

Socio- Economic Profile of the Goat Farmers in Lakhimpur and Dhemaji District of Assam

Kandarpa Boruah, L. Sanathoi Khuman, Gautam Bordoloi,
Sadananda Payeng, Monosri Johari, Manoj Kr. Kalita,
Aditya Baruah, Karuna Saikia, Dwipjyoti Mahanta,
Rana Burhagohain, Sanjib Khargharia

Received 8 July 2021, Accepted 6 September 2021, Published on 10 October 2021

ABSTRACT

Livestock plays a vital role in rural Indian economy and the tribal populations in the North East India are associated with livestock rearing since time immemorial. The present study was undertaken to ascertain the socio-personal status of goat farmers in Lakhimpur and Dhemaji district of Assam. The study was conducted from November 2019 to January 2020 in Narayanpur block in Lakhimpur and Dhemaji block in Dhemaji district and respondents were selected due to large concentration of goat farmers in the area. The villages and farmers were selected purposively after discussion with Block Veterinary Doctors and additionally taking in consideration of beneficiaries under the project “Women empowerment through scientific rearing of goats in Dhemaji and Lakhimpur district”. Four villages from each block and 10 farmers from

each village were selected as respondents making the sample size of 80 respondents. An interview schedule was prepared accordingly and the data collected were analyzed by using statistical tool SPSS for descriptive and relational statistics. The study revealed that most of the respondents were in the middle age groups (22-65 years) in Dhemaji, Lakhimpur and in pooled samples. In herd size, mean value among the respondents of Lakhimpur was significantly higher than Dhemaji ($t=-2.55$, $p<0.01$). In pooled sample, frequency of marital status showed 100% of the respondents were married 85% of respondents hailed from “nuclear” families and 15% had “joint” family. The primary occupation of 80% of them was agriculture, 12.5% in animal husbandry and 8.75 % in government service.

Keywords Goat, Farmers, Socio-economic, Assam.

Kandarpa Boruah*, L. Sanathoi Khuman, Gautam Bordoloi, Manoj Kr. Kalita, Aditya Baruah, Karuna Saikia, Dwipjyoti Mahanta, Sanjib Khargharia
Lakhimpur College of Veterinary Science, Assam Agricultural University, Joyhing, North Lakhimpur, Assam 787001, India

Sadananda Payeng, Monosri Johari, Rana Burhagohain
College of Veterinary Science, Assam Agricultural University,
Guwahati, Khanapara, Assam, India
Email : kandarpaboruah46@aau.ac.in

*Corresponding author

INTRODUCTION

India is blessed with wide diversity of agriculture and animal husbandry having wide variety of goat population with 34 well-known goat breeds based on different agro climatic region. India stands second rank in the world goat population with 148.88 million population of goat in 2019 showing an increase of 10.1% over the previous census (20th Livestock

Census 2019). Goat husbandry plays a significant role in Indian agricultural economy by contributing in the form of meat, milk, skin, leather and manure. The total meat production in the country is 8.1 million tons in the year 2018-19 where 13.53% meat production is contributing from goat alone (20th Livestock Census 2019).

Goat rearing has been practiced among the different caste and creed of Assam since time immemorial in backyard system. All categories of farmer's particularly small and marginal farmers in rural areas of Assam adopts goat farming because of low capital investment, high prolificacy and no social taboo of chevon and its product. Goat can be reared with the help of spare family labor and do not require any serious housing facilities and management skills (Rawat *et al.* 2015). Goat is a versatile livestock species and its meat is highly preferable as compared to other livestock meat. In Assam, goat is mostly reared for meat purpose although it also provides milk and other milk products.

Lakhimpur and Dhemaji district of Assam has a great potential for adoption of scientific goat farming in large scale. According to the 20th livestock census, the goat populations of these two districts are 2,63,588 and 1,52,901 respectively. So, considering the importance of goat farming as well as population of goat in this region, the present study was conducted to know the personal socio-economic characteristics of goat farmers of Lakhimpur and Dhemaji district of Assam.

MATERIALS AND METHODS

The study was conducted in Narayanpur block in Lakhimpur district and Dhemaji block in Dhemaji district during the month of November 2019 to January 2020. The villages and farmers were selected purposively for having substantial's population of goat farmers after discussion with the District Veterinary Officials, Block Functionaries and additionally taking in consideration of beneficiaries under the Assam state funded project (Financed by National Livestock Mission, Assam) "Women empowerment through scientific rearing of goats in Dhemaji and Lakhimpur district" undertaken by the faculty of LCVSc, AAU,

Joyhing, North Lakhimpur. Four villages from each block and 10 farmers from each village were selected as respondents making the sample size 80. A reliable and pre- tested interview schedule was prepared in consultation with the experts of Department of Extension Education, Lakhimpur College of Veterinary Science, AAU, Joyhing for data collection. The pre-testing of the interview schedule was done in the nearby blocks of Sisiborgaon block of Dhemaji district with test-retest method and the reliability was found out to be 87.56%. The interview schedule was checked for validity by discussing with the experts of LCVSc, literature materials. The collected data were analyzed by using statistical tools like mean, standard deviation, percentage and t test using the statistical software SPSS.

RESULTS AND DISCUSSION

Age

The study revealed that age had a prominent and distinctive role to play in all aspects of life and livelihood and that is the reason age is considered for all possible studies relating to man and society. Table 1 showed that most of the respondents were from middle age group in Dhemaji (28-65 years), Lakhimpur (22-65 years) and pooled sample (22-65 years). The mean scores showed no significant difference ($t=-0.63$, NS). Similar finding was reported by Payeng (2011), Suchiang (2016), Johari (2017).

Education

The findings of Table 1 also revealed that the average education score of the respondents were 4.87, 4.95 and 5.41 in Dhemaji, Lakhimpur and pooled sample with their respective standard deviation as 1.58, 0.84, 1.38 and score ranging 1-7, 4-7 and 1-7 in Dhemaji, Lakhimpur and pooled sample. Based on mean and standard deviation, the respondents were categorized into low, medium and high groups. Their distribution were 17.50 %, 65.00% and 17.50% in Dhemaji, 35.00%, 37.50% and 27.50% in Lakhimpur and 5.00% , 65.00% and 30.00% in the pooled sample. The mean scores showed no significant difference ($t=0.35$, NS). This finding was supported by Khuman (2011), Johari (2017).

Table 1. Profile distribution of the respondents on the basis of their socio-personal variables.

Variables	Districts	Mean	SD	Range	Low	Medium	High	't' value
Age (Year)	Dhemaji	47.47	6.57	28-65	6 (15.00)	29 (72.50)	5 (12.50)	-0.63 ^{NS}
	Lakhimpur	46.47	7.77	22-65	4 (10.00)	30 (75.00)	6 (20.00)	
	Pooled	46.97	7.17	22-65	8 (10.00)	61 (76.25)	11 (13.75)	
Education	Dhemaji	4.87	1.58	1-7	7 (17.50)	26 (65.00)	7 (17.50)	0.35 ^{NS}
	Lakhimpur	4.95	0.84	4-7	14 (35.00)	15 (37.50)	11 (27.50)	
	Pooled	5.41	1.38	1-7	4 (5.00)	52 (65.00)	24 (30.00)	
Family size	Dhemaji	4.9	1.48	3-8	8 (20.00)	25 (62.50)	7 (17.50)	-2.43 ^{**}
	Lakhimpur	4.1	1.21	4-7	5 (12.50)	29 (72.50)	6 (15.00)	
	Pooled	4.5	1.40	3-8	19 (23.75)	42 (52.50)	19 (23.75)	
Herd size (Goat size, number)	Dhemaji	0.45	0.25	0.1-1	3 (7.50)	28 (70.00)	9 (22.50)	-2.55 ^{**}
	Lakhimpur	0.67	0.50	0.1-1.9	2 (5.00)	29 (72.50)	9 (22.50)	
	Pooled	0.56	0.41	0.1-1.9	5 (6.25)	65 (81.25)	10 (21.50)	
Annual income from goatery (Rs)	Dhemaji	9000	7215.54	1000-30000	4 (10.00)	31 (77.50)	5 (12.50)	-0.61 ^{NS}
	Lakhimpur	9310	5361.82	3000-28000	6 (15.00)	26 (65.00)	8 (20.00)	
	Pooled	9155	6318.18	1000-30000	11 (13.75)	59 (73.75)	10 (12.50)	
Annual income Rs.	Dhemaji	53125	21945.37	30000-130000	2 (5.00)	33 (82.5)	5 (12.50)	-5.02 ^{**}
	Lakhimpur	81000	33371.26	40000-168000	3 (7.50)	30 (75.00)	7 (17.50)	
	Pooled	67062.5	31372.54	30000-168000	8 (10.00)	61 (76.25)	10 (12.50)	

Family size

In case of family size, Table 1 additionally showed that the average family size of the respondents were 4.90, 4.10 and 4.50 in Dhemaji, Lakhimpur and pooled sample with their respective standard deviation as 1.48, 1.21 and 1.40 and ranges as 3-8, 4-7 and 3-8 respectively. Based on mean and standard deviation, the respondents were categorized into low, medium and high groups. Their distribution were 20.00%, 62.50% and 17.50% in Dhemaji, 12.50%, 72.50% and 15.00% in Lakhimpur and 23.75%, 52.50% and 23.75% in pooled sample. After comparison of the mean scores of respondents' family

size, it was found that the mean scores of Dhemaji were significantly higher than that of the Lakhimpur ($t=-2.43$, $p<0.01$). This may be due to the fact that Dhemaji district has comparatively more tribal population as compared to Lakhimpur district and tribal family although less in population but had generally larger family size due to remoteness and reluctance to move out of their domicile area.

Herd size

It was also revealed that the average herd size of the respondents were 0.45, 0.67 and 0.56 in Dhemaji, Lakhimpur and pooled sample with their respective

standard deviation as 0.25, 0.50 and 0.41 and ranges as 0.1-1, 0.1-1.9 and 0.1-1.9 respectively (Table 1). Based on mean and standard deviation, the respondents were categorized into low, medium and high groups. Their distribution were 7.50%, 70.00% and 22.50% in Dhemaji, 5.00%, 72.50% and 22.50% in Lakhimpur and 6.25%, 81.25% and 21.50% in pooled sample. After comparison of the mean scores of respondents' herd size, it was found that the mean scores of Lakhimpur were significantly higher than that of the Dhemaji ($t=-2.55$, $p<0.01$). The reason behind that may be in Lakhimpur had majority of non-tribal farmers who were friendlier with the veterinary officers for getting scientific information regarding rearing of goats and a competitive interest in selling of more goats as compared to tribal farmers. Payeng (2011), Pyruth (2016), Suchiang (2016) also reported medium herd size in their studies.

Annual income from goatery

It was found that the average income of the respondents from goatery were Rs 9000/-, Rs 9310/- and Rs 9155/- in Dhemaji, Lakhimpur and pooled sample with their respective standard deviation as 7215.54, 5361.82 and 6318.18 and ranges as Rs 1000.00 to Rs 30,000.00, Rs 3000.00 to Rs 28,000.00 and Rs 1000.00 to Rs 30,000.00 respectively (Table 1). Based on mean and standard deviation, the respondents were categorized into low, medium and high groups. Their distribution were 10%, 77.50% and 12.50% in Dhemaji, 15, 65% and 20% in Lakhimpur and 13.75, 73.75% and 12.50% in pooled sample. The mean scores showed no significant difference ($t=-0.61$, NS).

Annual income

Table 1 showed that the average annual income of the respondents were Rs 53125/-, Rs 81000/- and Rs 67062.50/- in Dhemaji, Lakhimpur and pooled sample with their respective standard deviation as 21945.37, 33371.26, 31372.54 and ranges as Rs 30,000.00 to Rs 1,30000.00, Rs 40,000.00 to Rs 1,68,000.00 and Rs 30,000.00 to Rs 1,68,000.00 respectively. Based on mean and standard deviation, the respondents were categorized into low, medium and high groups. Their distribution were 5%, 82.50% and 12.50 in Dhemaji, 7.50%, 75% and 17.50% in

Table 2. Frequency distribution of respondents on the basis of their marital status. Figures in the parenthesis indicate percentage.

Sl. No.	Marital status	District	Married	Unmarried
1.	No. of respondents	Dhemaji	40 (100.00)	0 (0.00)
		Lakhimpur	40 (100.00)	0 (0.00)
		Pooled	80 (100.00)	0 (0.00)

Lakhimpur and 10%, 76.25% and 12.505% in pooled sample. After comparison of the mean scores of respondents' annual income, it was found that the mean scores of the Lakhimpur were significantly higher than that of the Dhemaji ($t=-5.02$, $p<0.01$). The possible reason may be that as majority of respondents of Lakhimpur were non-tribal, they were more oriented towards betterment of their economic condition, had more numbers of goats and more income from livestock rearing as compared to respondents of Dhemaji. Khuman (2011), Payeng (2011), Johari (2017) also reported medium income group of the farmers in their studies.

Marital status

The frequency of marital as seen from Table 2 revealed that cent per cent of the respondents were married in both the district. This finding was due to selection of goat farmers who have been associated with goat rearing for a long time. This finding is in line with Khuman (2011), Payeng (2011), Johari (2017).

Family type

The frequency of family type as seen from Table 3 revealed that 82.50% of the respondents hailed from "nuclear" type of family and 17.50% had "joint" family in Dhemaji district whereas in Lakhimpur district 87.50% of the respondents hailed from "nuclear" type of family and 12.50% had "joint" family. This result may be because of modern times, increasing

Table 3. Frequency distribution of respondents on the basis of their family type. Figures in the parenthesis indicate percentage.

Sl. No.	Family type	District	Joint	Nuclear
1.	No. of respondents	Dhemaji	7 (17.50)	33 (82.50)
		Lakhimpur	5 (12.50)	35 (87.50)
		Pooled	12 (15.00)	68 (85.00)

Table 4. Frequency distribution of respondents on the basis of their education.

Sl. No	Education level	District	Frequency	Percentage
1.	Illiterate	Dhemaji	2	5.00
		Lakhimpur	0	0.00
		Pooled	2	2.50
2.	Read and write	Dhemaji	2	5.00
		Lakhimpur	0	0.00
		Pooled	2	2.50
3.	Primary	Dhemaji	3	7.50
		Lakhimpur	0	0.00
		Pooled	3	3.75
4.	Middle	Dhemaji	4	10.00
		Lakhimpur	14	35.00
		Pooled	18	22.50
5.	High school	Dhemaji	17	42.50
		Lakhimpur	15	37.50
		Pooled	32	40.00
6.	Higher secondary	Dhemaji	5	12.50
		Lakhimpur	10	25.00
		Pooled	15	18.75
7.	Graduate	Dhemaji	7	17.50
		Lakhimpur	1	2.50
		Pooled	8	10.00

standard of living has made the people self centric leading to clashes among the families which results in splitting of joint family to become nuclear family. While in pooled sample 85.00% of the respondents hailed from “nuclear” type of family and 15.00% had “joint” family. This finding is supported by the finding of Satyanarayan *et al.* (2010), Payeng (2011), Johari (2017).

Education

The frequency of education as seen from Table 4 revealed that highest number of 42.50% followed by 17.50%, 12.50%, 10.00%, 7.50%, 5.00% and 5.005% respondents had high school, graduate, higher secondary, middle, primary, illiterate and read and write educational level in Dhemaji whereas in Lakhimpur the correspondent figures were 37.50 %, 2.50%, 25.00 %, 35.00%, 0.00%, 0.00% and 2.50%. And in the pooled sample the corresponding figures were 40.00%, 10.00%, 18.75%, 22.50%, 3.75%, 0.00% and 2.50%. Majority of respondents falling in high school education may be due to the fact that education has been given importance in the state leading to increasing numbers of school in various

Table 5. Frequency distribution of respondents on the basis of their primary, secondary and tertiary mode of occupation. Figures in the parenthesis indicate percentage.

Sl. No.	Occupation	District	Primary	Secondary	Tertiary
1.	Agriculture	Dhemaji	29 (72.50)	8 (20.00)	3 (7.50)
		Lakhimpur	35 (87.50)	3 (7.50)	2(5.00)
		Pooled	64 (80.00)	11(13.75)	5(6.25)
2.	Animal husbandry	Dhemaji	7 (17.50)	30 (75.00)	3 (7.50)
		Lakhimpur	3 (7.50)	38 (95.00)	2 (5.00)
		Pooled	10 (12.50)	68 (85.00)	5 (6.25)
3.	Service in government sector	Dhemaji	4 (10.00)	0 (0.00)	0 (0.00)
		Lakhimpur	3 (7.50)	0 (0.00)	0 (0.00)
		Pooled	7 (8.75)	0 (0.00)	0 (0.00)

areas as compared to earlier times. The finding were closely agreement with Shyam (2011), Pyruith, (2016) Suchiang (2016).

Occupation

The frequency of occupation as seen from Table 5 revealed that highest number of 72.50% followed by 17.50% and 10.00% respondents had primary occupation as, agriculture, animal husbandry and government service in Dhemaji whereas in Lakhimpur the correspondent figures were 87.50%, 7.50% and 7.50 % and in the pooled sample the primary occupation was evident as 80.00% in agriculture, 12.50 per cent in animal husbandry and 8.75% in government service. . Agriculture being primary occupation and animal husbandry being secondary occupation reveals the importance and reliance of rural folks to agriculture and animal husbandry for their livelihood. This finding is supported by Shyam (2011) Johari (2017).

CONCLUSION

From the study it can observed that goat farming in Lakhimpur and Dhemaji district is preferred by mostly middle-aged group of villagers. It has also been seen that in all aspect of the study, the farmers of Lakhimpur had generally better scores than farmers of Dhemaji district, viz., in case of herd size and annual income. However, farmers of Dhemaji district had bigger family size as compared to Lakhimpur district. It was also observed that majority of the farmers were

married, had nuclear family type and education of high school level. It can be observed from the study that majority of farmers were dependent on goat rearing for their livelihood. Therefore, suitable training in scientific goat farming, exposure tours to successful and large-scale goat farms, access to schemes (relating to goat farming) and loan availability from the banks can further improve the socio-economic status of the farmers. State Veterinary officials along with Lakhimpur College of Veterinary Science will play an important role in socio-economic development of the farmers.

ACKNOWLEDGEMENT

The author acknowledges the help provided by Department of Animal Husbandry and Veterinary, Govt of Assam (who granted the project entitled "Women empowerment through scientific rearing of superior goat in Lakhimpur and Dhemaji district of Assam") and Dr. S. Khargharia, Principal Investigator of the Project, Lakhimpur College of Veterinary Science, AAU, Joyhing, North Lakhimpur, Assam in identification and interviewing of goat farmers who were integral part of the study and ultimately helping in completion of the present study.

REFERENCES

- Johari M (2017) Geodynamics and Tribal Livestock Farm Women Transition in Assam, PhD thesis . Assam Agricultural University, Khanapara.
- Khuman LS (2011) Communication behavior relating to dairying among tribal and non-tribal dairy farmers in Cachar district of Assam. MVSc thesis. CVSc, Assam Agricultural University, Khanapara, Guwahati, India.
- Kumar S, Chauhan HS, Kide W, Mayekar AZ (2015) Socio-economic profile of goat farmers in Western Uttar Pradesh. *Life Sci Int Res J* 2 (2): 43-46.
- Livestock census (2019) Department of Animal husbandry, dairying and Fisheries. Government of India.
- Payeng S (2011) Economics of Pig Farming in Organized and Unorganized Farming in Kamrup District of Assam. PG thesis (Unpublished). Assam Agricultural University, Khanapara.
- Pyruith R (2016) Progressive poultry rearing ventures in selected districts of Meghalaya. MVSc thesis (Unpublished). CVSc, Assam Agricultural University, Khanapara, Guwahati, India.
- Rawat SK, Narayan S, Awasthi M, Dwivedi S (2015) Socio-economic analysis of goat rearing farmers in Mahoba District of Bundelkhand. *Agron Econ - An Int J* 2 (2): 29-34.
- Satyanarayan K, Jagadeeswari V, Murthy VC, Ruban SW, Sudha G (2010) Socio-economic status of livestock farmers of Narasapura village-A Benchmark Analysis. *Vet World* 3 (5): 215-218.
- Shyam J (2011) Enterpreneurial behavior of pig farmers in Kamrup district of Assam. MVSc thesis (Unpublished). CVSc, Assam Agricultural University, Khanapara, Guwahati, India.
- Suchiang R (2016) Issues around Niang Megha breed of pig rearing in Meghalaya. MVSc thesis (Unpublished). CVSc, Assam Agricultural University, Khanapara, Guwahati, India.