary Survey, 2025

In the study area, 52 respondents consider animal husbandry a socially and economically beneficial activity. Regarding the improvement of the socio-economic status of women, 50 respondents from the selected villages expressed a positive response, indicating that animal husbandry plays a crucial role in the economic empowerment of rural women. Mixed responses were received regarding male participation in animal husbandry activities; however, the majority of respondents acknowledged the active involvement of men. Children's participation was also observed across all villages, making it evident that animal husbandry is conducted as a family-oriented activity.

Regarding the negative impact of animal husbandry on education, 39 respondents answered "partially" or "no," suggesting that animal husbandry generally does not pose a major obstacle to education. Furthermore, 62 respondents acknowledged that animal husbandry has significant potential for future development and serves as a vital means of employment generation in rural areas. The study also revealed that 41 families consider animal husbandry a key source of income. Notably, 54 respondents from the selected villages accepted animal husbandry as a respectable and traditional occupation. This demonstrates that animal husbandry is not merely an economic activity but an integral part of the cultural and social fabric of rural society.

In conclusion, it can be stated that animal husbandry is making a significant contribution to income growth, employment generation, women's empowerment, and livelihood security in the study area, thereby proving instrumental in strengthening the process of rural development.

Conclusion

The present study reveals that animal husbandry forms a crucial foundation for the economy and livelihoods of rural

households in the Kapkot development block. Goat and sheep rearing have emerged as key animal husbandry activities in the study area, contributing significantly to the income and economic security of rural families. Beyond direct income, rural households derive substantial economic benefits through milk consumption, animal labor, and the accumulation of livestock assets.

The study also found that women's participation in animal husbandry activities exceeds that of men, thereby fostering their economic empowerment. By providing local employment opportunities, animal husbandry helps curb migration and strengthens rural livelihoods. Furthermore, most respondents view animal husbandry as a respectable and traditional occupation and foresee potential for its future expansion.

Thus, it can be concluded that animal husbandry is a vital instrument for the rural economy, employment generation, income security, and social development—a role that becomes even more significant in mountainous regions.

Suggestions

1. The availability of improved livestock breeds and high-quality fodder must be ensured for livestock rearers in rural areas. Subsidies and technical assistance could be provided through government schemes and cooperative institutions to enhance livestock productivity.
2. Veterinary services, vaccination facilities, and disease control programs need to be expanded. Regular health check-ups and timely treatment can minimize livestock losses and increase the profitability of animal husbandry.
3. Livestock rearers should be provided with training in modern animal husbandry techniques, scientific management, and milk production. This would boost production capacity and enable rearers to improve their

incomes by adopting new technologies.

4. Better market systems, collection centers, and transportation facilities should be developed for the marketing of milk and other livestock products. This would ensure fair prices for producers and help transform animal husbandry into a more profitable enterprise.

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