

**A REPORT ON SOCIODEMOGRAPHIC CHARACTERISTICS
AND OTHER FEATURES OF FARMERS IN SONAGAZI
UPAZILA OF FENI DISTRICT IN BANGLADESH.**



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Statement of Author

I, Md. Osman Khan, certify unequivocally that I have performed all the tasks detailed in this report. The data was gathered from Field, books, national and international periodicals, and other sources. All citations have been properly acknowledged. Consequently, I am solely responsible for collecting, manipulating, preserving, and publishing all data compiled in this report.

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The Author

List of Acronyms Symbols Used

Abbreviations	Elaboration
%	Percentage
P	The P-value is known as the level of marginal significance
SD	Standard Deviation
No,N	Number
>	Grater than
<	Less than
e.g	Example given
etc.	Et cetera
et. al.	And his associate
CVASU	Chattogram Veterinary & Animal Sciences University

Sociodemographic characteristics and other features of farmers in Sonagazi Upazila of Feni district in Bangladesh

Abstract

In Bangladesh, the livestock sector is crucial to the economy, contributing 1.85% of GDP and providing essential protein sources for rural households. Livestock farming is closely linked to the sociodemographic conditions of farmers, influenced by factors such as farm size, rearing types, and access to veterinary care. This study aims to examine the sociodemographic characteristics of livestock farmers in Sonagazi Upazila, assess animal health issues reported at the Upazila Veterinary Hospital (UVH), and identify constraints faced in animal rearing while proposing solutions to enhance livestock productivity. A mixed-methods approach was employed, utilizing structured questionnaires administered to farmers visiting UVH. The findings indicate that a majority of the farmers are middle-aged (64.3%) and predominantly married (85.7%). Educational levels significantly impact animal management practices; higher education correlates with better veterinary care utilization and regular anthelmintic use. Alarming, 64.3% of farmers consult village doctors rather than qualified veterinarians, leading to issues such as incorrect treatment and increased animal mortality. Additionally, 71.4% of livestock products are kept for family consumption rather than for sale. This research underscores the urgent need for improved veterinary services, enhanced education, and financial support for small-scale farmers in Sonagazi Upazila. Targeted interventions, including training programs and increased access to microcredit, are essential to address the challenges faced by farmers, ultimately promoting sustainable livestock farming and improving livelihoods in the region.

Keywords: Livestock, livelihood, practice, correlate, enhance, farmer.

1. INTRODUCTION

Livestock population in Bangladesh is 4428.47 lac in 2022-2023 financial year leading 1.85% of GDP (BBS, 2022). There is a strong relation between livestock farming and sociodemographic condition on the farmer based on farming size, rearing types, types of doctors they consult, anthelmintics interval as well as the production etc. To ensure fulfilling the demand of protein, people rear livestock in small scale and also keep them as a “easy to cash” asset (Ahmed et al., 2010). Ruminants are also important in a diversification strategy that aims to reduce market and climatic risks and optimize the use of available resources (Valdivia, 1996).

Our study area has population of around 290,664 with an average 4.28 people per household, standing as the second most populous upazila in Feni District behind Feni Sadar Upazila. (Population and Housing Census, 2022) Less than 12% of the population of our study area live below Upper Poverty Line. The study methodology combined individual and household (micro) survey data from the HIES and Population and Housing (macro) census data with the objective of estimating welfare indicators for specific geographic area as small as upazila. (BBS, 2016)

As human population is increasing day by day in the region of the country, the access of rural families to land, capital, and labor diminishes while opportunities for income from off-farm activities becoming scant. They have the tendency or desire to move to the farm activities but due to extreme poverty, lack of government help in the region, they can't do so. That's why they are moving to backyard farming instead of large-scale farming or farming as their main source of income. They do backyard farming as to support their protein demands and sometime to support family expanses. Some non-governmental organizations (NGO) e.g- BRAC, Asha, Peosikha etc. provide some micro-credit financial support for livestock development in our study area. But which is not sufficient for the population.

The upazila have a “Livestock center and Veterinary Hospital” at Bokhtarmunsi Bazar and only a few numbers of people get treatment from there. People of the area don't get proper treatment from the hospital due to lack of “Veterinary Sargon” and non-practicing tendency of Upazila Livestock officer (ULO). Instead of getting free service and medication, people of the area get wrong, expensive, unnecessary medication and treatment by SLO who is not allowed to do treatment. (BVC Act, 2019)

The study was done to get an understanding of how small farming contributes to increase household income of the small farmers by improving their livelihood security which might assist policy makers to improve the socioeconomic condition of small farmers through implementing integrated farming and financial and technical support.

1.1 Objectives

The objectives of this study were designed

- I. to demonstrate the socio-demographic condition of the farmers
- II. to know the animal problem in Upazila Veterinary Hospital (UVH)
- III. to find out the constrains and overcoming of rearing of animal.

2. MATERIAL and METHODS:

2.1 Study Area

The study was carried out in coastal region in Sonagazi Upazila, Feni, Chittagong district in Bangladesh. It covers a total area of 284.89 square kilometres (110.00 sq mi), making it the largest upazila in Feni District, accounting for almost 28.77% of the district's total area. (District Report: Agriculture Census 2019). Poultry, goat, sheep and cattle, buffalo are the main livestock species. The climate of the area is generally cool and prone to flooding. The research area was located between 22°51'27.44683"N 91°23'44.02031"E



2.2 Study Design

The study design was mixed method because qualitative and quantitative data collected at a time. A convenience sampling method was done during the study.

2.3 Study population

The total sample size is 28.

2.4 Study Period

The data was collected from UVH for 25 days from 1st April to 25th April.

2.5 Data collection procedure

Data were collected through a prescribed questionnaire and collected from those who came to Upazila Veterinary Hospital (UVH) and livestock center for the treatment of their livestock.

2.6 Statistical Analysis

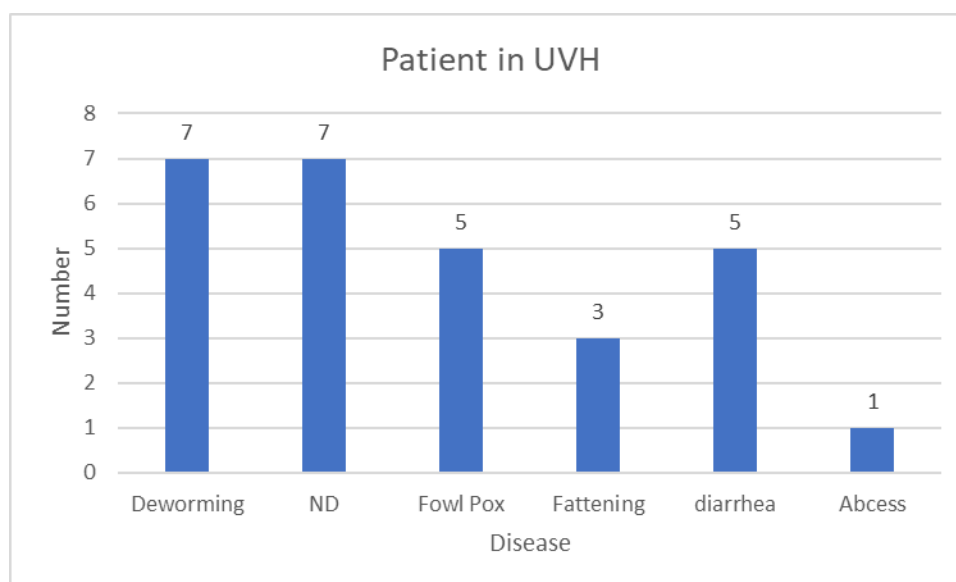
Descriptive statistics like frequency, percentages, mean, standard deviation and range were calculated for quantitative variable and graph was explored for qualitative variable. A cross tabulation was explored to make association between variables. The data were analyzed using the SPSS software package, specifically version 23. Mean, standard deviation and frequency, percentages were calculated.

Chapter 3

3. RESULT:

3.1 Types of patients in UVH

The provided graph is a bar chart titled "Patient in UVH," which shows the number of patients for various diseases. The x-axis represents different diseases, and the y-axis represents the number of patients affected by each disease. Both deworming and ND have the highest number of patients (7), while abscess has the lowest number (1). Other diseases like fowl pox and diarrhea have moderate counts of 5 patients each, and 3 for fattening.



3.2 Socio-demographic condition of the livestock farmers

Age: The table 1 shows that the respondents were classified into two categories, such as young age (up to 30 years), middle and old age (above 30 years). The findings indicate that the highest proportion (64.3%) of the of the farmers studied was in the middle and old aged category (64.3%) compared to belonging to young aged group (35.7%)

Marital status and religion: In our study 85.7% (N=24) was married and 14.3% (N=4) was single. People here get married in early age. In the study

67.9%,28.6%,3.6% are Muslim, Hindu and Christian respectively. There is no relation between Marital status and Religion.

Education: We grouped educational status of our study group into two groups. Education up to Junior ($\leq$ Class8) and above Junior ($>$ Class 8). 28.6% people in our study was upto Junior education and 71.4% above Junior education. Educational status has an impact on animal management. That will be discussed later

Monthly Income: The average monthly income of our study area is 22964 taka per family ranging from 12000 to 60000 taka. We grouped the income two groups. One group is classified as lower income ($\leq$ 20,000) and another one was middle to higher income ($>$ 20,000)

Family Type and Member: In our study group, one fourth percentage was consisting of Joint family and other were nuclear family. But the family member of each family consists in average more than 5 person.

Table 1: Socio-demographic condition of the livestock farmers

Variables	N, %	Mean (SD)	Range
Age (years)		33.79 (10.44)	20, 53
≤ 30	10 (35.7)		
> 30	18 (64.3)		
Marital status			
Married	24(85.7)		
Single	4(14.3)		
Religion			
Islam	19(67.9)		
Hindu	8(28.6)		
Christian	1(3.6)		
Education		9.29(2.980)	0,12
Upto junior	8(28.6)		

Above junior	20(71.4)		
Profession			
Business	7 (25)		
Farmer	7 (25)		
Housewife	5 (17.9)		
Student	3 (10.7)		
Others	6 (21.4)		
Monthly family income		22964(10225.176)	12000,60000
≤ 20000	18 (64.3)		
> 20000	10 (35.7)		
Family type			
Nuclear	21 (75)		
Joint	7 (25)		
Family member		5.39 (1.548)	3,9
≤4	8 (28.6)		
≥5	20 (71.4)		

3.3 Livestock related information of the respondents

No. of livestock: We divided the animals into different groups on the basis of no of Animals. Two groups of cattle having minimum “one cattle” and “more than one cattle”. We can see that most of the people have “more than one cattle” (46.4%) in compare to “Only one cattle” (17.9%) Nobody in the study have not more than 3 cattle indicating small scale farmers in the area. We grouped no of goats of our study group into two groups. One group consist of people having 2 goat and another is 3-6 goats. The percentage of the goat population is 7.2% and 14.3% respectively. Almost all of the people in the study had chickens and ducks. The study shows that

35.8% people have less than 15 chicken and 53.5% people have more than 15 chickens and ducks.

Product Sale: Most of the people in our study area don't sell their livestock products (i.e.- Meat, milk, egg) for their own consumption. 71.4% people keep their livestock for consumption of their family whereas only 28.6% reared for commercial purpose.

Micro-credit Loan: People here don't get that much support or loan from Government or from any kind of NGO. Only 3 person (10.7%) get micro credit loan. Another 89.3% don't get any kind of financial support.

Rearing Method: Intensive method is not that much famous in the area. Only one person rears in those methods. Least 27 rears in semi-intensive method.

Going to Doctor for Animal Problems: 35.7% people consult to government doctor for the problem of their animal. 64.3% consult with Village doctor or Quack. They told us due to Lack of Field Veterinarian, High fees of veterinarian.

Anthelmintics: We found 3 kinds of behavior in terms of anthelmintics use. No of regular, irregular, not at all user of anthelmintics is 14.3%, 67.9% & 17.9% respectively.

Table 2: Livestock related information of the respondents

Variables	N, %	Mean (SD)	Range
No. of cows		1.18(1.020)	1, 3
1	5 (17.9)		
2-3	11 (46.4)		
No. of goats		.71(1.536)	2, 6
2	2 (7.1)		
3-6	4 (14.3)		
No. of chickens and ducks		15.61(6.989)	10, 30
15	10 (35.8)		
> 15	15 (53.5)		

Product sale			
Yes	8(28.6)		
No	20(71.4)		
Micro-credit loan			
Yes	3(10.7)		
No	25(89.3)		
Rearing method			
Intensive	1(3.6)		
Semi-intensive	27(96.4)		
Cowshed floor			
Brick	4(14.3)		
Mud	24(85.7)		
Going to doctor for animal problem			
Gov. doctor	10(35.7)		
Village doctor	18(64.3)		
Anthelmintic			
Regular	4(14.3)		
Irregular	19(67.9)		
Not at all	5(17.9)		

3.4 Association variables

Table 3 shows the association between anthelmintic and going to animal problem with education. It was shown that there was a significant association between education and going to animal problem where people preferred more village doctor.

Table 3: Association between anthelmintic, going to animal problem and education of farmer

	Education		P value
Anthelmintic	Junior (≤ 8)	Above junior (> 8)	
Regular	0 (0.0)	4 (100)	0.153
Irregular	5 (26.3)	14 (73.7)	
Not at all	3 (60)	2 (40)	
Going to animal problem			
Govt. doctor	6 (60)	4 (40)	0.011
Village doctor	2 (11.1)	16 (88.9)	

3.5 Problem facing to rear animal

In Feni, Bangladesh, livestock rearing faces several challenges that impact the livelihoods of farmers. According to farmers, major issues were the lack of proper veterinary services, which leads to falsely treated diseases and high mortality rates among animals. Additionally, limited access to quality feed and grazing land. Climate change also poses a threat, with unpredictable weather patterns affecting feed availability and increasing the risk of floods. Furthermore, market access remains a concern; farmers often struggle to get fair prices for their livestock due to competition from larger suppliers. Addressing these challenges is crucial for sustainable animal rearing in the region.

3.6 Problem solving to rear animal

Farmers said some valuable opinion in the questionnaire. To effectively tackle the challenges of animal rearing in Feni, Bangladesh, a collective approach is essential.

First, improving veterinary services by creating helpful environment for vets and training local farmers in basic animal healthcare can ensure timely treatment and disease management. Additionally, enhancing access to quality feed through encouraging people to be more dependent to the high nutritive fodder and nutrition training will address malnutrition issues. Providing financial support through microloans for better facilities and veterinary care is important. We saw that only small number of people get financial help from government or NGO. Encouraging community cooperatives can ensure fair price for their livestock and livestock products. It can further improve sustainability and productivity. By integrating these strategies, the prospects for livestock rearing in Feni can be significantly enhanced.

Chapter 4

Discussion

4. DISCUSSION

The findings indicate that the highest proportion (64.3%) of the of the farmers studied was in the middle and old aged category (64.3%) compared to belonging to young aged group (35.7%). The results of this study were almost similar with (Rahman Z, 2012) where they reported that 65.3%, 34.7% farmers were in middle and old aged, young aged category respectively. Young people seem to too much interest in livestock rearing. A great tendency among younger people is for Business/ Overseas worker.

In our study 85.7% (N=24) was married and 14.3% (N=4) was single. The percentage Of marriage increased over the year. Research from 2019 showed that 68% was married, 25% was single and 7% was divorced (Khatun, 2018.Lack of interest in Tertiary education, financial responsibility may be a major cause of increase marriage, specially early marriage.

28.6% people in our study was up to Junior education and 71.4% above Junior education. It also similar to the report of UNESCO UIS. About 65% people in our study group have their monthly income less than or equal to 20,000 taka. Rest have income more than 20,000. In our study we saw that 75% farmers belong from nuclear family and 25% are from joint family. Day by day nuclear family is being popular. The percentage of nuclear family was 56 earlier (Amin, 1998).

In our study 46.4% farmers have more than cattle and 17.9% have only one cattle with avarge of 1.18 cattle per household. According to Agriculture census 2019, 100% households have cattle in their house. Average no of cattle per house was 0.56. No of average chicken in per household was 11.19 in the 2019 census but in our study, we saw that the average no of our study are is around 15. Day by day

people are being more interested in chicken as a good source of protein. (Agriculture Census Report of Feni-2019).

71.4% people in our study are don't sell their livestock products (Milk, Meat, Egg) they keep it to fulfil the need of household uses. This tendency differs from other region of the country.

It is shocking that 64.3% people in our study group go to the village doctor(quack) for the treatment of their cattle. Only 35.7% people consult with vet when their animal become sick. This Quacks use antibiotics without proper reason which may lead to antimicrobial resistance and will also hamper the farmer economically. Shockingly the percentage of consulting with vet is decreasing. Previous study from 2022 showed that the percentage of consulting with vets was 55.2% and 44.8% consulted with quack.(AK,P.2022). Lack of education, lack of veterinarian, searching cheaper service may led them to consult with quack. The deworming strategies are 14.3%, 67.9% and 17.9% for regular, irregular and not at all use of anthelmintics respectively. The percentage from earlier study was 51.1%, 32.6% & 15.6% respectively, which is alarming cause irregular deworming may be a major cause for malnutrition.

There is a strong relationship between education and deworming of cattle. The P value of these two factors is 0.15. Those who have education bellow class 8, nobody in that group do deworming regularly. A study also shows prove that there is a good relation between education and deworming. (Sayed et al., 2022).

We also found relation between educational qualification and consulting with vet or quack. The P value of these two factors is 0.011 which suggest strong relation between these factors.

The main strength of the study is it shows a root level data from UVH of Sonagazi. This indicates the behaviors, sociodemographic condition of farmers. There is no evidence of this data about the area except government data. The main limitation of the study is the sample size of the study. larger sample size will give clearer and more exact image of the area. More study can be done here. Another limitation is the collection place of data. We only collected data from UVH. But people from every region may not visit in the UVH during the period.

LIMITATIONS

- ✓ Small sample size
- ✓ A few people visit in UVH which may not representational of the population

Chapter 5

Conclusion and Recommendation

Conclusion

From the study, it reveals that the sociodemographic condition, their knowledge, their farming pattern, farming condition. Lack of education, Veterinary facilities are now major concern to small scale farmers. Government attention and support should be provided here. Micro credit loan by government and NGO should be increased. This step can make the area more livestock friendly and improve the lifestyle of farmers. Farmer should provide basic training about management and basic care. All together we can achieve the SDG goal of ensuring sustainable protein supply and sustainable development of the farmers

Recommendation

The study shows a huge potential in livestock sector in Sonagazi, Feni. If government can support root level farmers with financially and veterinary supervision, The place can be a important hub of livestock.

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Biography of Author

This is Md. Osman Khan, son of Mohammad Khan and Suraya Akter, doing his graduation on Doctor of Veterinary Medicine (DVM) at Chattogram Veterinary and Animal Sciences University under Faculty of Veterinary Medicine. He passed the Secondary School Certificate Examination (SSC) in 2016 from Adamjee Cantonment Public School, Dhaka and got GPA 5.00 and then Higher Secondary Certificate Examination (HSC) in 2018 from Adamjee Cantonment collage, Dhaka and got GPA 4.83 out of 5.00. Presently, he is engaged in a yearlong internship. Osman is deeply passionate about his field of study and is dedicated to developing foundational skills from day one, striving to acquire practical knowledge to meet the demands of the modern scientific era.