A Study on Castrated Black Bengal Goat Fattening: Status and Prospect

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Executive Summary

This study examined the profitability of selected IGA and risk management of the beneficiaries in particular household under the project of LIFT. PKSF Partnership for Development and Justice has currently been implementing the project LIFT under WAVE foundation. WAVE foundation starts their work from 2008 at south-west region of Bangladesh in the district of chuadunga. A research was required to detect IGAs appropriate and profitable for this specific target group. Central research issues were: (a) Profitability and sustainability of castrated male goat fattening including market study and recommendations minimum internal and external conditions; and (b) Possibilities for risk management/minimization.

Kushaghata, Karpasdanga, Senerhuda, Akondobaria village from Damorhuda upozilla under Chuadunga district were purposively selected for the study. Primary data were collected through sample survey. Research Assistants, who were postgraduate students of the Sylhet Agricultural University (SAU); Faculty of Doctor of Veterinary Medicine (DVM), were appointed for data collection. The fieldwork was conducted in November 2013. Mainly activity budgets were prepared to assess the profitability of the concerned IGA.

Field grazing was the main feeding system and was strongly influenced by season. One person was able to herd 9-11 goats in the dry season while in the rainy season the number of heads was 20-25. In addition to the family members, servants were also engaged to graze goats. The farmers reported that they used the sale proceeds from the goats to cultivate crops, purchase food, housing and clothing, social activities, educational expenses and purchase of land.

Most of the farmers in the study area reported that goat fattening was a profitable business and that they could overcome a crisis by selling goats. It is concluded that there is a need to have more information on the role of goats in rural development so that appropriate research strategies can be developed.
INTRODUCTION

Bangladesh is a densely populated country having about 145 millions of people in its 14750 sq. km of area. About 49 percent of population of the country is female (BBS, 2007). Women are most important segment of human resources who need attention for their development. There is a close relationship between the status of women and the socio-economic development in any country. The rate of literacy for women is very low in Bangladesh. It is only 25.5 percent for women compared to 38.9 percent for men. Bangladesh is one of the poorest countries in the world in terms of per capita income which is 482 US dollar (BBS 2007). To ensure a balanced socio-economic development of the country improvement of the status of women with a change in status is a precondition. This may be achieved only when there is increased participation of women in development activities (Nahar, 2000 and Alam, 2001). The role of women in goat keeping is very significant in the rural families and goat is the most important means through which rural women are able to contribute meaningfully to the cash needs for and their family members.

Goat rearing is the most useful way of women earning those who stay at home. However livestock contribute about 2.95% to the GDP (Gross Domestic Product) of Bangladesh and therein total foreign exchange earning accounts for about 6.2 percent (Alam, 1995) in which share of goat is enormous. Goat production varies in different parts of the world. Since production cost of goat is much less than cattle and buffalo goat farming requires small initial investment and as such low risk of loss due to individual death. On the other hand, this species can easily be managed by women and children. Black Bengal goat is developed in this country through natural selection without any intervention by man. Through proper participation of rural women in goat rearing some advantages are given below: to create employment opportunity through goat rearing, to increase income generating activities, to create a new awakening among the neglected section of society, and to preserve and improve ‘Black Bengal’ variety (Ahmed, 1991).

From the ancient period goat rearing has an important role for the production of meat, milk and skin. Near about 677 million goats in the world, of them 64 percent is found in Asia, 30 percent in Africa, 3.3 percent in North and South America, 2.3 percent in Europe and 0.4 percent in Oceania. In Asia, 71 percent goat reared by small farmer. In case of Bangladesh out of 2 crore goats 52 percent reared by landless marginal farmer (Chowdhury et al., 2002). In Bangladesh the average number of goat per farm is 4, which 362 Participation of Rural Women in Goat Rearing is equal to the South-east Asian countries like Indonesia, Malaysia and Thailand. Forty one percent farm incomes come from goats in some parts of Bangladesh. Besides leather is the best export goods in Bangladesh that earn 25 crore Taka per year (Chowdhury et al., 2002).

In Bangladesh the men dominated over the women in decision making aspect in rural area. The situation now seems to be changing considerably due to the introduction of new technologies in agriculture like goat rearing, poultry raising, homestead farming etc (Islam et al., 1996). Women and their access to goat rearing is a dimension in the development process. This remained virtually an unexplored area of investigation. After remaining invisible for a long time, it has only recently been surfaced in discussion on development strategies. Now a days the rural women are being approached by different Government and Non Government agencies. On the other hand there is a need to find out working areas for intensifying their participation in agricultural production. In a country like Bangladesh more
involvement of women in agriculture particularly goat rearing becomes mandatory to combat over all food storage, malnutrition and also to develop the socio-economic condition of the rural women. Agricultural Extension Service, therefore, needs to develop sound plans and procedure for improving knowledge of the rural women in various aspects of goat rearing. The success of any promotional work depends on the soundness of the extent programs. Information on farmers need, their problems, prospect etc. are essential for an effective plan of work. But very little research has been done on the participation of rural women in goat fattening in Bangladesh. Considering the above facts the investigator became interested to undertake a study on participation of rural women in goat fattening. The following specific objectives have been drawn in order to give proper direction of the study: to examine the selected characteristics of rural women, to assess the extent of participation of rural women in goat fattening, to explore the relationship between selected characteristics of rural women and their extent of participation in goat fattening, and to assess problems faced by the rural women in participating goat fattening.

**Table 01:** Demand, supply and deficit of meat /person/year (2007-2008)

<table>
<thead>
<tr>
<th>Products</th>
<th>Requirement</th>
<th>Available</th>
<th>Deficit</th>
<th>Percent of deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat (kg)</td>
<td>43.25</td>
<td>9.12</td>
<td>34.13</td>
<td>78.9</td>
</tr>
</tbody>
</table>

*Source: FAO/APHCA (2008)*

**Table 02:** Productivity of different goat & sheep in terms of meat in 2007-08 in Bangladesh.

<table>
<thead>
<tr>
<th>Meat</th>
<th>Number</th>
<th>Production (mmt)</th>
<th>Unit production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goat</td>
<td>8193</td>
<td>0.082</td>
<td>10 kg/Goat</td>
</tr>
<tr>
<td>Sheep</td>
<td>917</td>
<td>0.009</td>
<td>10 kg/Sheep</td>
</tr>
</tbody>
</table>

*Source: DLS-2009*
Table 03: Yield potentialities of Livestock products and per-head availability in Bangladesh

<table>
<thead>
<tr>
<th></th>
<th>Mill. Tons/no</th>
<th>Contribution of each sp %</th>
<th>Per-head availability in kg/year</th>
<th>Per head/day in gm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.04</td>
<td></td>
<td>7.13</td>
<td>20.0</td>
</tr>
<tr>
<td>Goat</td>
<td>0.08</td>
<td>7.69</td>
<td>0.55</td>
<td></td>
</tr>
<tr>
<td>Imported</td>
<td>0.25</td>
<td>24.04</td>
<td>1.7</td>
<td></td>
</tr>
</tbody>
</table>


1.1 Statement of the Problem
In Bangladesh, PKSF Partnership for Development has currently been implementing the project LIFT in cooperation with the partner NGOs (Non-government Organizations) WAVE in Chuadunga district, since 06th January 2008. The project will be running till to date.
The target beneficiaries of the project are 10,000 rural women up to 2015 AD, with less than 1,800 kcal daily nutritional intake and on an average less than Tk 500 income per person per month (with very few or no access to infrastructure, services, employment). About 62 percent of these women have below 1,600 kcal daily nutritional intake and on an average less than Tk 400 per capita income per month. This LIFT project transfers assets and skills to the beneficiaries (mainly women). The major income generating activities (IGAs) under the LIFT are: goat rearing; cattle & goat fattening, buck service centre, fodder production, vaccination, doe & kid supply etc. Each beneficiary usually follows at least any of seven of these IGAs. It may be noted that goat fattening for meat production has been an important agribusiness for the smallholders. It has an important role in human diet, generating rural as well as national income and creating self employment opportunities. The poor can earn a lot of money and improve their standard of living by rearing the goat. It has now been decided to conduct a study on profitability and risk management of IGA under the LIFT project primarily to detect most appropriate and profitable IGA for the specific target group. The main themes of this research will be on: (a) Profitability and sustainability of male goat fattening including market study and recommendations on minimum internal and external conditions; (b) Possibilities of risk management/minimization; and (c) Scopes and limits of replication of the IGA.

In fact, it is not yet clearly known which IGA is contributing most to achieve the ultimate goal of the project and which one is the most profitable to the specific target group. Even no one knows what might be the possible risks facing the beneficiaries in conducting the selected IGAs. In other words, no hard data on these particular issues are available to the beneficiaries, decision makers, researchers, and NGO and project personnel. This study has, therefore, been designed to find out answers to these problematic situations.

1.2 Objectives of the Study
This study has been developed based on the problems discussed in the above section and to fulfill the specific objectives outlined below:
(a) To assess the profitability of the selected most common IGA mainly goat fattening taking into account the local market situation and power structure;
(b) To identify at least three innovative and most profitable rentable IGAs and possible solutions for overcoming risks involved in each of the selected IGA;
(c) To suggest some policy guidelines/recommendations for improvement of IGAs under LIFT project.

1.3 Hypotheses of the Study
The following hypotheses were set for the study:
(a) The selected IGAs are not equally profitable for the beneficiaries in Bangladesh.
(b) There is no significant change in the asset possession of the followers of IGAs.
(c) There is no serious risk involve in adopting the selected IGAs.
1.4 Significance of the Study
This study may be useful both at micro and macro levels. Wrong selection of IGA entails losses that are very important to the ultra-poor. The target women and/or group members and their advisers (mainly NGOs) may, therefore, use the results of the present study in making right decision to the selection of the profitable IGA, which will contribute most to increasing food security as well as society’s welfare. The study will be helpful for policy makers and donor agencies reviewing policy options for reducing poverty of the ultra-poor of Bangladesh through IGAs. It would also add new knowledge in the field of goat fattening and marketing problems and build foundation for further research in this respect. This study, however, is not designed to replace any political judgment; rather it is an attempt to provide effective information by which judgment can be sharpened and the likelihood of errors minimized.

RESEARCH METHODS

2.1 Introduction
An appropriate research methodology is very important in conducting any socioeconomic study. This study, of course, was based on a sample survey of ultra-poor women following IGAs under the LIFT in the district of Chuadanga in Bangladesh. This chapter gives a brief description of the methods adopted in different stages of the study and analyzing the data collected from the study areas.

2.2 Selection of the Study Area
Keeping in view the major objectives of the study, resource as well as time constraints, Kushaghata, Karpasdanga, Senerhuda, Akondobaria village from Damorhuda upozilla under Chuadunga district for conducting this study. A large number of project beneficiaries were involved under the selected study areas. Since the beneficiaries have been following a number of IGAs such as, cattle fattening, goat fattening in selected areas; steps have, therefore, been taken to cover only male goat fattening.

2.3 Selection of the Sample
The ultra-poor, as stated earlier, have introduced male goat fattening for food security and changing their lots. In total, 4047 women beneficiaries were randomly selected for primary data collection from the selected IGA. In fact, a Stratified random sampling technique was followed in this study.
Table 04: Distribution of sample size in the selected study

<table>
<thead>
<tr>
<th>Name of the Beneficiaries</th>
<th>Chuadunga</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kushaghata</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Karpasdanga</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Senerhuda</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Akondobaria</td>
<td></td>
</tr>
<tr>
<td>Farm Activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goat Fattening</td>
<td>221</td>
<td>244</td>
</tr>
<tr>
<td>Sub-total</td>
<td>221</td>
<td>244</td>
</tr>
</tbody>
</table>

2.4 Questionnaire Design
A preliminary survey schedule was designed in Bengali taking into account the objectives of the study so that the beneficiaries could grasp the questions. Before making the schedule final, a series of discussions and exchange of ideas were made between the researcher and the concerned officials of WAVE so that the most valuable information/data can be obtained for the study within the shortest possible time.

2.5 Period of Study
The study covered the whole season and/or financial year of the concerned farm activities. The fieldwork, however, covered only two weeks at the beginning of November 2013.

2.6 Collection of Data
The whole survey was conducted by the researcher himself accompanied by the well trained Assistants, who were basically working in WAVE foundation on different positions. In fact, the researcher was often assisted by the concerned NGO officials wherever encountered any difficulties in understanding local terminologies. In response to the question about output, return and cost, some beneficiaries provided some dubious figures. In such a situation, it was necessary for the researcher himself, supported by local NGO officials to convince beneficiaries of the independence of the survey from the government. Each respondent, however, was given a brief introduction about purposes of the study. Then the questions were asked in turn with replies being recorded directly on the schedules. The information was initially collected in local units. The data so collected were then summarized and analyzed for obtaining the results of the profitability of the relevant IGA.

2.7 Methods of Assessing the Profitability of IGAs
Profit is simply the difference between the value of physical output produced by the farm and costs of resources used in production of the concerned outputs. All costs and benefits in this study were determined by using local prices. In costing of all home supplied inputs, for example, family labour, opportunity cost doctrine was employed. The summary of the survey results have been presented on each group of the selected beneficiaries of the concerned IGA in the form of research report.
RESULTS AND DISCUSSION

3.1 Introduction
The essence of the survey results of the selected beneficiaries is presented in this Chapter. The profitability of the selected IGA has broadly been analyzed.

3.2 Results of Profitability Analyses of the Selected IGAs
During the period of data collection, it was observed that goat fattening was the most common IGA in all the selected area Kushaghata, Karpasdanga, Senerhuda, Akondobaria village from Sadar, Damurhuda and Jibannagar upazillas under Chuadunga district. There is village wise presentation of profitability result of goat fattening.

Table 05: Profitability Analyses Goat Fattening by the beneficiaries under the project LIFT.

<table>
<thead>
<tr>
<th>Items</th>
<th>Kushaghata</th>
<th>Karpasdunga</th>
<th>Senerhuda+ Akondobaria</th>
<th>All Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity</td>
<td>Value/ cost (TK/ 6m)</td>
<td>Quantity</td>
<td>Value/ cost (TK/ 6m)</td>
</tr>
<tr>
<td>A. Gross Return (GR)</td>
<td>460</td>
<td>2553000</td>
<td>27</td>
<td>173988</td>
</tr>
<tr>
<td>Goat Droppings</td>
<td>46000</td>
<td>2700</td>
<td>20</td>
<td>2000</td>
</tr>
<tr>
<td>Total GR</td>
<td>460</td>
<td>2599000</td>
<td>27</td>
<td>176688</td>
</tr>
<tr>
<td>B. Variable Cost (VC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplementary feed cost</td>
<td>82340</td>
<td>4644</td>
<td>4300</td>
<td>91284</td>
</tr>
<tr>
<td>Veterinary cost</td>
<td>23000</td>
<td>1350</td>
<td>500</td>
<td>24850</td>
</tr>
<tr>
<td>Total VC</td>
<td>105340</td>
<td>5994</td>
<td>4800</td>
<td>116134</td>
</tr>
<tr>
<td>C. Gross Margin (A-B)</td>
<td>2493660</td>
<td>170694</td>
<td>145200</td>
<td>2809554</td>
</tr>
<tr>
<td>D. Fixed cost (FC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase cost (Castrated male goat)</td>
<td>1033866</td>
<td>67500</td>
<td>50000</td>
<td>1151366</td>
</tr>
<tr>
<td>Total FC</td>
<td>1033866</td>
<td>67500</td>
<td>50000</td>
<td>1151366</td>
</tr>
<tr>
<td>E. Net Return (C-D)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Survey (2013).

Fig: Total cost, return and profit scenario
**Fig : Average purchase and sale price of per Goat**
3.3. Livestock activities

Farm activities, were mainly livestock keeping such as goat fattening. It can be seen from the summary results of the profitability analyses presented in that the selected beneficiaries with their IGA were highly profitable. The beneficiaries, in fact, were earning the highest TK 16000.00 per year and net profit Tk 1300.00 per month was received by goat fattening. It may be noted that the goat keepers had to incur the lowest cost among all the selected livestock activities.
3.4 Marketing Problems Faced by Adopters of IGAs
Attempts were made to identify various problems and constraints faced by the poor beneficiaries in conducting the fattening programme. But these problems vary from place to place. Most problems were: (i) Lack of balanced diet; (ii) Inadequate credit facilities; (iii) Presence of middlemen and unwanted intervention by them during the period of purchasing and selling goats; (iv) Volatile prices in input and output markets; (v) Social problem like theft of goat.

3.5 Measures for Improvement of Marketing Problems
The NGO officials with the help of local leaders/literate persons should take all possible positive steps immediately to mitigate those problems. A large amount of credit could be made available at a reasonable rate of interest. The concerned government officials and federation of beneficiaries should pay an immediate attention to ensure supply of key inputs in right time at fair prices in the market and also reasonable prices to their outputs.
IDENTIFICATION OF RISK & RISK MANAGEMENT

4.1 Introduction
What might be the possible risks involve in each of the activities that have also been explored in this chapter. Despite the fact, the broad approaches open to procedures for managing risks have been overviewed in this chapter, where the four themes of diversity, flexibility, productivity and stability are usually considered.

4.2 Identification of Innovative IGAs
In the previous chapter (Table 05), the annual profit, monthly profit and annual income have been shown. All these criteria clearly indicated that the selected IGAs were highly profitable from the viewpoints of individual adopter of livestock activities. These encouraging results clearly hint that the selected beneficiaries are now more confident and going to be self-reliant within the shortest possible time if they could follow the most profitable IGA. They expressed their views to the researcher during the field visits that they are not only able to meet the basic needs of their families, but have also earned a respectable position in the society, since they have gradually been building up their own assets through the new activities under the project of LIFT. In other words, they have now been dreaming of a better future and more empowerment in the society.

It may be noted that the male goat fattening, among the selected livestock activities, has secured the top most position in terms of profitability. Goat rearing, on the other hand, has got the second position among the present livestock activities. In fact, the similar comment was made by the beneficiaries of all the selected areas of Chuadunga district. Thus, there will be a substantial change in the asset possession of the beneficiaries depending upon how many and what combinations of IGAs are going to adopt by an individual beneficiary during a year. For achieving the maximum profit per year they adopt male goat fattening two times per year in accompany with normal goat rearing.

4.3 Nature of Risks in IGA
Since their lack of control over climate, the market in which they sell and the institutional environment in which they operate, the resource-poor farmers always face uncertainty and the consequent risks of production and income variability generated by this uncertainty. In this study, risks involved in the selected IGA have broadly been classified into: (i) Physical risks; and (ii) Market risks. Physical risks could be occurred due to some unpredictable situations like fatal accidents and deaths of livestock. Market risks, on the other hand, could be arisen due to fall of prices of outputs and/or soaring prices of the inputs of the concerned IGAs.

4.4 Suggestions for Reducing Risks
The concepts of diversity, flexibility, productivity and stability are seldom separable and typically are quite complementary considerations in risk management, but these will help to mitigate risks involved in the selected IGAs of the beneficiaries. Since livestock activities
are risky, farmers should diversify their IGA to overcome risk associated with the concerned IGA. A key aspect of flexibility is the choice of stocking rate in case of goat. For example, one castrated male goat fattening was highly risky to its keeper, but a pair could be a profitable option for them.

Table 04: Risk & preventive measures taken by the organization.

<table>
<thead>
<tr>
<th>SL. NO</th>
<th>Risk</th>
<th>Steps Taken By the Organization</th>
<th>Steps will need Taken By the Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Diseases Outbreak (PPR, Goat Pox, pneumonia &amp; Food Poisoning).</td>
<td>Organization completed treatment &amp; Vaccination by his own Technical Officer (Livestock).</td>
<td>There is essential for advertisement to control diseases outbreak (Leaflet, Poster, milking, dish cable).</td>
</tr>
<tr>
<td>2</td>
<td>Lack of proper Knowledge for goat fattening.</td>
<td>100% beneficiaries have given one day training. And health card othe animal health preservation&amp; technical tips about castrated goat management have given.</td>
<td>The duration of training must be extended about 3 days.</td>
</tr>
<tr>
<td>3</td>
<td>Lack of proper Knowledge for balanced feed.</td>
<td></td>
<td>Training arrangement on feed management is essential.</td>
</tr>
<tr>
<td>4</td>
<td>Unavailability of Vaccine</td>
<td>Contact with government professional for regular vaccine supply.</td>
<td>Steps should be taken for availability of vaccine at NGO organization.</td>
</tr>
<tr>
<td>5</td>
<td>Beneficiaries donot purchase goat after taking loan</td>
<td>After 15 days of loan disbursment the beneficiary influenced to buy the castrated goat.</td>
<td>After loan acceptance who doesnot purchase the castrated goat they must be examined before giving second loan.</td>
</tr>
</tbody>
</table>

The productivity, on the other hand, refers to the long-run trend in the ratio of total output to the totality of all inputs used in production. Many technical innovations can contribute usefully to the advance of productivity. In the context of risk, increasing productivity is an attractive characteristic of a farming system. Because of their degradation of the resource base, imply increasing risk as production possibilities become more fragile. The stabilization strategies addressed primarily to the sources of risk in the physical environment faced by farmers. Price support is a particular form of commodity price stabilization which may be specifically aimed at mitigating farm-level risk by putting a floor under output price. Both to farmers and government, price stabilization is an attractive concept and may possibly be beneficial in its risk-reducing effects. The most encompassing farm-level risk mitigation would be to provide individual farmers with an assured income, thereby covering both yield and price risks.
4.5 Concluding Remarks
The above-mentioned discussions clearly hint that there were some risks involved in male goat fattening. In earlier sections some of positive measures have been outlined to mitigate the farm-level risks of the beneficiaries. This may also be taken as some positive steps and good lessons for reducing risks to other areas of the project LIFT.

OPPORTUNITIES OF GOAT REARING

5.1 Introduction
In Bangladesh, Chuadunga, Meherpur, Jhennaidho, Jessore & Kustia district is famous for goat rearing. Among the four district the grazing land is normally high& comparely natural calamities is less than other district of the country. There are many pasture land which is appropriate for goat rearing. Here about 80% people normaly rare goat & they have tendency for commercial male goat fattening. There are several points considering the opportunity of goat fattening.;

5.1.1 Participation of Rural Women in Goat Rearing
In the present study overall participation of rural women in male goat fattening was low to medium. In fact women in our country belong to conservative society who face different sorts of social obstacle to fatten goat which rightly been reflected in this study. So, there is a need for strengthening extension work by GOs and NGOs to ensure a continuous flow of information to overcome these sorts of social obstacle in goat fattening. Most of the rural women were young to middle aged while age of the rural women had no significant relationship with their participation in goat fattening. But, as larger proportion of the rural women is middle aged, a woman who has lost her husband by death & not married and also aged women; it may be necessary to give some importance to these categories.

5.1.2 Goats concentrate in dry regions
Goats are concentrated in dry regions, particularly in the southern and western districts of the country. Moreover, they are reared by rural households and mostly by women for cash income. They feed purely by scavenging e.g. browsing on pastures and roadside grasses. Goats utilize a range of herbs, shrubs and tree leaves and therefore they do not compete with cattle for feed resources. In this study, the economic profit of goat fattening is derived from sale meat goats and amounts to approximately Tk 8000 annually per goat.

5.2 Gender Roles in Livestock Production
5.2.1 Ownership of Livestock: While land ownership is entirely in the hands of men, livestock are more often owned by women. Women mainly rear male goats to make an additional income. Livestock ownership is higher among women in male-headed households. Land scarcity and landlessness does not stop women from rearing poultry and livestock but the existence of a homestead is another important factor in determining whether women own livestock. In this study among 100% beneficiaries about 50% women
own goat and 25% women own cattle and rest 25% women own another livestock due to lack of land.

5.2.2 Division of Labour According to Gender
Livestock keeping is a combined family involvement and proves again the requirement of family labour as an essential component. It is, in fact, difficult to separate each family member’s. To keep livestock involves cleaning, feeding, and tending. The tending of goats only involves cleaning and grazing. However, 50% women accomplish the cleaning twice daily and small children & grown up sons of the family, aged person of the family who are fully unable to do hard work will also contribute to goat fattening.

5.2.3 Gender and decisions concerning livestock
Since women are fully responsible for the labour involved with goat fattening, they are mainly responsible for making decisions concerning the sale of goat and they also benefit from the income. While women only contribute around 25 percent of the labour involved with tending small ruminants, men make the decisions regarding these. It is possible for women to sell goats and other items from the house itself.

The income of women contributes to the welfare of the family, as women make decisions on and are capable of purchasing food by means of their own resources. The study showed significant improvement of the growth of children, which was related directly to the mother's income. As regards decisions on micro-credit it is the men who make decisions regarding the contraction of loans and who take responsibility for the repayment though it is generally the women who obtain the loan. The work to be done by women is generally decided on in a joint discussion. The women are of the opinion that if both men and women have income, the family expenses are better managed.

5.2.4 Gender roles and labor migration
As a result of men migrating in search of work, the workload of women increases, especially in households with goats. However, in connection with other types of livestock such as cattle, for which women are solely responsible, the migration of men does not affect women much. The same is true in connection with the seasonal workload, which also rises for women. The common period of migration is from November to May, when the livestock disease burden is highest. Providing medicine and veterinary support for livestock in the absence of men’s support, adds to women’s workload. Another related issue is, whether the absence of men empowers the women. When men migrate, the women make the day-to-day decisions, though they make no major decisions. Cash sent by the men to their family, contributes to the women’s raising of goat fattening.
IMPACT OF LIVESTOCK DEVELOPMENT

Now a day’s Goats are found almost everywhere in Chuadanga district. Due to favorable climatic conditions and availability of food materials, people of this district especially the poor have chosen to fatten goats to change their poverty stricken lot. And they have become successful. A family having 5-10 goats can earn 15-70 thousands taka per annum. Black Bengal goat, the famous small ruminant of Bangladesh has a worldwide demand for its meat. It requires only 4 sqm space and small amount of food. A poor family easily can arrange it. Goats are also less prone to diseases. As a whole goat fattening is a beneficial enterprise for the people who want to change their fate through his own effort.

The programmes undertaken during the LIFT created a positive impact on self- and wage employment in connection with goat fattening and other income generating activities through different DLS/NGO-operated package programmes. The credit programmes of various NGOs supported women’s involvement in the livestock production around the homestead, using surplus labour and agricultural by-products.

The number of loans raised within the smallholder livestock sector has grown and satisfactory repayment rates have been achieved (around 90%). The capital needed to start a business is minimal, an increasing number of the poor, have received loans with the aim of establishing male goat fattening. This type of credit to people has raised their total household incomes by at least 10 per cent per year, has improved the daily rural wages and has created jobs. But the micro-credit extension among poor households is quite low – it ranges from 16 to 42 per cent. It is particularly difficult for ultra-poor people of the South-West region of Bangladesh to gain access to micro credits. The basic reasons for this are the conventional selection process and criteria of beneficiary and other exclusionary processes of NGOs and projects.

Goats play an essential role in connection with food security and rural development as part of an integrated farming system, which is tailored to local needs. Goats not only provide food, they also enable poor landless people, especially women, to enter into the cash economy. In doing so, the Goat production provides increased income stability for the family without disrupting other food producing activities. Impact studies have thus found important improvements of the nutritional situation of the households participating in poverty targeted goat programmes. The increase in intake of grain and animal produce such as red meat intake is estimated between 15 and 20 per cent in beneficiary households. This means that the beneficiaries have actually increased the number of meals from 2 to 3 per day. The monthly income of many beneficiaries has also increased by 25%. Another important aspect of the role of goat fattening - in reducing poverty is its impact on women. The goat development has raised the living standards and the status of women. Moreover, it has increased women’s employment opportunities and children’s access to education as well as health and social services.
The immediate and direct impact of the farm activities has therefore been an increased nutrition level of poor households, particularly women and children. Moreover, the additional cash income contributes to meeting the needs of women and children, which would otherwise not be met, e.g. education. Thus the poverty reduction impact of goat’s interventions is wide, not only in terms of enhanced income generation but also in terms of positive effects on human capital.

The goat development of functionally landless households, with less than 0.5 acres, made significant contributions to the total household income - in many cases over 50 per cent! The emerging evidence indicates that smallholder income-savings and family nutrition are quickly improved by goat enterprises. Many lenders have turned their homesteads into larger animal operations and the income of a growing number of them has risen above the poverty line. Goats are thus considered the best opportunity of many rural households for improving the living standards and stepping out of poverty.

Although GOB institutions like DLS have made little progress in reaching the poor, NGOs have succeeded to a high extent in reaching the functionally poor. They have influenced especially women to break loose of the traditional conservative life and improve their livelihood and production by means of small-scale male goat fattening.

All the above-mentioned impacts in terms of self-employment and income generating activities have furthermore increased the awareness of poor rural communities towards empowerment, increased literacy level and consequently they have made these communities more resistant to social injustice. Some negative impacts of the credit schemes are, however, observed. It is found that a considerable number of poor farmers remain indebted to the NGOs due to poor and ineffective technical back up services, absence of market outlets and higher interest rates. According to the farmers, follow-up services and further training could have reduced these types of negative effects.
CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions
The findings of the present study revealed that LIFT project is a great blessing for the resource-poor participating women in Bangladesh. Before this LIFT project, women had no opportunity to have any asset from any NGOs and financial institutions. At present, these poor women can have opportunities to adopt a combination of two or more IGAs a year through the LIFT project. In the context of income generation, creation of self-employment, increased asset possession, women empowerment, poverty alleviation and food security, the selected IGA have currently been playing very crucial role for overall socioeconomic development of the women in rural Bangladesh. These women are now able to fulfill their basic needs of the family members, which were, in fact, almost impossible before implementation of the present LIFT project.

7.2 Recommendations
In the process of testing the set hypotheses and considering the ultimate findings of the study, some policy recommendations are made for improvement of income generating activities under the LIFT project, which are highlighted below.

(a) PKSF Partnership for Development and its partner NGOs like WAVE should increase the existing amount of money allocated for beneficiaries goat fattening in the LIFT project. With the present amount, an individual can have only one meat goat, which is not enough for the beneficiary to be fully employed family labour and earning required income.

(b) The present study clearly indicates that goat fattening is the most profitable and socially acceptable IGA to all the beneficiaries in the selected study areas. The selected NGOs should, therefore, encourage the beneficiaries to adopt goat fattening for making their better future. Financial profitability should be given the top most priority, but this should not be considered as only criterion for making selection of the IGA.

(c) For the improvement of the existing marketing system, communication and transportation facilities from rural to urban areas should be improved. This will create opportunities for easy and quick movements of goods and services from rural to urban and/or urban to local market at a lower cost. Thus, input-output markets would be more efficient since steeper competition will take place between a large number of buyers and sellers. The concerned authority and/or local Union Council should improve some physical facilities at the local market so that the existence of middlemen could immediately be removed.

(d) Steps should be taken to make available all necessary inputs at fair prices in the local markets through the federation of beneficiaries so that these beneficiaries can purchase their inputs at the door steps.
(e) Arrangements could be made by NGOs for providing training on improved management (both physical and financial) system and disease control. At least monthly meeting of the group members could be held and priority should be given to solve various management problems of the concerned IGA.

(f) More preventive veterinary cares for livestock should be geared up so that goat’s mortality rate could be minimized.

(g) A provision could be made in each of the selected NGOs for offering award annually to the best performer (in terms of net return/profit and/or asset accumulation) of the goat fattening under the LIFT project so that the beneficiaries can have incentives to take more cares for their individuals’ activities; and thus, they can change their lots for the greater interest of Bangladesh.