



Socio-Demographic Study of the Selective Livestock (Goat-Sheep) Rearing and Fattening Contributors for Poverty Reduction in Northern Part of Bangladesh

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Abstract

Context: The baseline survey was carried out for the selection of farmers/beneficiaries with the socio-demographic scenarios. The action research is to understand and compare effectiveness and impact of the Goat & Sheep rearing and fattening model for poverty reduction of smallholder farmers.

Methodology: The baseline survey of action research was used only quantitative approach for data collection. Data were collected from two sub-districts of Rajshahi and Natore district in Bangladesh: Paba and Walia-Lalpur. A total of 105 goat and sheep farmers were interviewed. For quantitative data, a robust household survey was used with Survey CTO software to know the ownership patterns of livestock especially goat and socio-economic condition of the farmers.

Key findings: A total of 105 respondents there were 52 goat farmers in Paba, Rajshahi and 53 goat farmers in Walia Lalpur, Natore district, respectively. The study reveals that the farmers primarily selected for the action research were highest (60%) percentages occupation was agriculture. Cent percentages of respondent were women their average income, loan and savings were BDT 191240.95, 43960.78 and 16722.7273, respectively.

Conclusion: These findings highlighted the financing and social supporting roles of small ruminants rearers, particularly goats are playing in the study area. In order to develop suitable technologies, formulate policies through eradicating constraints to improve productivity and enhance livelihoods these findings might be strong instruments.

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Keywords: Socio-demography; Selective livestock (goat-sheep); poverty reduction; Northern part of Bangladesh.

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Background

Bangladesh is a low-lying densely populated country of more than 150 million people, 75% of those who live in rural areas; rural poverty rate is 63%, of which 36% are extremely poor [1]. Bangladesh mainly depends on agriculture and livestock is one of the most important components of agriculture in the country. At present agriculture sector of Bangladesh contributes 17.02 % of Gross Domestic Product (GDP) whereas livestock contributes 2.50 % of GDP of the economy [2,3]. The livestock industry is mainly based on cattle, goat, sheep, buffalo, and poultry in Bangladesh. The present population of livestock is 23.79 million cattle, 1.47 million buffalo, 25.77 million goats and 3.34 million sheep [4]. The economy of Bangladesh is largely agro-based with just under 50% of the total labour force still employed in the sector and more than 70% of the population involved directly or indirectly in agricultural activities [5]. Goats and sheep are highly adapted to a broad range of climatic and geographic conditions and are more widely distributed than any other mammalian livestock. Headcount percentage of upper-level poverty has reduced from above 80% after independence to 31.5% in 2010 and over 17.6 percent people are also living in extreme poverty (lower level) [6]. The poverty reduction is much faster than any other countries in South Asia. However, the challenge is addressing chronic poverty that remains almost same over long time. Beside other challenge, 157 million people living in 147,620 sq. km that force per capita land size to reduce to 0.12 decimals only. It is quite a big impediment for the people living in agrarian society and sustaining their livelihood. Agriculture absorbs 80% of the labor force and contributes 16% to GDP but per capita land holding is creating immense structural problems. Small holding agricultural production is quite low, therefore their diverse engagement with off farm activities is apparent [6].

However, over the last decades, different development initiatives taken by Government and NGOs have contributed to uplift the situation. Application of modern technology and constant attempts for innovating different solutions around agriculture sector has accelerated the poverty reduction performance in Bangladesh. Within broad agriculture sector, livestock sub-sector has significant contribution. Livestock sectors employ 2 million underprivileged women and it is expected that by the year 2020 additional 6.1 million women will be employed in this sector [7]. The study also indicates that the sector has enormous potential for private sector investment in rural area. In 90s, investment in the poultry sector was only BDT 1.5 Billion, but now it is more than 2.5 Billion. It is expected to reach 5 Billion by the year 2020 [7].

The northern barind region of Bangladesh is a lot of facilities like less use land (one or two cropping will remain useless), lower price of wages and interested group. In the same vein, different development agencies have been working with farmers for their economic empowerment through livestock rearing and fattening initiatives. It has been found that every development organization has its own way of looking at the problems thus finding subsequent solutions. Heifer International Bangladesh (HIB) as a development organization since its journey in Bangladesh has also been working with livestock farmers (goat and sheep in particular) to promote their economic empowerment. For that the current study was undertaken as **Socio-demographic study of the selective livestock (goat-sheep) rearing and fattening contributors for poverty reduction in northern part of Bangladesh.**

Methodology of the action research baseline survey

The action research project will provide a set of intervention for a 12-month duration among the selected project target beneficiaries in the Heifer Bangladesh Project areas. Therefore, before the project intervention, we must know about the present situation of target project beneficiaries, especially socio-economic status, knowledge and practice of goat and sheep rearing and technical skills etc. In consideration, baseline survey of action research has required.

The baseline survey followed a non-experimental design to assess the present livelihood situation and practice of goat and sheep rearing of target project beneficiaries. Only quantitative approach was used.

Location of the survey

The baseline survey of action research project was conducted in two selected locations or Upazilas (Paba and Walia-Lalpur) in Rajshahi and Natore districts of the Heifer Bangladesh project areas.

Among the Bangladesh rural activities, rain fed agriculture (51.33%) is the most important, followed by livestock keeping (13%) and off-farm activities (3%) [8]. Poultry, goat, sheep and cattle were the main livestock species kept. The Rajshahi, Natore tract lies in the monsoon region of the summer dominant hemisphere. The climate of the area is generally warm and humid. This region has already been designated as draught prone. The average temperature ranges from 25°C to 45°C in the hottest season and 5°C to 15°C in the coolest season with an average relative humidity of 75%. The research area was located between 24^o.18' and 24^o.36' North latitude and between 88^o.17' and 88^o.43' East longitude [9].

Data collection

Data were collected through online based software SurveyC-TO. One hundred and five farmers were randomly investigated from two upazilas of Rajshahi and Natore districts. The baseline survey mainly collected information on animals' health condition, goat or sheep fattening and breeding, goat or sheep and their rearing age and the weight etc. recorded at the starting period of action research. The record of vaccination and deworming was ensured at the beginning of the research in the respective households and animals. The condition of housing of animals was also be recorded at the beginning of the research.

Data analysis

The quantitative data were analyzed by using SPSS. Number of statistical techniques were used ranging from simple frequency distribution to cross tabulation.

Results

Out of 105 respondents there were 52 goat farmers in Paba and 53 goat farmers in Walia Lalpur respectively owner of paba, Rajshahi and Lalpur, Natore district. The farmers were categorized in three groups- A, B and C. Three categories (A, B and C) farmers were purposively selected (A= Poor Household; B= Moderate Households and C=Resilient Household) for rearing of goat and sheep. Out of 105 farmers A-79 (70.5%), B-21 (20%) and C-5 (4.8%) category. All of goat farmers were interviewed comprehensively about goat management.

Socio-demographic profiles of target project beneficiaries

In considering the objective of baseline survey the socio-demographic characteristics focused on household types of economic categories, main occupation, income and expenditure of household, savings, loan, land and livestock ownership.

Type of respondents

The Figure 1 shows that the type of respondents was classified into three categories, such as type A, type B and type C. The findings indicate that the highest proportion (70.2%) of the households covered in the type A than 20% were type B and rest of 4.8% were type C.

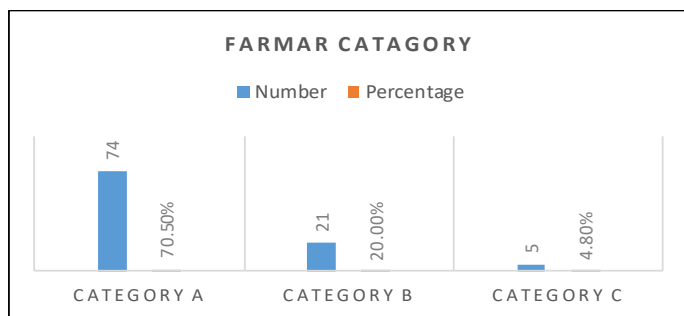


Figure 1: Type of respondents.

Position in Self-help Group (SHG)

The farmers were classified into two ways, such as executive member and members. The Figures 2 indicates that 4.8% of surveyed SHG member were executive member and 95.2% were only general member in SHG.

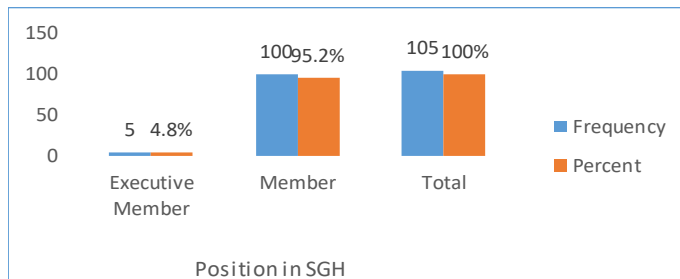


Figure 2: Position in Self-help Group (SHG).

Household head main occupation

Total respondents were classified into eight categories. Table 1 shows that most of the respondent's main occupation were agriculture (60%). The other household head main occupation was agriculture day labour 12.4%, non-agriculture labour 4.8%, rickshaw/van puller 7.6%, service 3.8%, business 6.7%, household work 1% and others 3.8%.

Table 1: Household head main occupation (%).

Type of occupation	No. of respondents (n=105)	Percentage
Agriculture	63	60.0
Agriculture day labor	13	12.4
Non-agriculture labor	5	4.8
Rickshaw/van puller (local transport)	8	7.6
Service	4	3.8
Business	7	6.7
Household work	1	1.0
Others	4	3.8

Table 2: Household yearly net income, loan and savings at BDT.

Traits	Minimum BDT	Maximum BDT	Average BDT	Standard Deviation (SD) BDT
Income	4000.00	3000000.00	191240.95	317588.867
Loan	2000.00	200000.00	43960.78	44152.445
Savings	500.00	502000.00	16722.7273	59036.36733

From the Figure 3 shows that the average net income, loan and savings of the respondents were BDT 191240.95, 43960.78 and 16722.7273 respectively.

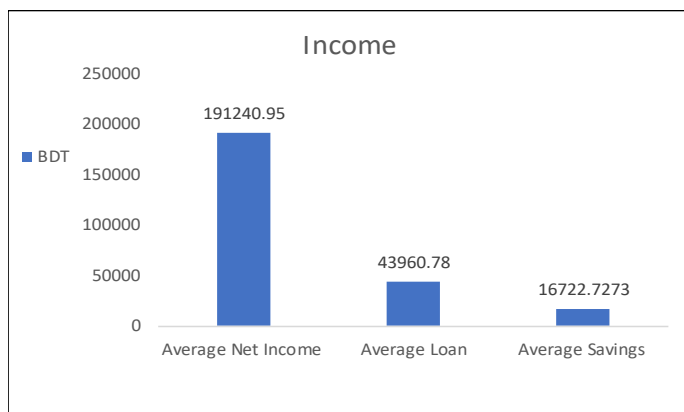


Figure 3: Average household net income, loan and savings yearly.

Discussions

Most of the respondents (70.2%) were marginal farmer. Similar results observed in another research by authors Haque *et al.* [8]. The other household head main occupation was agriculture day labour 12.4%, non-agriculture labour 4.8%, rickshaw/van puller 7.6%, service 3.8%, business 6.7%, household work 1% and others 3.8%. The other study in Barind area showed that the major category 65.33% of the respondents was belong to agriculture with small livestock farming [8]. The results of this study were more or less similar with [10] where they reported that 70 % farmers were involved in agriculture. In another study [11] reported that 60% farmers were engaged in agriculture with livestock rearing but 40% farmers reared only livestock. The households yearly minimum & maximum net income, loan and savings were BDT 4000.00 & 3000000.00; 2000.00 & 200000 and 500.00 & 502000 respectively. The authors Haque *et al.* disagree with the current study and they observed the farmers of Paba, Rajshahi was showed that 98% farmers had no institutional savings and 8.67% had no loan [8].

Conclusions

From the study it reveals that all goat farmers in Paba under Rajshahi district and lalpur under Natore district areas were marginal in type and they used traditional extensive goat rearing. So, adopting improved technologies through training and awareness and minimizing reviled constraints goat rearing might be a valuable instrument for women empowerment, availing education facilities, improved livelihood and after all the source of improved and safe animal protein.

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