STUDY ON SOCIO-ECONOMIC ASPECTS AND CONSTRAINTS FACED IN GOAT REARING WITH SPECIAL REFERENCE TO SELF HELP GROUP IN PRAYAGRAJ DISTRICT OF UTTAR PRADESH

Amit Kumar, Ameesh John Stephen, Mukesh Kumar Maurya

Department of Agricultural Economics, Naini Agriculture Institute, SHUATS,

ABSTRACT

Following analysis of the data gathered from the respondents who raised goats, it was discovered that, out of the 130 respondents, 72 (55.39%) have 5 to 8 goats in their family, followed by 32 (24.62%) who have 8 to 10 goats, 18 (13.85%) who have fewer than 5 goats, and only 8 (6.15%) who have more than 8 goats. Goats were placed fourth in need of access to healthcare services. The respondents ranked the lack of goat-rearing knowledge and abilities as fifth and sixth, respectively. Lack of timely vaccines, a wild animal attack, and a lack of diagnostic resources were placed seventh, eighth, and ninth, respectively. Goats were placed fourth in need of access to healthcare services. The respondents ranked the lack of goat-rearing knowledge and abilities as fifth and sixth, respectively. The respondents rated attacks by wild animals, delayed immunizations, and a lack of diagnostic tools, respectively, at seventh, eighth, and ninth.

KEYWORDS: Arithmetic Mean, Weighted Average, and Garett Ranking

INTRODUCTION

India with 154 million goats is one of the largest goats owning country in the world and playing a significant role in livelihood and nutritional security as well as providing supplementary income to nearly 70 million farmers of over 5,00,000 remote villages in the country. Goat meat production in the country has increased from 4.70 to 5.96 lakh tons during the last decade (2002 to 2011) with an annual growth rate of 2.4%. Similarly, goat milk production in the country has also increased from 36.4 to 45.9 lakh tons during the same period with annual growth rates of 2.6 %. The country stands first in goat milk production and is the second largest in goat meat production in the world by sharing 29% & 12% goat milk and meat production,

respectively. Goat meat (Chevon) is most preferred and widely consumed meat in the country. Since ancient times goat milk has traditionally been known for its medicinal properties and has recently gained importance in human health due to its proximity to human milk for easy digestibility and it's all round health promoting traits. The goat sector contributes Rs. 22,138 crores to the country's livestock GDP through meat (Rs. 11,932 crores), milk (Rs. 5,513 crores), skin (Rs. 800 crores) and manures (Rs. 1,594 crores).

Livestock sector is expected to emerge as an engine of agricultural growth in the 12th plan and beyond in view of rapid growth in demand for animal food products. Achieving growth rate of 5.6%, however, would required addressing challenges of shortage of feed and fodder and frequent occurrence of some deadly diseases. Livestock is an important source of income and employment in rural areas. It provides balanced nutrition in the form of milk, egg and meat besides farm, power. Animal husbandry plays a major role in providing employment especially self employment with high participation of women. The increase in the demand and supply of livestock and livestock products rose up exorbitantly at global level as a sequel to increasing urbanization, burgeoning population growth as also improved income levels, changing lifestyles and consumption of high calorie food. Various kinds of livestock species like cattle, buffalo, goat, sheep, hen and pig etc. were reared as domestic and subsistence animals (Khan, 2012). There are various ways in which livestock husbandry is being practiced viz; mixed farming, nomadic herding, and commercial grazing and so on livestock rearing incorporates not only keeping the animals and feeding them, but it also includes the marketing of animals, animal rearing and collecting and processing milk or milk products for marketing them to get maximum remunerations. (Khan et al., 2013) India has huge population of different species of livestock. In 2007 there were 199 million cattle, 105 million buffaloes, 72 million sheep, 141 million goats, 11 million pigs and 649 million poultry birds. The cattle population after reaching a peak of 204.6 million in 1992 declined until 2003, but again showed an increasing trend in 2007. The decline in cattle number was largely confined to the male cattle an important source of draught power in India agriculture. Their number declined from 101 million in 1992 to around 83 million in 2007. This was due to declining size of land holding and increasing mechanization of agricultural operations.

RESEARCH METHODOLOGY

SAMPLING DESIGN

Multi-stage sampling technique with stratified random sampling at its ultimate stages was used.

Selection of District

There are 75 District and 18 Divisions in Uttar Pradesh state and the divisions are Agra, Aligarh, Prayagraj, Azamgarh, Bareilly, Basti, Chitrakoot, Devipatan , Ayodhya, Gorakhpur, Jhansi, Kanpur, Lucknow, Meerut, Mirzapur, Moradabad, Saharanpur, and Varanasi. Out of these the Prayagraj division of Uttar Pradesh has been selected, and under this division, Prayagraj district has been selected out of four districts purposively for the present study on the basis of maximum area under guava cultivation.

Selection of Blocks

List of all the 23 community development blocks of Prayagraj district along with total goat rearing SHG's were collect from current website records available in the Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRIM). Two Hocks namely Karchana and Mauaima has been selected purposively based on the highest goat rearing Self-help Groups.

Selection of villages

A complete list of all villages of Karchana and Mau Aima blocks has been obtained from the Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM). Thereafter these villages has been arranged in ascending order on the basis of SHG's Thus, out of total villages, 2-4% village has been selected randomly for the present study.

Selection of respondent/growers

A complete list of all respondents/rearing has been prepared with the help of DAY-NRLM and there after a complete list of all respondents has been arrange in ascending order on the basis of their size of SHG's then these goat rearing SHG'S has been categorized into 3 Size SHG's viz.

Small size SHG's   -   Below 5 members,

Medium size SHG's   -   5-20 members,

Large size SHG's   -   20 members and above respectively.

METHOD AND COLLECTION OF DATA

Primary Data

Primary data has been collected by survey method through personal interview using schedule from middleman, goat rearing and channel partners of goat trading during study. For evaluating the specific

objectives of the study, necessary primary data has been obtained from the selected SHG's through personal interview with the help of a pre-tested and structured schedule. The data has been collected pertaining to the agricultural year 2019. The method of personal interview will adopt to ensure that the data obtaining from the respondents has been relevant, comprehensive and reasonably correct and precise.

Collection of secondary data

It has been collected from magazines, published papers, books, journals, periodicals news & govt. records, etc.

Analytical Tools

1. **Arithmetic Mean:**

$$AM = \frac{\sum X_i}{N}$$

Where,

AM = Arithmetic Mean

$\sum X_i$ = Sum of Variables

N = Total Number of Variables

2. **Weighted Mean:**

$$WM = \frac{\sum W_i \ X_i}{\sum W_i}$$

Where,

WM = Weighted Mean

W_i = Weight of X_i

X_i = Variable

3. **Garrett Ranking Technique:**

Farmers were asked to rank the restrictions. In light of this, we used Garrett's table to translate these ranks into scores. The following is Garrett's algorithm for turning ranks into percentages.

$$\text{Per cent position} = \frac{100 * (R_{ij} - 0.50)}{N_j}$$

Where,

R_{ij} = Rank given for i[th] item in j[th] system

N_j = Number of items ranked in jth system

RESULTS & DISCUSSION

The research were conducted for "A study on value chain of small ruminant (Goat) in Prayagraj district of Uttar Pradesh with special reference to SHG's" in the Department of Agricultural Economics, Sam Higginbottom University of Agriculture, Technology and Sciences Prayagraj -211007,U.P. (India). The main objective of the research was to study and analysis of value chain of small ruminant (Goat) in Prayagraj district of Uttar Pradesh with special reference to SHG's.

Establishment

Table.1: Distribution of SHGs on their establishment period

Sr. No.	Periods	SHGs (per cent)			
		Small	Medium	Large	Total Percentage
1.	Between 0 to 5 years	5 (62.50)	21 (55.26)	2 (50.00)	28 (56.00)
2.	Between 5 to 10 years	2 (25.00)	12 (31.58)	1 (25.00)	15 (30.00)
3.	Above 10 years	1 (12.50)	5 (13.16)	1 (25.00)	7 (14.00)
	Total	8 (100)	38 (100)	4 (100)	50 (100)

After the observation and collection of the data about socio-economical condition of the respondent goat rearing SHGs it found that the goat rearing SHGs were involved in the financial support to the goat rearing members of its group from start up to long time. On the basis of establishment time, the respondent's SHGs were classified into three categories namely between 0 to 5 years, between 5 to 10 years and above 10 years. The results are presented in Table 1 From this Table 1, it could be concluded that, out of the total respondent's majority (i.e., 56 per cent) of respondents come between 0 to 5 yrs followed by 5 to 10 yrs (30 per cent), following other 14 per cent respondents fall in above 10 years.

Age

Table.2: Distribution of respondents of SHGs according to their age

Sr. No.	Age	Respondents (Numbers)			
		Small	**Medium**	**Large**	Total Percentage
1.	**Below 18 years**	2 (20.00)	3 (3.00)	1 (5.00)	6 (4.62)
2.	**Between 18 to 25 years**	3 (30.00)	19 (19.00)	3 (15.00)	25 (19.23)
3.	**Between 25 to 50 years**	4(40.00)	63 (63.00)	11 (55.00)	78 (60.00)
4.	**Above 50 years**	1(10.00)	15 (15.00)	5 (25.00)	21 (16.15)
5.	**Total**	10 (100)	100 (100)	20 (100)	130 (100)

From this Table 2, it could be concluded that, out of the total respondents majority (i.e., 60 per cent) of respondents have been come between 25 to 50 years, following other 19.23 per cent of respondents have been fallen in the range of between 18 to 25 years, while about 16.15 per cent of respondents have been fallen above 50 years, while 4 per cent of respondents have been came in below 18 years.

Table.3: Distribution of respondents of SHGs according to their education

Sr. Nos.	Education	Number of respondents (per cent)			Total Percentage
		Small	**Medium**	**Large**	
1.	Illiterate	1 (10.00)	4 (4.00)	1 (5.00)	6 (4.62)
2	Primary level	2 (20.00)	16 (16.00)	3 (15.00)	21 (16.15)
3	High school	4 (40.00)	53 (53.00)	9 (45.00)	66(50.77)
4	HSC	2 (20.00)	17 (17.00)	4 (20.00)	23 (17.69)
5	Graduate	1 (10.00)	8(8.00)	2(10.00)	11 (8.46)
6	Post Graduate	0 (0.00)	2 (2.00)	1(5.00)	3 (2.31)
	Grand Total	**10 (100)**	**100 (100)**	**20 (100)**	**130(100.00)**

From Table 3, it could be inferred that little more than half of the respondents had high school (50.77 per cent) education, followed by remaining having intermediate (17.69 per cent), primary school (16.15 per cent), graduate (8.46.00 per cent), illiterate (4.62 per cent), and post graduate (2.31 per cent) education. It is evident that greater proportion of farmers were educated up to high school and did not go for further studies, the probable reason might be their medium annual income, lack of awareness on the importance of education and lack of encouragement from family members for continuing further studies. Therefore, the efforts are needed to educate the illiterate and school dropouts through adult education, and functional literacy programmes in village to increase the level of education.

Experience

Table.4: Distribution of respondents according to their goat farming experience

Sr. No.	Experiences	Number of respondents (per cent)			
		Small	Medium	Large	Total Percentage
1.	Below 5 years	1 (10.00)	15 (15. 00)	2 (10. 00)	18 (13.85)
2.	5 to 10 years	3 (30. 00)	24 (24. 00)	3 (15. 00)	30 (23.08)
3.	10 to 20 years	4 (40. 00)	43 (43. 00)	7 (35. 00)	54 (41.54)
4.	Above 20 years	2(20. 00)	18 (18. 00)	8 (40.00)	28 (21.54)
	Grand Total	**10 (100)**	**100 (100)**	**20 (100)**	**130 (100.00)**

It is evident from the Table 4 that majority (41.54 per cent) of the respondents had 10-20 years of goat rearing experience followed by 23.08 per cent of respondents who had goat rearing experience of 5-10 years, 21.54 per cent of farmers who had above 20 years of farming experience and 13.85 per cent of respondents had below 5 years of experience. It could be inferred that their experience could be better exploited to adopt recent goat rearing technologies.

Income

Table.5: Total annual income of respondents agencies (Rs/Yr) (In %)

Sr. No.	Income	Number of respondents (per cent)			
		Small	Medium	Large	Total (Percentage)
1.	Below 100000	3 (37.50)	5 (13.16)	0 (0.00)	8 (16.00)
2.	100001 to 500000	5 (62.50)	14 (36.84)	1 (25.00)	20 (40.00)
3.	500001 to 1000000	0 (0.00)	19 (50.00)	1 (25.00)	20 (40.00)
4.	1000001 to 1500000	0 (0.00)	0 (0.00)	2 (50.00)	2 (4.00)
5.	Above 1500000	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	Total	8 (100)	38 (100)	4 (100)	50 (100)

The above Table 5 shows detailed information about the total annual income (Rs/Yr) of responded SHGs in the study area. A majority (i.e., 40%) of respondents income has been fall in range of 100001 to 500000 and 500001 to 1000000 in which medium SHGs were maximum while 50 per cent of large farmers and more than 60 percent small SHGs fall in this range, following others 16 % belongs to range below 100000 and 4% belongs to range 1000001-1500000. This indicate that majority of SHGs had annual income below 1000000 range.

Table.6: Distribution of the goat rearing respondents according to their occupation

Sr. No.	Occupation	Number of respondents (per cent)			
		Small	Medium	Large	Total Percentage
1.	Agriculture	1 (10.00)	12 (12.00)	1 (5.00)	14 (10.77)
2.	Animal Husbandry/Dairy	7 (70.00)	77 (77.00)	12 (60.00)	96 (73.85)
3.	Salaried	1(10.00)	4 (4.00)	2 (10.00)	7 (5.39)
4.	Business / Profession	1 (10.00)	7 (7.00)	5 (25.00)	13 (10.00)
	Total	10 (100)	100 (100)	20 (100)	130 (100.00)

It is evident from the Table 6 that majority (73.85 per cent) of the sample respondents have done animal husbandry/dairy and followed by 10.77 per cent of sample respondents have done Agriculture, 10.00 per cent of sample respondents have done business and 5.39 per cent of sample respondents were salaried person.

Respondents

Table.7: Distribution of the respondents according to number of family members

Sr. No.	Number of family members	Number of respondents (per cent)			
		Small	Medium	Large	Percentage
1.	Marginal (Only 1)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
2.	Small (2 to 4)	3 (30.00)	27 (27.00)	5 (25.00)	35 (26.92)
3.	Medium (5 to 6)	4 (40.00)	41 (41.00)	8 (40.00)	53 (40.77)
4.	Large (Above 7)	3 (30.00)	32 (31.00)	7 (35.00)	42 (32.31)
	Total	10 (100)	100 (100)	20 (100)	130 (100.00)

It is evident from the Table 7 that majority of sample respondents have been 5 to 6 members in their family (40.77 per cent) and followed by 31.54 per cent of sample respondents have been above 7 family members, 26.92 per cent of sample respondents have been 2 to 4 family members and 0.00 per cent of respondents have been only one person in their family.

Size of Herd

Table.8: Distribution of the Respondents According to Size of Herd

Sr. No.	Size of herd	Number of respondents (per cent)			
		Small	**Medium**	**Large**	**Percentage**
1.	**Below 5 goats**	2 (20.00)	15 (15.00)	1 (5.00)	18 (13.85)
2.	**5 to 8 goats**	6 (60.00)	57 (57.00)	9 (45.00)	72 (55.39)
3.	**8 to 10 goats**	2 (20.00)	23 (23.00)	7 (35.00)	32 (24.62)
4.	**Above goats**	0 (0.00)	5 (5.00)	3 (15.00)	8 (6.15)
	Total	**10 (100)**	**100 (100)**	**20 (100)**	**130 (100.00)**

Size of herd of goats has been categorized in four categories depending upon the number of goats owned by the respondents. After the observation of the collected data from the goat rearing respondents, it found that out of all 130 respondents' maximum number of the respondent's i.e.72 (55.39 per cent) have 5 to 8 goats in their family followed by 32 (24.62 per cent) respondents have 8 to 10 goats, 18 (13.85 per cent) respondents have below 5 goats while only 8 (6.15 per cent) respondents have more than 8 goats in their family.

Constraints

Table.9: Overall Ranking by Respondents

Rank	Variables	1	2	3	4	5	6	Total	Average	Final Ranking
1	High transaction losses	1925	3843	810	506	444	138	7666	58.97	2
2	Absence of regulated markets	5005	882	864	460	481	276	7968	61.29	1
3	Exploitation by middlemen	770	945	3132	736	629	322	6534	50.26	3
4	Share in consumer's rupee low	1386	1260	594	2300	555	368	6463	49.72	4
5	Lack of knowledge of slaughters house	924	1134	1026	736	1665	460	5945	45.73	5

6	Lack of knowledge of complete value of goat	1078	1071	972	736	925	920	5702	43.86	6

The total score of the each factor ranks have been estimated by multiplying Garrett value with the respective given value. Hence, the total score is essential to calculate the average score given by the total respondents under different factors of a particular phenomenon.

Table 9 described the calculation procedures of total Score of the sample respondents. The total score calculated by multiplying Garret Value with the respective rank given by the respondents on each factor of the sample. Hence, on the first rank the Garrett value is 77 and the number respondents given Rank 1 is 6. So, by multiplying this two, it is getting the total score i.e., 5005. Hence, all the estimation process going on the same direction on each and every factors with their respective rank given by the number of respondents.

Under Garrett value ranking techniques, average score has been calculated by dividing the total score with the total respondents of the selected sample. The highest percentage average score indicates the 1st rank whereas the lowest percentage average score indicates the last rank of the total estimated factors rank.

The study has been shown the various problems in marketing of goat rearing, which is presented in Table No. 9. From this table, it could be seen that six problems were identified by the respondents. Out of those six, the absence of regulated markets in the study area was ranked as the foremost one which caused inconvenience to the beneficiaries in participating in the SHGs. High transaction losses in the goat rearing was ranked second and so on.

CONCLUSION

After the observation of the collected data from the goat rearing respondents, it found that out of all 130 respondents' maximum number of the respondent's i.e.72 (55.39 per cent) have 5 to 8 goats in their family followed by 32 (24.62 per cent) respondents have 8 to 10 goats, 18 (13.85 per cent) respondents have below 5 goats while only 8 (6.15 per cent) respondents have more than 8 goats in their family. The Lack of access to health services to the goats, ranked fourth. The Lack of skills and awareness about goat rearing has been rank fifth and sixth respectively by the respondents. The Attack by wild animals, Lack of timely vaccinations and Lack of diagnostic facilities have been ranked seventh, eighth and nine respectively by the respondents.

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