

**IMPACT OF BANGLADESH KRISHI BANK AGRICULTURAL
LOAN ON THE SOCIO-ECONOMIC CONDITION OF
SMALL FARMERS IN SARISHABARI UPAZILA
OF JAMALPUR DISTRICT**

A THESIS

By

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REGISTRATION NO. 06-01969

SEMESTER: JULY-DECEMBER, 2013



**DEPARTMENT OF AGRICULTURAL EXTENSION AND INFORMATION SYSTEM
SHER-E-BANGLA AGRICULTURAL UNIVERSITY
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This is to certify that thesis entitled, “**IMPACT OF BANGLADESH KRISHI BANK AGRICULTURAL LOAN ON THE SOCIO-ECONOMIC CONDITION OF SMALL FARMERS IN SARISHABARI UPAZILA OF JAMALPUR DISTRICT**” submitted to the Faculty of Agriculture, Sher-e-Bangla Agricultural University, Dhaka, in partial fulfillment of the requirements for the degree of **MASTER OF SCIENCE** in **AGRICULTURAL EXTENSION AND INFORMATION SYSTEM**, embodies the result of a piece of *bona fide* research work carried out by **MD. MEHEDI HASAN**, Registration No. **06-01969** under my supervision and guidance. No part of the thesis has been submitted for any other degree or diploma.

I further certify that any help or source of information, as has been availed of during the course of this investigation has duly been acknowledged.

Dated:
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ABSTRACT

The purposes of the study were to ascertain the impact of BKB agricultural loan towards the socio-economic condition of small farmers, to explore the relationship between the characteristics of the small farmers and the impact of BKB agricultural loan on the socio-economic condition and to identify the problems faced by the BKB agricultural loan beneficiaries in receiving and utilizing of loans. The study was conducted in three unions of Sarishabari upazila in Jamalpur District. A list of 1103 beneficiaries was prepared with the help of respective SAAO of those unions, branch manager, loan officer and field assistant of that branch. From the list 110 beneficiaries were selected at random for sample. Data were collected during 1st September, 2013 to 30th November, 2013. Pearson's correlation co-efficient was used to explore the relationship between the variables. Findings showed that more than half (55.46 percent) of the respondents belonged to low impact category compared to 26.36 percent had belonged to medium impact and 18.18 percent had belonged to high impact after involvement with BKB agricultural loan. Out of nine independent variables, farm size, loan availability and loan utilization had significant positive relationship with the impact of BKB agricultural loan on socio-economic condition of the small farmers. Based on the Problem Confrontation Index (PCI) the amount of loan is not adequate in terms of demand' ranked first

followed by 'loan is not available in time of need'. 'High rate of interest' was ranked third, 'loan disbursement is delayed due to linger process' was ranked fourth and "loan repayment period is very short' was ranked last.

CHAPTER I

INTRODUCTION

1.1 Role of Agriculture in Economic Development

Bangladesh has a primarily agrarian economy. Most Bangladeshis earn their living from agriculture. The characteristics and the evolution of the agricultural sector around the world are diverse and finance is a key issue in the evolution of the agricultural sector. Agriculture is a key sector of the economy in many developing countries. Strengthening this sector requires, amongst others, better accessibility to financial services. Majority of people in developing countries live in rural areas and are involved in agriculture activities. In these countries, agriculture is the pillar of the economy and the other sectors of activity such as industry, commerce, and public and private services largely depend on it.

Bangladesh is one of the least development countries in the world. The economy is poor and vast majority of people live below poverty line, her resource base is narrow and contribution of agricultural sector still dominates the Gross Domestic Product (GDP). Giving the importance of agriculture in the national economy, it is clear that a slow and steady growth in agriculture will impose effective constraints to the achievement of major macro-economic objectives.

Agriculture first provides for families subsistence needs. Any surplus generated provides cash income to cover other essential needs. The surplus is sold in the market to meet domestic demand for food crops. Cash crops such as cotton, peanuts, coffee, tea, jute, tobacco, vanilla and so on are mainly aimed at export markets. Raising livestock such as poultry, goats, pigs and sheep whether for meat, milk, eggs, leather or as draft animals or for religious or cultural rituals is also a major agricultural activity (Chowdhury and Chowdhury, 2011). Exported agricultural products represent a major source of foreign currency for several countries. Despite this major contribution from the agricultural sector to the economy, the rural sector in developing countries only has modest means to fulfill its task. Agricultural finance should be integrated as much as possible into an overall

development approach based on support for agricultural production, the marketing of agricultural products, improvement in management capacity, protection of the environment and risk management.

The major occupation of the people of Bangladesh is “Krishi”. Krishi is a Bengali word which means “Agriculture”. Development of agriculture is still synonymous with the economic development of this country. Bangladesh agriculture has witnessed an all time high growth rate of 6.94 percent in the FY 1999-2000 (BER, 2005). Figure 1.1 shows the annual growth rate of GDP at constant market price by different sub-sectors.

About 76.70 percent of its populations live in rural areas and 48.10 percent are engaged in agriculture (BBS, 2010). The predominance of agriculture in the country’s economic life becomes all the evident if one looks at the magnitude of its contribution to Gross Domestic Product (GDP). According to BER (2013) report, agriculture contributes 19.41 percent to GDP in the year FY 2011-2012.

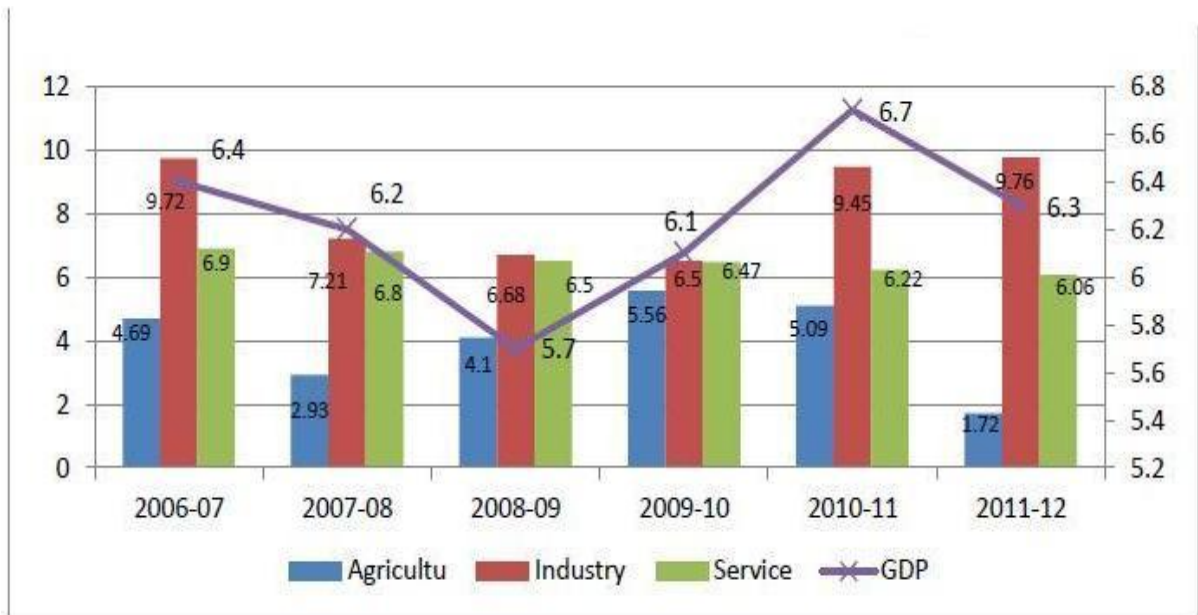


Figure 1.1 Percent of sectoral GDP growth at constant prices (Base: 1995-1996)

Source: Bangladesh Economic Review, 2012

Top most priority has so far been placed on agriculture especially on production of cereal crops to achieve self-sufficiency in food grain production. According to the final estimates, the volume of rice production in 2011-12 was 348.85 lakh metric tons of which

Aus occurred for 23.33 lakh, Aman 127.98 lakh and Boro 187.59 lakh metric tons (BER, 2013).

To fulfill the food and nutritional demand of growing population of the country and to ensure and sustain dependable food security, special emphasis has been given on building up a modern agricultural system based on appropriate technology. To implement this input distribution package, emphasis should be given on credit, creating opportunities for investment in agriculture, modernization of research methods for quality improvement of agro-products.

Credit is thought to be the crucial element in bringing about desired change in agricultural production that ultimately would contribute to economic development of the country. Throughout the developing countries, credit has been conceived of as an important mechanism for development strategy particularly those associated with increased productivity.

Mechanization in agricultural has added extra cost in producing crops, livestock and fisheries. It is therefore, now a day, not at all possible on the part of those farmers to meet up such huge cost of producing agricultural commodities being already financially hard pressed from their own pocket. Farmers therefore, have to resort to borrowing from external sources of credit.

1.2 Bangladesh Krishi Bank (BKB) in Agricultural Lending

Bangladesh Krishi Bank (BKB) has been established under the Bangladesh Krishi Bank order 1973 (President's Order No 27 of 1973). BKB is a banking company under the Banking Company Act-1991. Its Head Office is located at Krishi Bank Bhaban, 83-85 Motijheel Commercial Area, Dhaka-1000, Bangladesh. The primary objective of BKB is to provide credit facilities to the farmers for the development of agriculture and entrepreneurs engaged in development of agro-based and cottage industries (BKB, 2012).

BKB is guided in accordance with the policies and principles of the Government of the Peoples Republic of Bangladesh. It has an authorized capital of Tk.15,000 million (Taka

fifteen thousand million) only and paid up capital of Tk.9,000 million (Taka nine thousand million) only which is fully paid by the government. The Bank started commercial functioning since 1977 to generate more loan able fund from the idle rural and urban savings and invest them for the betterment of our economy. Bangladesh Krishi Bank operates its function through its 952 branches (except Rajshahi and Rangpur Division) of which 822 are rural and 130 are urban. It has 15 foreign exchange (Authorized dealer) branches.

BKB finances production of all the summer and winter crops, horticulture and nursery etc. The Bank attaches importance to use scientific method and modern technology in fish cultivation. It extends adequate credit support for excavation and re-excavation of ponds, round the year cultivation of species, which have rapid growth, cultivation of sweet water prawn and other fishes. The Bank makes use of expertise of the concerned government agencies for bringing more ponds/water bodies under cultivation and increasing productivity. As an agricultural country different types of crops and fruits are produced here. The Bank also pays due importance to setting up agro-industries for preservation, processing and marketing of agricultural produces having backward linkage with basic sub-sectors of crop, fishery, livestock and forestation. Manufacturing and marketing of agricultural implements are also encouraged. Moreover, there is enough scope for export of these items through processing mechanism and value addition. Considering the needs of the target groups since late seventy's BKB has been implementing a series of Micro-Credit programs out of which 10 programs have recently been completed and 31 programs are in operation at present. These diversified micro-credit programs are being implemented by BKB to achieve the following objectives:

- To create employment opportunities through income generating activities.
- To empower the rural women to establish their own rights.
- To improve the living standard of the rural people.
- To alleviate poverty of the poor people.
- To make easy access to institutional credit facilities and resources.

- To mobilize rural savings.
- To make optimum utilization of rural resources.
- To engage inactive human resources of the rural areas in productive/ economic activities.
- To engage rural people in development process of the country.
- To eliminate exploitation done by the money lenders.

Table 1.1 Year and Sector-wise financing in agribusiness activities by Bangladesh Krishi Bank

(Figure in Core Taka)

Sector of Loan	Year wise disbursement		
	2009-10	2010-11	2011-12
Crop	1787.52	2072.58	2330.70
Fishery	329.41	370.85	421.28
Livestock	260.97	307.72	327.24
Farm and irrigation machineries	35.64	37.73	32.40
Agro based industries	252.53	331.85	835.15
Cash credit	1623.09	2384.13	1320.63
Poverty Alleviation	48.76	52.26	55.96
Others	481.78	343.87	489.94
Total	4819.70	5900.99	5813.30

Source: Annual Report, Bangladesh Krishi Bank, 2012.

1.3 Statement of the Problem

Bangladesh Krishi Bank (BKB) is a Government owned specialized bank that deals with promoting savings, mostly from middle class of urban and rural people. This bank promotes investment in different sectors of agriculture, industry and trade. It either invest directly or advances loan to the investors.

Farmers of Sarishabari upazila of Jamalpur District cultivate agricultural crops mainly on their land in order to produce food grains for subsistence their families and for economic gain. They used to cultivate by taking micro-credit from different credit providing organizations. Traditional commercial banks fail to minimize the credit needs to the poor for three main reasons. First, those banks require collateral, which the poor find difficult to provide. Second, their procedures for filling in application forms and completing other

formalities for obtaining loans are too cumbersome for the illiterate poor and third, they prefer handling large loans rather than the petty loans that the poor need (Hossain, 1988).

In view of the foregoing discussion, it is necessary to know how agricultural loans of BKB are working and also to know the answer to the following questions:

1. What are the selected characteristics of BKB beneficiaries?
2. What is the impact of BKB agricultural loan on the socio economic condition of small farmers?
3. What is the relationship between the selected characteristics of BKB beneficiaries and impact of BKB agricultural loan on the socio economic condition of small farmers?
4. What are the problems faced by the beneficiaries in receiving and utilizing loan?

1.4 Objectives of the Study

Keeping in view the research questions the following objectives were framed out in order to give proper direction to the research work:

1. To determine and describe the selected characteristics of small farmers of Sarishabari upazila of Jamalpur district;
2. To ascertain the impact of BKB agricultural loan towards the socio economic condition of small farmers;
3. To explore the relationship between the characteristics of the small farmers and the impact of BKB agricultural loan on the socio economic condition;
4. To identify the problems faced by the BKB agricultural loan beneficiaries in receiving and utilizing of loans.

1.5 Justification of the Study

Increased productivity, income, consumption and participation of the beneficiaries in socio-economic development activities are some of the major pre-requisites for the overall economic development of Bangladesh. Most of the development organizations believe to

work to meet-up the above pre-requirements as the pre-requisites for socio-economic development since the independence of Bangladesh. As the poor do not have sufficient employment opportunities and income earnings sources to maintain their livelihood, they are the vulnerable class of the society. They are expected to uplift their personal, social and economic dimensions by increasing their access and control over resources. Bangladesh Krishi Bank has developed a number of credit programs in different sectors such as crop, fisheries, live stock, farm and irrigation equipment, agro based industrial project, SME (Small and Medium Enterprise), continuous loan (Working Capital and Cash Credit) and micro credit (Small Loan). The issues on socio-economic development need more attention and thus it deserves a specific investigation. There is a need to conduct study regarding the performance of Bangladesh Krishi Bank (BKB) agricultural loan for the socio economic development of the small farmers.

1.6 Assumptions of the Study

“An assumption is the supposition that an apparent fact or principle is true the light of the available evidence (Carter, 1945)”. The researcher had the following assumptions in mind while undertaking the study:

1. The findings would give a clear indication of the impact of BKB agricultural loan in the socio economic development of the small farmers.
2. The respondents were capable of furnishing proper responses to the question contained in the interview schedule.
3. The responses furnished by the respondents were valid and reliable.
4. Information furnished by the beneficiaries included in the sample was the representative of the whole population of the study area.
5. The data collected from the respondents were free from interviewer bias.
6. The selected characteristics of the respondents and the impact of BKB agricultural loan of these were normally and independently distributed with their respective means and standard deviation.

1.7 Limitations of the Study

Considering time, money and other resources available to the researcher and to make the research meaningful and manageable from the practical point of view, it has certain limitations that are listed below:

1. It was very difficult to get accurate information because the respondents do not keep any written records with respect their activities, production or income. Therefore, the researcher had to depend on data furnished by the respondents.
2. Characteristics of the beneficiaries were many and varied. However, only nine characteristics were selected for this study.
3. The study was confined to only one upazila, namely Sarishabari of Jamalpur district.

1.8 Definition of Terms

For clarity of understanding, certain terms frequently used throughout the study are defined and interpreted as below:

Bangladesh Krishi Bank (BKB): Bangladesh Krishi Bank (BKB) is a state owned specialized bank. It has been established under the Bangladesh Krishi Bank order 1973 (President's Order No 27 of 1973). The Bank started commercial functioning since 1977. Bangladesh Krishi Bank operates its function throughout the country except Rajshahi and Rangpur division.

Impact: “Impact” is a term which refers to sustained structural changes which have lasting effect.

Socio-economic condition: Chaplin (1928) defined socio-economic condition as “the position of an individual or a family occupies with reference to the prevailing average standards of cultural possessions, effective income material possessions and participation in the respondents activities of the community”. For this study socio-economic condition was defined as the position of an individual in the society in respect of housing status,

possession of farm power, health and sanitation condition, occupational pattern, housing material, family education, land and income.

Problem: Problem refers to a difficult about which something to be done. Problem faced by the small farmers of Sarishabari upazila under Jamalpur district was defined as the extent of difficulties faced by the beneficiaries in the way of operating of BKB agricultural loan program.

Age: Age of a farmer referred to the period of time in complete years from his/her birth to the time of interview.

Level of education: Level of education of an individual was defined as the formal education received up to a certain level from an educational institute (e.g. school, college and university) at the time of interview.

Family size: Family size is defined as the total number of individuals directly dependent upon the respondent farmers for every family demands. They usually live in the same homestead area and eat in the same kitchen. Family members include respondent farmer himself, his wife, children and other dependent members.

Farm size: Farm size refers to the total area of land possessed by a respondent farmer through different land tenure system such as homestead area, land under own cultivation, land given to others on share cropping, land taken from others on share cropping, land taken on lease etc. The area is estimated in terms of full benefit to his/her family.

Loan availability: It refers to the amount of money received by the beneficiary as loan from any branches of Bangladesh Krishi Bank and other sources during the previous year.

Loan utilization: BKB agricultural loan is distributed among the clients for certain specific purposes. Loan utilization was defined as the pattern of utilization of loan by the beneficiaries. In this study the extent of loan utilization by the borrowers in assigned purposes was ascertained.

Organizational participation: Organizational participation of an individual refers to his direct contact with various organizations within a specific period of time. An individual

could take part in various activities of organization as ordinary member, executive officer (president, secretary etc.). All these forms of participation were considered to operationalized the variable.

Communication with Bangladesh Krishi Bank personnel: The term communication refers to the involvement of face to face exchange of views between two or more individuals or BKB personnel including area manager, branch manager, loan officer and field assistant. These personnel are supposed to maintain a connecting link with the small farmers for loan distribution and loan recovery. Contact with BKB personnel means the involvement of rural small farmers with those personnel of BKB.

Attitude towards BKB Agricultural Loan: Attitude means one's feeling, belief and action toward an object. According to Drever (1968) "an attitude is a more or less stable set or disposition of opinion, interest or purpose, evolving expectancy of certain kind of experience and readiness with appropriate kind of response". Morgan *et al.* (1960) regarded "attitude as literally mental postures, guides conduct for which each new experience is referred before a response is made". The attitude toward BKB agricultural loan means their feelings, beliefs and action toward various aspects of Bangladesh Krishi Bank agricultural loan.

CHAPTER II

REVIEW OF LITERATURE

A number of studies have so far been made on agricultural credit in Bangladesh, most of which were limited to the nature, volume and information related to distribution, utilization and repayment of loan. This chapter deals with a brief review of previous research studies relating to the present study and to formulate and construct a framework that will be fitting for accurate understanding of the research.

2.1 Performance of Bangladeshi Agricultural Bank

According to Ahmed (1980) though Bangladesh inherited an agrarian economy, agriculture did not get due importance hitherto. As such the farmers did not find change of their lot, rather the number of landless and marginal farmers increase day by day. The main drawback of our agriculture is the lack of finance as the vast majority of our farmers are living at or below subsistence level. These farmers were found to receive 86% of their credit from non institutional sources which includes money lenders, shopkeepers, relatives, friends, well to do rural people, market intermediaries and others. It was guessed that non institutional sources still provide 70% of the credit. In this regard institutional credit facility can be considered. Institutional sources refer to the government, cooperatives, agricultural banks and commercial banks that are entrusted with the responsibility of credit dispensing. Institutional sources provide an increasing trend with the passage of time.

Kahlily *et al.* (1997) observed that unlike urban credit market, rural credit market is generally repressed. Financial policies for agricultural credit are more subject to distortions. The major policies are: interest rate, loan targeting, refinancing of loans and interest and loan forgiveness program. Policies are formulated by Bangladesh Bank. These policies influence the behavior of agricultural credit in formal financial markets.

According to Khalily *et al.* (1997), credit is necessary for agricultural development vis-à-vis rural economic development. But loan recovery rate is low. This has adverse impact on

revolving of loan able fund and viability of rural financial system. Poor performance of lenders in agricultural credit does affect viability of rural financial system. A quick estimate shows that social cost of forgiveness program has been twenty five percent of loan outstanding. On the other hand continued interest of the political lenders in interest and loan forgiveness program also affects expected recovery behavior of the borrowers. Burden of social cost for agricultural or rural credit cannot be fully attributed to crop loans as it constitutes only forty percent of the total agricultural credit. Non crop loans are likely to be less risky. Therefore, the problem of high social cost for agricultural credit can perhaps be linked to institutional behavior.

Chowdhury (2002) observed that banking industry of Bangladesh is a mixed one comprising nationalized, specialized, private and foreign commercial banks. Many efforts have been made to explain the performance of these banks. Understanding the performance of banks requires knowledge about profitability and the relationship between variables like market size, bank's risk and bank's market size with profitability.

Chowdhury and Islam (2007) stated that deposits and loan and advances of Specialized Banks (SBs) are more sensitive to interest rate changes than those of Nationalized Commercial Banks (NCBs). So SBs should not make abrupt change in lending rate and deposit rate by following the NCBs. If NCBs change their lending rate or deposit rates, their deposits and loan and advances will be affected less than those of SBs. However, SBs offer higher deposit rate and charge higher lending rates than NCBs. That is why the interest rate spared of SBs was higher than that of NCBs.

2.2 General Review on Impact of Agricultural Loan

Shahjahan (1966) stated that he made an attempt to measure the effectiveness of Agricultural Development Bank of Pakistan (ADBP) credit and showed that 98% of the total families surveyed were in need of external credit for agricultural purpose. It showed that only 50% of the total loan requirement could have been made met by the ADBP (now

BKB) and 47% and 21% of it have been utilized on capital and current expenditure on farming respectively.

Bashar (1969) with a view to analyzing the structure of agricultural credit and made a survey in two villages of Mymensingh district. He found that more than 90% of total loan in village Panghagra and nearly 99% in village Kazir shimla were supplied by the non-institutional sources. He also found that 45% of total borrowings from all sources together have used to meet family expenditure.

Roy (1978) attempting to examine the loan utilization pattern in 8 villages situated at various regions of Bangladesh. The author came across that about 84% of the households surveyed utilized the borrowed funds for consumption purpose whereas quite insignificant proportion of household spent for productive purpose during the same period. The study further reveals that owner farmers have spent more than 15% of loan for agricultural production whereas; the tenant farmers spent more (about 24%) on agricultural production.

Ahmed (1980) studied 68 BKB loanees spread over 5 villages of Bangladesh and found that 91% of total loan has been used for agricultural purpose. Crop failure was identified as the main reason for non-repayment of loan followed by others. More than 50% of the respondents also took loan from non-institutional sources in additional ones.

Bangladesh Bank (1981) found that after forming groups under Grammen Bank, the income of the members increased by 70 percent within 2-3 years. On an average, the income has increased to Tk. 9,166/-, which was 55 percent higher than it was before. After forming the groups only 5 percent members took loan from non-institutional sources.

Alamgir (1982) while analyzing individual activities of the Grameen Bank loanees, showed that for women the most popular activity was milk cow-keeping (44% of total loan). Other important activities were paddy husking and beef fattening. These activities accounted for 75% of the total loan taken by female clients.

Chowdhury (1989) conducted a study on GB borrower's viability by BB and BIDS. It was indicated that there has been a sustainable gain in income following the use of credit. An increase in credit by one Taka leads to an income increase of slightly over 0.5 Taka within the year. Such a realized rate of return is indeed appreciating and greatly contributes towards a viable credit system.

Begum (1994) conducted a study on impact of RDRS activities on the socio-economic development of women member in Sadar Thana of Kurigram District and found the involvement of the households with RDRS has increased income, employment, basic needs situation and social awareness and status of the women. The income of the households under RDRSA project sole of crops, vegetables, fruits, poultry and dairy products increased by 122% and non agricultural activities increased by 22% after their involvement with RDRS.

Ghosh (1997) found that income from the vegetables; poultry and dairy products increased by 164% and overall labor absorption from non-agricultural source increased by 74% after their involvement with homestead farming and income generating activities of Proshika.

Mohiuddin (1999) conducted a research to examine the effectiveness of credit under the SACP provided by the RAKUB on the basis of selected borrower farmers of Bera Upzila of Pabna district. He found that the large farmers were received more amount of credit compared to medium and small groups. Loans were obtained mostly for producing potato and sugarcane. The sample borrowers productively utilized most of the loaned money. Family expenditure seemed to be expectedly low. The large farmers were better loan repayments followed by the small and medium farmers.

Mazumder (2003) stated that after taking loan respondents of all age group could increase their level of income. After taking loan the credit clients educational status were increased, large loan amount receiving client contribute maximum level of income, although it was not at a significant level. All farm size group respondents could increase their low level of

income. By taking loan large family gave maximum amount of low and medium level of income than other types of family and other levels of income.

Jahan (2004) in examining the pattern of BKB credit use, assessing the repayment performance and identifying the factors affecting repayment performance of the selected borrower farmers and found that the large farms were received more amount of credit compared to other two groups, small and medium farmers. Loans were obtained mostly for production of rice. The sample borrowers productively utilized a lion's share of loaned money. Capital expenditure seemed to be expected minimum.

Kashem (2005) conducted a study on effectiveness of credit provided by the RAKUB on crop production in some selected areas of Rangpur District and found that crop production loan had a positive impact on changing socio-economic and income status of the selected borrower farmers and provided loan money is productively used.

Sarker (2007) conducted a study on impact of BRDB micro-credit towards the uplifting social status of the beneficiaries and found that 60% of the respondents could change their socio-economic status in medium scale compared to 38% of them could change in low scale and 2% of them could change in high scale after involvement with BRDB micro-credit programs. He concluded that there is an opportunity to increase the social status of the beneficiaries by increasing more credit facilities for them.

Hossain (2007) indicated that food consumption of the respondents after involvement with BRAC micro credit program increased indicating that it can change their economical condition.

2.3 Relationship between the Selected Characteristics of the Beneficiaries with the Impact of Agricultural Loan

2.3.1 Age and impact of agricultural loan

Dickerson (1992) in his study observed that younger women were concerned almost primarily with productive activities while older women were involved more in decision-making within their households and they had to play extra domestic roles.

Akter (2000) in his study found significant positive relationship between age of the women in RDRS clientele group and their participation in decision making role in the family with regard to development activities.

Zakaria (2000) in his study observed a negative trend of relationship between age of the respondent and their credit utilization and repayment behavior.

Islam (2002) reported that the age of the rural women had no significant relationship with their poverty alleviation activities.

Ali (2003) found that there was a positive and significant relationship between age of the respondents and their changes in income and in housing environment but non-significant relationship was found between age and their changes in food consumption.

Sharmin (2005) observed that age of the respondents did not show any significant relationship with their perception of benefit. Sarker (2007) also found no significant relationship between age and impact of BRDB micro credit.

Khan (2006) in his study found that age of the respondents had significant relationship with the impact of Grameen Bank micro credit program. This is agrees with the findings of Hossain (2007) and Solaiman (2007).

2.3.2 Level of education and impact of agricultural loan

Begum (1994) in her study entitled “Poverty Alleviation of the Rural Women Organization by Association for Social Advancement” observed that education of the rural women had a positively significant relationship with their poverty alleviation owing to participation TMSS activities.

Zakaria (2000) stated that there was no significant relationship between education of the respondents and impact of micro-credit as perceived by them.

Ali (2003) found that there was a positive and significant relationship between education of the respondent and their changes in income, food consumption and housing environment.

Khan (2006) found no significant relationship between educational level of the respondents and Grameen Bank micro-credit program in uplifting the socio-economic condition of the rural women beneficiaries.

Sarker (2007) found significant relationship between education and impact of BRDB micro-credit which agrees with the findings of Kuhinur (2007), Hossain (2007) and Solaiman (2007).

2.3.3 Family size and impact of agricultural loan

Basak (1997) found that the family size of the rural women under BRAC had a significant positive relationship with their impact of participation in BRAC rural development activities.

Zakaria (2000) stated that family size of the beneficiaries had no significant relationship with impact of micro-credit.

Islam (2002) reported that the number of family members of the respondents had positive significant relationship with their poverty alleviation.

Ali (2003) found that the relationship between family size of the respondents and their change in income, change in food consumption and change in housing environment was non-significant.

Samad (2004) observed that family size of the rural women had no significant relationship with their poverty alleviation activities. This result is similar to the findings of Khan (2006), Hossain (2007), Kuhinur (2007), Sarker (2007) and Solaiman (2007).

2.3.4 Farm size and impact of agricultural loan

Begum (1994) observed that the farm size of the rural women had no significant relationship with their poverty alleviation.

Akter (2000) found that there was a significant positive relationship between farm size of the women and their participation in decision-making role in family.

Sarker (2002) observed a positive significant relationship between farm size of the RDRS beneficiaries and their change in food consumption in Integrated Aqua-culture Development Project, RDRS.

Jahan (2004) in her study observed that large farms received more amount of credit compared to other two groups, small and medium farmers, loans obtained were mostly for producing rice.

Samad (2004) reported that the farm size of the respondents had positively significant relationship with their poverty alleviation.

Rahman (2005) commented that the respondents earning ability is dependent on their farm size, which increase the family income and social development.

Khan (2006) in his study indicates that the respondents having large farm size were more likely to have impact of micro credit towards uplifting their socio-economic conditions.

Kuhinur (2007) found no significant relationship between farm size of the respondents and impact of Grameen Bank micro credit.

2.3.5 Loan availability and impact of agricultural loan

Saha (1991) in her study dealt with the impact of credit on borrowers activities and income generation. She found that credit has a significant impact on both the borrowers activities and income generation. After taking credit crop cultivation as the main and subsidiary occupation increased by 8 percent and 80 percent respectively. The highest proportion of the borrowers during the pre-credit period belonged to the income of Taka 3,001-Taka 6,000. While during the post loan period highest proportion of the borrowers shifted to the higher income group of Taka 6,000-Taka 10,000 which indicates that the pattern of change in income of borrowers overtime was positive.

Rahman (1993) studied the relationship between crop production and bank credit. He used secondary data for the period of 1978-79 to 1988-89. He found no strong relationship between crop production and bank credit, i.e.; credit has no significant impact on crop production in Bangladesh.

Islam (2001) mentioned that credit received had negatively significant relationship with change in food habit of the respondents.

Sarker (2002) stated that women with more credit had more income than those with less credit. Credits received by some of the members were high because two or more persons joined the group from the same family in order to receive more credit. They invested more credit in their self employment opportunities and got more return from those. So, their income has changed significantly.

Ali (2003) stated that credit received of the respondents showed a positively significant relationship with their change in income and housing environment. Credit received had a great influence for socio-economic development of the beneficiaries (Khan, 2006), but it was not helpful in case of food consumption.

Hossian (2007) concluded that credit received of the rural women had a significant positive relationship with the impact of BRAC micro-credit program on socio-economic upliftment. Sarker (2007) and Solaiman (2007) also found similar results in their study.

2.3.6 Loan utilization and impact of agricultural loan

Rahman (1980) showed that 27.87%, 11.08%, 44.26% and 16.79% of total credit were utilized for current expenditure, farming, family expenditure and non-farm expenditure respectively.

Nagabhushanum and Halyal (1989) stated that 50.48% of the amount borrowed was utilized for productive purpose. About 17% of the amount was spent on partially productive purpose.

Rahman (1995) designed a research on socio-economic study of credit program of the ASA in some selected areas of Gazipur district and found that 36% of the sample loaners were not able to invest loans entirely in their proposed scheme.

Uddin and Uddin. (1999) in a study found that loan were utilized in capital expenditure (45.33%), current farm expenditure (16.00%), investment in business (24.00%), house constructin (2.67%) and others (12.00%) from institutinal sources.

Kashem (2005) in his study stated that about 9.75% of total loan amount has been utilized by capital expenditure on farming, 48.85% by current expenditure on farming, 9.68% by non-farm business expenditure and 31.72% by various family expenditure.

Sarker (2007) found no significant relationship between credit utilization and impact of BRDB micro-credits towards the upliftment of social status of the beneficiaries of Naikhongchhari upazila under Bandarban district.

2.3.7 Organizational participation and impact of agricultural loan

Rajib (2006) found a significant relationship between organizational participation and credit need, credit utilization and credit repayment behavior of the beneficiaries.

Kuhinur (2007) found no significant relationship between organizational participation and impact of Grameen Bank micro-credit on women beneficiaries.

Sarker (2007) found significant relationship between organizational participation and impact of BRDB micro-credits towards the upliftment of social status of the beneficiaries.

2.3.8 Communication with BKB personnel and impact of agricultural loan

Kuhinur (2007) found a positive significant relationship between communication with GB employee and impact of Grameen Bank micro-credit program women beneficiaries. However, the researcher wishes to make a research on relationship between communication with BKB employees and staff and impact of agricultural loan on the respondents.

2.3.9 Attitude towards Bangladesh Krishi Bank (BKB) agricultural loan and impact of agricultural loan

Zakaria (2000) stated that 60.83% of the respondents had moderately favorable attitude towards BRDB (IWP) credit, 37.50% had less favorable and only 1.67% had highly favorable attitude towards BRDB (IWP) credit.

Sarker (2007) in his study revealed that 66% of the respondents had moderately favorable attitude towards BRDB micro-credit program while 29% had less favorable and only 5% had highly favorable attitude towards BRDB micro-credit program in uplifting of social status of the beneficiaries.

Solaiman (2007) found that 21% of the respondents had low favorable attitude towards GB micro-credit program, 70% had moderate favorable attitude and 9% of the respondents had high favorable attitude towards GB micro-credit program on poverty alleviation of rural women.

2.4 Reviews Related to Problem Confrontation

Ali (2003) stated that about two-third (71.29%) mentioned about insufficient amount of credit as per demand as the main problem. More than half (67.32%) of the respondents opined that new loan is not issued until final repayment of installments and about same proportion (65.34%) for not getting credit at the time of need.

Mazumder (2003) stated that a little over 25.45% opined that the credit amount was inadequate by which ASA credit clients were affected mainly. The second (15.45%) most severe problem was lengthy processing in getting recommendation from committee members. Most (22.73%) of the credit clients faced two or more than two problems in repayment of their credit amount.

Khan (2006) in his study revealed that six problems were faced and perceived by the GB women beneficiaries in receiving the micro credit. Among those problems 'Insufficient amount of credit as per demand' ranked first. 'Credit is not available in the time of need' ranked second. 'The misuse of credit for another activities' was the least stated problem among the six problems.

According to Hossain (2007) among six problems faced by the respondents 'high rate of interest' ranked first. 'Pay back period starts early' ranked second and 'Insufficient amount of credit as per demand' was the third ranking problem. 'The misuse of credit for other activities' was the least stated problem among the six problems.

On the basis of Problem Faced Index (PFI) the 'do not get current credit when any one of them did not repay previous loan' ranked first followed by 'insufficient amount of credit'. 'Misuse of credit for special activities or buying foods' was ranked third and 'decisions taken based on nepotism' was ranked last (Sarkar, 2007).

2.5 The Conceptual Framework of the study

In scientific research, selection and measurement of variables constitute an important task. The hypothesis of a research while constructed properly contains at least two important elements i.e. “a dependent variable” and “an independent variable”. Independent variables which included age, level of education, family size, farm size, loan received, loan utilization, organizational participation, communication with BKB employees and staff and attitude towards BKB agricultural loan and the dependent variable was impact of BKB agricultural loan. Based on this discussion and the review of literature the conceptual framework of the study has been formulated and shown in the Figure 2.1.

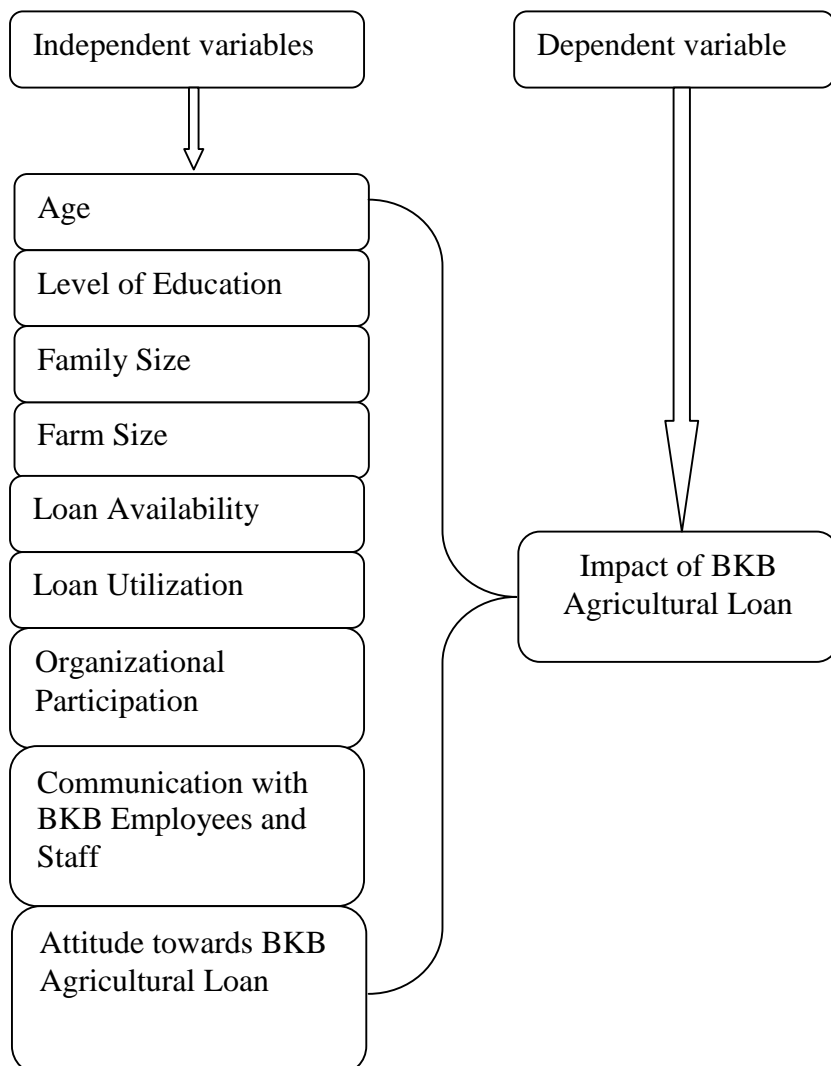


Figure 2.1. The Conceptual Framework of the Study

CHAPTER III

METHODOLOGY

Methods and procedures of collecting and analysis of data are very important in a research. Methodology should be appropriate so that the researcher will be able to collect necessary data and analyze them in an appropriate way, which will help him/her to arrive at correct decision. Methods and procedures followed in conducting the study have been discussed in this chapter. Further, the chapter includes the operational format and comparative reflection of some variables used in the study. Also statistical methods and their use have been mentioned in the section of this chapter.

3.1 Locale of the Study

Jamalpur District consists of 7 upazila namely Jamalpur sadar, Sarishabari, Baksiganj, Dewanganj, Islampur, Madarganj and Melandaha, out of which Sarishabari upazila was purposively selected as the locale of the study. There are 5 branches of Bangladesh Krishi Bank such as Sarishabari, Bhatara, Baushi, Tarakandi and Jagannathganj Ghat. Sarishabari branch of Bangladesh Krishi Bank is the main branch of the upazila. The jurisdiction of this branch is surrounded by three unions namely Paurashava, Satpoa and Kamarabad which were considered as the locale of the study. A map of Sarishabari upazila showing the study area is presented in figure 3.1.

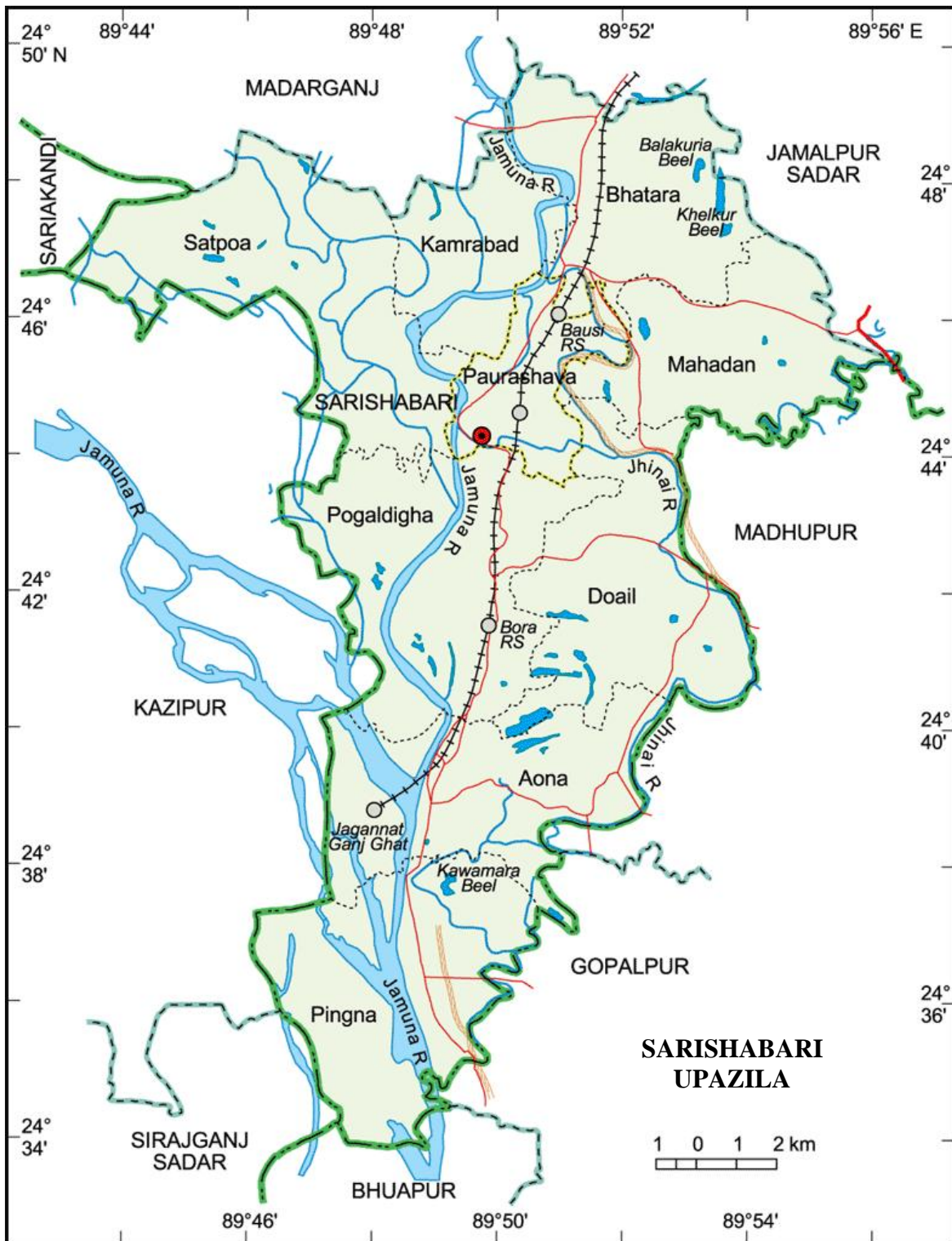


Figure 3.1. Map Showing Sarishabari Upazila under Jamalpur District

3.2 Population and Sampling

An update list of all the BKB agricultural loan beneficiaries of the selected area was prepared with the help of respective SAAO of those unions, BKB branch manager, loan

officer and field assistant of that branch. The list comprised a total of 1103 farmers. These farmers constituted the population of this study. There were 341 farmers from the union Paurashava, 477 from Satpoa and 285 from Kamarabad union. Ten (10) percent of the population from each union was randomly selected as representative sample by using random number table. Thus, the sample size for the union Paurashava was 34, Satpoa 48 and Kamarabad 28 making the total sample size of 110 farmers. A reserve list of 33 farmers at the rate of three (3) percent of the population was prepared by the same method so that these farmers could be used in case, the individuals included in the original samples were not available or not found at the time of data collection. The distribution of the farmers included in the population, sample and those in the reserve list appears in Table 3.1.

Table 3.1. Distribution of population, sample and reserve list of respondents in three unions under Sarishabari upazila of Jamalpur district

Sl. No.	Name of the Unions	Population	Sample Size	Number of Farmers in the Reserve List
01	Paurashava	341	34	10
02	Satpoa	477	48	14
03	Kamarabad	285	28	9
Total		1103	110	33

3.3 The Research Instrument and Its Preparation

An interview schedule was prepared for collection of data keeping the objectives and variables of the study in mind. The questions and statements contained in the schedule were simple, direct, relevant to the title of the study and easily understandable by the farmers. The draft schedule was prepared in English with the help of the supervisor. The interview schedule was pre-tested before final data collection. Ten respondents were interviewed for the pre-test while at least one farmer of each of the three unions was interviewed. Based on the pre-test experience, necessary correction, addition, alternation

and rearrangements were made. Thus the interview schedule was prepared for final use. The interview schedule was multiplied as per requirement. The English version of the interview schedule is enclosed in Appendix A.

3.4 Data Collection

Data were collected personally by the researcher himself through face to face interview from the randomly selected respondents with the help of an interview schedule. The researcher made all possible efforts to collect pertinent and authentic information. Rapport was established prior to the interview. The coordination and cooperation of the respondents were very nice. The data collection was done from 1st September, 2013 to 30th November, 2013. The researcher sought help from the local leaders, Sub-Assistant Agriculture Officers and field assistant of BKB for this purpose. The respondents were assured about the confidentiality of their information delivered to the researcher.

3.5 Data Coding and Tabulation

A detailed coding plan was prepared. Data were coded into a coding sheet. These were then compiled, tabulated and analyzed in accordance with the objectives of the study by using SPSS program. Qualitative data were converted into quantitative form by means of suitable scoring techniques for the purpose of analysis.

3.6 Variables of the Study

Measurable characteristics of a population that may vary from element to element either in magnitude or in quality are called variables (Ahmed *et al.*, 2004). The success of a research to a considerable extent depends on the exact selection of the variables. A research hypothesis contains at least two elements as independent variable and dependent variable. An independent variable is the factor which is manipulated by the experimenter to ascertain its relationship to an observed phenomenon. A dependent variable is the factor which appears, disappears or varies as the experimenter introduces, removes or varies the independent variable (Townsend, 1953).

3.7 Measurement of the Variables

In order to conduct a study in accordance with the objectives it was necessary to measure the variables. The procedures of measuring the variables have been described below.

3.7.1 Measurement of independent variables

The independent variables of this study were nine selected characteristics of BKB agricultural loan beneficiaries of Sarishabari upazila under Jamalpur District. These were age, level of education, family size, farm size, loan availability, loan utilization, organizational participation, communication with BKB personnel and attitude towards BKB agricultural loan. Procedure for measuring independent variables has been discussed below:

Age: The age of a respondent was measured in terms of actual years from his birth to the time of interview on the basis of his response. A score of one (1) was assigned for each year of age. For example, if any respondent's age was 35 years then he was given a score of 35.

Level of education: Education score of a respondent was measured in terms of the year of schooling completed by the respondent farmer. A score of 0.5 was assigned for the respondent who can sign only, one was assigned for each year of schooling and zero (0) for the respondents who can't read and write.

Family size: Family size of a respondent was determined in term of actual number of members in his family including himself, his wife, sons, daughters, brothers, sisters, parents and any other person(s) who jointly lived and ate together. The family size was considered by the actual number mentioned by the respondents. For example, if a respondent mentioned that he had 3 members in his family then his family size was 3.

Farm size: Farm size was measured as the size of his farm on which he continued his farming operations during the period of study. It included the area of farm owned by him as well as those obtained from others as share cropping, lease etc. The area was estimated

in terms of full benefit to the growers in terms of hectare. The farm size of a respondent was measured by using the following formula:

$$FS = A_1 + A_2 + 1/2(A_3 + A_4) + A_5$$

Where

FS = Farm size

A₁ = Homestead area including pond

A₂ = Land under own cultivation

A₃ = Land given to others on share cropping

A₄ = Land taken from others on share cropping

A₅ = Land taken from others on lease

Loan availability: It referred to the amount of money received by a respondent as loan from any institution. The total loans were calculated by adding the entire split loan together. Loan availability of a respondent was expressed in thousand ('000') taka.

Loan utilization: Firstly, loan utilization pattern was divided into three categories, namely, fully utilized in assigned purpose, partially utilized in assigned purpose and utilized in other than assigned purpose. A single loan was supposed to be utilized by a loanee in any one of the above three ways. However, weights were given in the following manner:

Loan Utilization	Weight
Fully utilized in assigned purpose	2
Partially utilized in assigned purpose	1
Utilized in other than assigned purpose	0

The obtained score for utilization of any loan, could therefore, range from 0 to 2. Scores were assigned for measuring the effect of loan utilization as follows:

Effect of Loan Utilization	Weight
Profit	2
Neither loss or profit	1
Loss	0

The total loan utilization score was measured by the multiplication of loan utilization score with the effect of loan utilization score. Thus the total loan utilization score could range from 0 to 4, where '0' indicating no loan utilization and '4' indicating high loan utilization.

Organizational participation: Organizational participation score was measured on the basis of participation by the respondent in different organizations. Scores were assigned for participation of a respondent in an organization in the following manner.

<u>Nature of Participation</u>	<u>Score</u>
No participation	0
Participation as an ordinary member	1
Participation as an executive member	2
Participation as an executive officer	3

Organization participation (OP) score of a respondent for an organization was computed by using following formula:

$$OP = P_{OM}Y + 2P_{EM}Y + 3P_{EO}Y$$

Where,

- OP = Organizational participation
- P_{OM} = Participation as ordinary member
- P_{EM} = Participation as executive member
- P_{EO} = Participation as executive officer
- Y = Duration of participation in year

Organization participation score of a respondent was determined by summing the participation scores of all the organizations.

Communication with BKB personnel: It was measured by the extent of contact by the loanee with any of the BKB individual like Area Manager, Branch Manager, Loan Officer and Field Assistant. Each of the respondents indicated the extent of contact by checking any one of the four responses, frequent, occasional, rare and no contact. The scale for computing the contact with BKB personnel score is given below:

<u>Nature of Contact</u>	<u>Score</u>
Frequent	3
Occasional	2
Rare	1
No contact	0

The scores obtained by a respondent for all the above personnel were added together to determine the BKB personnel contact score.

Attitude towards BKB agricultural loan: Attitude of a respondent was used to refer his feelings and actions toward BKB agricultural loan. There were 8 (Eight) statements consisting of 4 (Four) positive and 4 (Four) negative related to BKB agricultural loan. A statement was considered positive if it possessed an idea favorable towards the BKB agricultural loan. On the other hand, a statement was considered negative if it was unfavorable towards the BKB agricultural loan. The respondents were asked to express their opinion in the form of strongly agree, agree, undecided, disagree and strongly disagree. A score of 5 was given to strongly agree, 4 to agree, 3 to undecided, 2 to disagree and 1 to strongly disagree whenever the statement was positive. A reverse scoring method was followed in case of negative statement such as strongly disagree 5, disagree 4, undecided 3, agree 2 and strongly agree 1. The sum total of the scores obtained by a respondent was his/her score for this variable. The scores of respondents could range from 8 to 40, where 8 indicated highly unfavorable attitude and 40 indicated highly favorable attitude towards BKB agricultural loan.

3.7.2 Measurement of dependent variable

Impact of Bangladesh Krishi Bank (BKB) agricultural loan in the socio economic condition of small farmers was measured on the basis of changes occurred in five selected dimensions (changes in annual income, changes in housing, changes in sanitation, changes in source of drinking water and changes in farm and house hold materials) of livelihood of the respondents as a result of their involvement with BKB agricultural loan program. The measurements of selected dimensions are as follows:

Changes in annual income: A respondent's annual family income was measured in Taka on the basis of his yearly earning. All of his crops yields of previous year were converted into Taka according to prevailing market price. The prices of other enterprise (livestock, poultry and fisheries) were also added to the annual income. Earnings from non

agricultural sectors (business, service, labor etc.) of a respondent were also included in the income computation.

Income from different sources were added together to obtain total family income. For calculation of income score, one score was assigned for each one thousand ('000') Taka. The change in annual income was determined by computing income score of the respondents between “before” and “after” involvement with BKB agricultural loan program. The change in annual income was categorized as follows:

<u>Change in annual income</u>	<u>Assigned score</u>
No change	0
Low change (1-15 thousand Tk.)	1
Medium change (above 15-30 thousand Tk.)	2
High change (above 30 thousand Tk.)	3

Changes in housing: It referred to the condition of housing unit of respondent's household both “before” and “after” involvement with BKB agricultural loan program. There are five types of housing in the study area. For determining the type of housing unit each respondent was asked to indicate the nature of housing unit “before” and “after” receiving BKB agricultural loan. The change of housing unit was measured on the basis of housing unit score of the respondents “before” and “after” receiving BKB agricultural loan. Weights were assigned as follows:

<u>Types of housing unit</u>	<u>Weights</u>
No house at all	0
Katcha ghar with straw or plastic roof	1
Katcha ghar with tin roof	2
Pacca ghar with tin roof	3
Pacca ghar	4

Scores were assigned to determine the changes occurred in housing unit “before” and “after” receiving BKB agricultural loan as follows:

<u>Change in weights of housing unit</u>	<u>Assigned score</u>
No change (0)	0
Low change (1-2)	1
Medium change (3)	2
High change (4)	3

Changes in sanitation: It referred to the condition of sanitation of the respondents both “before” and “after” involvement with BKB agricultural loan program. There are four types of sanitation facilities in the study area, such as open place or bush, katcha toilet, half sanitary toilet and sanitary toilet. For determining the type of sanitation facilities each respondent was asked to indicate the nature of sanitation facilities “before” and “after” receiving BKB agricultural loan. The change of sanitation facilities was measured on the basis of sanitation score of the respondents “before” and “after” receiving BKB agricultural loan. Weights were assigned as follows:

<u>Types of sanitary facilities</u>	<u>Weights</u>
Open place or bush	0
Katcha toilet	1
Half sanitary toilet	2
Sanitary toilet	3

Scores were assigned to determine the changes occurred in sanitation “before” and “after” receiving BKB agricultural loan as follows:

<u>Change in sanitation</u>	<u>Assigned score</u>
No change (0)	0
Low change (1)	1
Medium change (2)	2
High change (3)	3

Changes in source of drinking water: It referred to the condition of source of drinking water facilities of the respondents both “before” and “after” involvement with BKB agricultural loan program. There were three types of facilities in the study area, such as water from river or pond, tube well from own and tube well from others. For determining

the type of facilities each respondent was asked to indicate the nature of source of drinking water facilities “before” and “after” receiving BKB agricultural loan. The change of source of drinking water facilities was measured on the basis of sanitation score of the respondents “before” and “after” receiving BKB agricultural loan. Weights were assigned as follows:

<u>Types of source of drinking water</u>	<u>Weights</u>
Water from river or pond	0
Water from well	1
Tube well from others	2
Tube well from own	3

Scores were assigned to determine the changes occurred in source of drinking water facilities “before” and “after” receiving BKB agricultural loan as follows:

<u>Change in drinking water</u>	<u>Assigned score</u>
No change (0)	0
Low change (1)	1
Medium change (2)	2
High change (3)	3

Changes in family asset: It referred to the condition of farm and house hold materials of the respondents both “before” and “after” involvement with BKB agricultural loan program. In this study 19 items were included to determine the asset possession of the respondents’ household. Each respondent was asked to indicate his possession against 19 items.

Sl. No	Items	Unit Price	No. of Items	Total Price
1	Khat			
2	Chowki			
3	Chair			
4	Table			
5	Bench			
6	Wooden almirah			

7	Show case			
8	Watch			
9	Radio			
10	Television			
11	Fan			
12	Bi-cycle			
13	Rickshaw			
14	Van			
15	Torch			
16	Cow			
17	Goat			
18	Hen			
19	Duck			
	Grand Total			

The total family asset was measured by multiplying the no. of items with the price of each item. Then all the prices of all items were added and change in family asset was measured between “before” and “after” involvement with BKB agricultural loan program. The change was categorized as follows:

<u>Change in family asset</u>	<u>Assigned score</u>
No change	0
Low change (1-15 thousand Tk.)	1
Medium change (above 15-30 thousand Tk.)	2
High change (above 30 thousand Tk.)	3

Final measurement of impact of BKB agricultural loan: Finally impact of BKB agricultural loan in the socio economic condition of small farmers was measured by the addition of scores of all the selected five dimensions. Thus this score could range from 0 to 15, while ‘0’ indicating no impact and ‘15’ indicating highest impact in the socio economic condition of the respondents.

3.8 Measurement of Problem Confrontation Index

It is obvious that the rural people face a number of problems or constraints in receiving and utilizing loans. However, after discussion with the respondents 5 major problems in receiving and utilizing BKB agricultural loan were selected to measure the extent of problem faced. A four-point rating scale was used to determine problem confrontation during receiving and utilizing BKB agricultural loan. Each respondent was asked to express his opinion in the form of one of the four responses such as severe, moderate, little and not at all. Scores of 3, 2, 1 and 0 were assigned respectively in each of the responses for an item. For each of the components, problem confrontation on receiving and utilizing BKB agricultural loan of respondents was determined by summing all the scores obtained by him. To determine the rank order of the identified problems, Problem Confrontation Index (PCI) for each problem was measured using the following formula:

$$\text{PCI} = (\text{P}_1 \times 3) + (\text{P}_2 \times 2) + (\text{P}_3 \times 1) + (\text{P}_4 \times 0)$$

Where,

PCI = Problem Confrontation Index

P₁ = No. of the respondents confronted as severe problem

P₂ = No. of the respondents confronted as moderate problem

P₃ = No. of the respondents confronted as little problem

P₄ = No. of the respondents confronted as no problem

3.9 Statement of the Hypothesis

As defined by Goode and Hatt (1952) “A hypothesis, which can be put to a test to determine its validity. It may be contrary to, or in accord with common sense. It may prove to be correct or incorrect. In any event, however, it leads to an empirical test.” In studying the relationship between variables, research hypotheses are formulated which state the anticipated relationship between the variables. However, for statistical test it becomes necessary to formulate null hypothesis. In studying relationship between variables a hypothesis was formulated which stated the anticipated relationship between the variables. In this study the null hypotheses were framed as “There is no relationship

between the selected characteristics of the small farmers of Sarishabari upazila and the impact of Bangladesh Kirshi Bank agricultural loan". The selected characteristics were: age, level of education, family size, farm size, loan availability, loan utilization, organizational participation, communication with BKB employees and staff and attitude towards BKB agricultural loan.

3.10 Statistical Analysis

The collected data were compiled, tabulated, coded and analyzed in accordance with the objectives of the study. The statistical measures such as number and percentage distribution were used for describing the variables of the study. In order to explore the relationships between the selected characteristics of the farmers and the impact of BKB agricultural loan, Karl Pearson Correlation Co-efficient (r) was computed. Correlation matrix was also computed to determine the interrelationships among the variables. Five percent (0.05) and one percent (0.01) level of significance was used as the basis of rejecting any null hypothesis.

If the computed value of co-efficient of correlation ' r ' was equal to or greater than table value at designated level of significance for the relevant degrees of freedom, the null hypothesis was rejected and it was concluded that there was significant relationship between the concerned variables. However, when the computed value of co-efficient of correlation was found to be smaller than the tabulated value at the designated level of significance for the relevant degrees of freedom, it was concluded that the null hypothesis could not be rejected and hence there was no relationship between the concerned variables.

CHAPTER IV

RESULTS AND DISCUSSION

The findings of the study and interpretations of the results have been presented in this Chapter. The first section deals with the nine selected characteristics of the respondents, while the second section deals with the impact of Bangladesh Krishi Bank (BKB) agricultural loan on the socio-economic condition of small farmers. The third section deals with the relationships between the selected characteristics of farmers and impact of BKB agricultural loan on socio-economic condition of small farmers. Finally, the fourth section contained the problems faced by the beneficiaries in receiving and utilizing BKB agricultural loan.

4.1 Selected Characteristics of the Small Farmers

This section concerned with the findings of the nine selected characteristics of the farmers in nine subsections. The selected characteristics included age, level of education, farm size, family size, loan received, loan utilization, organizational participation, communication with BKB personnel and attitude towards BKB agricultural loan.

4.1.1 Age

Age of the respondents ranged from 30 to 63 years, the average being 47.13 years and the standard deviation was 7.94. On the basis of age, the farmers were classified into three categories: Young aged (up to 35 years), middle aged (36-50 years) and old aged (above 50 years). Table 4.1.1 contains the distribution of Bangladesh Krishi Bank agricultural loan beneficiaries according to their age.

Table 4.1.1 Distribution of Bangladesh Krishi Bank agricultural loan beneficiaries according to their age

Category	Farmers		Mean	SD
	No.	Percent		
Young Age (Up to 35)	12	10.91	47.13	7.94
Middle Age (36-50)	60	54.55		
Old Age (Above 50)	38	34.55		
Total	110	100.00		

Data presented in Table 4.1.1 indicated that the highest proportion (54.55 percent) of the beneficiaries felt in the middle aged category compared to 34.55 percent into old age category. Only a small portion (10.91 percent) of the respondent beneficiaries fell into young age category. The findings indicated that a large proportion (89.09 percent) of the farmers were middle aged to old aged. The middle and old aged farmers had more farming experience. After taking loan from any organization they are able to produce more farm products and can contribute to the upliftment of socio-economic condition of the society.

4.1.2 Level of education

The education score of the respondents ranged from 0 to 16 with an average being 3.24 and the standard deviation was 3.72. Based on their level of education, the respondents were categorized into four categories: no education (0-0.5), primary education (1-5), secondary education (6-10) and higher education (Above 10). Table 4.1.2 shows the distribution of the respondents according to their level education scores. From the table, it was revealed that majority of the respondents (48.18 percent) had no institutional education compared to 33.64 percent having primary education and 14.55 percent having secondary education. Only 3.64 percent of the BKB agricultural loan beneficiaries have higher education.

Table 4.1.2 Distribution of Bangladesh Krishi Bank agricultural loan beneficiaries according to their level of education

Category	Farmers		Mean	SD
	No.	Percent		
No Education (0-0.5)	53	48.18	3.24	3.72
Primary Education (1-5)	37	33.64		
Secondary Education (6-10)	16	14.55		
Higher Education (Above 10)	4	3.64		
Total	110	100.00		

From the data presented in Table 4.1.2 it can be generalized that most (81.82 percent) of the respondents were either illiterate or had only primary level of education. Such type of

educational status might have made them landless, homeless and poor. The situation might appear to be quite normal in a usual rural background of Bangladesh.

4.1.3 Family size

Family size of the respondent farmers ranged from 2 to 7 with an average of 4.65 and standard deviation 1.29. On the basis of family size the respondent beneficiaries were classified into 3 categories such as small (up to 4 members), medium (5-6 members) and large (above 6 members) shown in Table 4.1.3. Data presented in Table 4.1.3 show that the highest proportion (48.18 percent) of the farmers belonged to the small family size category compared to 40.00 percent of the farmers belonged to medium category and a small proportion (11.82 percent) had large family size.

Table 4.1.3 Distribution of Bangladesh Krishi Bank agricultural loan beneficiaries according to their family size

Category	Farmers		Mean	SD
	No.	Percent		
Small (Up to 4)	53	48.18	4.65	1.29
Medium (5-6)	44	40.00		
Large (Above 6)	13	11.82		
Total	110	100.00		

It is revealed from the table that majority (88.18 percent) of the respondents belonged to small to medium family size category. The data also indicate that the average family size of the study area was 4.65 where the average family size of Bangladesh is 4.40 (BBS, 2011). It is a sign of awareness of the respondents regarding family planning and birth control. This success was achieved by the contribution of the Department of Health and Family Planning and different government and non-government organizations in the study area.

4.1.4. Farm size

In the study area farm size varied from 0.10 to 2.01 hectares. The average farm size was 0.74 hectare with a standard deviation of 0.37. The respondent farmers were classified into

four categories based on their farm size such as marginal farm (Up to 0.20 ha), small farm (0.21 to 1.00 ha), medium farm (1.01 to 2.00 ha) and large farm (more than 2.00 ha) as shown in Table 4.1.4.

Table 4.1.4 Distribution of Bangladesh Krishi Bank agricultural loan beneficiaries according to their farm size

Category	Farmers		Mean	SD
	No.	Percent		
Marginal farm (Up to 0.20 ha)	8	7.27	0.74	0.37
Small farm (0.21 to 1.00 ha)	75	68.18		
Medium farm (1.01 to 2.00 ha)	25	22.73		
Large farm (more than 2.00 ha)	2	1.82		
Total	110	100.00		

Data in Table 4.1.4 show that highest proportion (68.18 percent) of the farmers belonged to medium farm size category whereas 22.73 percent belonged to medium farm size, 7.27 percent marginal farm size and only 1.82 percent large farm size. Most (90.91 percent) of the beneficiaries had fallen into small to medium farm size categories. It showed that the respondents might face resource constraints in managing their farm. The study area appeared to be highly heterogenic in terms of farm size.

4.1.5 Loan availability

Loan availability scores of the respondent farmers ranged from 10 to 80 with an average of 41.57 and standard deviation 16.50. Based on the loan availability scores the respondents were categorized into three categories as small loan recipient (up to 30), medium loan recipient (31-50) and high loan recipient (above 50). Table 4.1.5 shows the distribution of BKB agricultural loan beneficiaries according to their loan receive scores.

Table 4.1.5 Distribution of Bangladesh Krishi Bank agricultural loan beneficiaries according to their loan availability scores

Category	Farmers		Mean	SD
	No.	Percent		
Small loan recipient (up to 30)	24	21.82	41.57	16.50
Medium loan recipient (31-50)	68	61.82		
High loan recipient (above 50)	18	16.36		
Total	110	100.00		

Table 4.1.5 indicates that the highest proportion (61.82 percent) of the respondent farmers of the study area were medium loan recipient while 21.82 percent were small loan recipient and 16.36 percent were large loan recipient. From the table it is shown that majority of the farmers had fallen into small to medium farm size category and they need medium amount of loan to meet their needs. Sarker (2007) also found that about half of the respondents (49 percent) were medium BRDB credit recipient.

4.1.6 Loan utilization

Loan utilization scores of the beneficiary farmers ranged from 0 to 4. An average loan utilization score of the farmers was 2.37 and standard deviation 1.12. On the basis of their loan utilization scores, the respondents were categorized into four categories, as no utilization, low utilization, medium utilization and high utilization. Data in Table 4.1.6 showed the distribution of BKB agricultural loan beneficiaries according to their loan utilization. Data contained in Table 4.1.6 indicated that the 40.91 percent of the respondents had high loan utilization compared to 36.36 percent had medium utilization and 20.00 percent had low utilization. Data also revealed that only 2.73 percent of the respondents had no utilization of loan at all in the assigned purposes.

Table 4.1.6 Distribution of Bangladesh Krishi Bank agricultural loan beneficiaries according to their loan utilization scores

Category	Farmers		Mean	SD
	No.	Percent		
No utilization (0)	3	2.73	2.37	1.12
Low utilization (1)	22	20.00		
Medium utilization (2)	40	36.36		

High utilization (above 2)	45	40.91		
Total	110	100.00		

4.1.7 Organizational participation

The computed organizational participation scores of the farmers ranged from 0 to 22 with an average of 5.64 and standard deviation 4.97. According to the scores of organizational participation the respondent farmers were classified into no participation (0), low participation (1-7), medium participation (8-15) and high participation (16-22) as shown in Table 4.1.7.

Table 4.1.7 Distribution of Bangladesh Krishi Bank agricultural loan beneficiaries according to their organizational participation

Categories	Farmers		Mean	Standard deviation
	Number	Percent		
No participation (0)	27	24.55	5.64	4.97
Low participation (1-7)	52	47.27		
Medium participation (8-15)	28	25.45		
High participation (16-22)	3	2.73		
Total	110	100		

The data contained in the Table 4.1.7 show that most (47.27 percent) of the farmers of the study area had low organizational participation. A mentionable number (24.55 percent) had no organizational participation and 25.45 percent had medium organizational participation. Only a small proportion (2.73 percent) of the farmers had high organizational participation. This result indicates that in the study area village level organizations are very few and their activities are very poor.

4.1.8 Communication BKB personnel

Communication with BKB personnel scores of the respondents ranged from 0 to 9 with an average of 3.96 and standard deviation 2.00. Based on their communication, beneficiaries were classified into three categories as low communication (up to 3), medium communication (4-6) and high communication (above 6). Table 4.1.8 shows the

distribution of Bangladesh Krishi Bank (BKB) agricultural loan beneficiaries according to their communication exposure with BKB personnel.

Table 4.1.8 Distribution of Bangladesh Krishi Bank agricultural loan beneficiaries according to their communication with BKB personnel

Category	Farmers		Mean	SD
	No.	Percent		
Low communication (up to 3)	48	43.64	3.96	2.00
Medium communication (4-6)	46	41.82		
High communication (above 6)	16	14.54		
Total	110	100.00		

Data presented in the Table 4.1.8 reveal that 43.64 percent of the farmers had low communication with BKB personnel regarding agricultural loan while about equal proportion (41.82 percent) had medium communication and 14.55 percent of the respondent farmers had high communication with Bangladesh Krishi Bank officer and staff regarding agricultural loan.

4.1.9 Attitude towards BKB agricultural loan

According to Drever (1968) “an attitude is a more or less stable set or disposition of opinion, interest or purpose, evolving expectancy of certain kind of experience and readiness with appropriate kind of response”. Morgan *et al.* (1960) regarded “attitude as literally mental postures, guides conduct for which each new experience is referred before a response is made”.

Table 4.1.9 Distribution of Bangladesh Krishi Bank agricultural loan beneficiaries according to their attitude towards the use of BKB agricultural loan

Category	Farmers		Mean	SD
	No.	Percent		
Low favorable attitude (20-27)	29	26.36	29.22	4.10
Medium favorable attitude (28-34)	72	65.46		
High favorable attitude (35-40)	9	8.18		
Total	110	100.00		

Attitude of the respondent beneficiaries in the study area towards Bangladesh Krishi Bank agricultural loan was measured by asking them 8 questions. The attitude scores of the farmers ranged from 20 to 40 against the possible score 8 to 40 with an average of 29.22 and standard deviation 4.10. Based on the observed attitude scores the farmers were categorized into 3 categories: low favorable attitude (20-27), medium favorable attitude (28-34) and high favorable attitude (35-40) as shown in Table 4.1.9.

Data presented in the Table 4.1.9 shows that highest proportion (65.45 percent) of the farmers had medium favorable attitude towards BKB agricultural loan while 26.36 percent had low and 8.18 percent high favorable attitude. Most (73.64 percent) of the respondent farmers had medium to high favorable attitude. It is clear that they were satisfied in different loan products and services of Bangladesh Krishi Bank. So, they showed favorable attitude.

4.2 Impact of Bangladesh Krishi Bank agricultural loan on the socio-economic condition of small farmers

Bangladesh Krishi Bank agricultural loan played an important role in the upliftment of socio-economic condition and poverty alleviation of the beneficiaries. For measuring the impact of BKB agricultural loan, the social status of the beneficiaries before receiving loan was compared with their present condition. After receiving BKB agricultural loan, the social status of the beneficiaries has changed positively.

4.2.1 Salient features on five selected aspects of impact of BKB agricultural loan

The impact of BKB agricultural loan in socio-economic condition of the respondents can be assessed by comparing information about ‘before’ and ‘after’ condition on change in annual income, housing, sanitation, source of drinking water and family asset of the respondents. Salient features of this five selected aspects of impact of BKB agricultural loan are presented in Table 4.2.1.

Table 4.2.1 Salient features on five selected aspects of impact BKB agricultural loan

Dimension of impact of BKB agricultural loan	Categories	Farmers		Mean	Standard deviation
		No.	Percent		
Change in annual	No change (0)	29	26.36	1.30	1.00

income	Low change (1)	33	30.00		
	Medium change (2)	34	30.91		
	High change (3)	14	12.73		
Change in housing	No change (0)	51	46.36	0.80	0.90
	Low change (1)	36	32.73		
	Medium change (2)	17	15.46		
	High change (3)	6	5.45		
Change in sanitation	No change (0)	64	58.18	0.61	0.85
	Low change (1)	30	27.27		
	Medium change (2)	11	10.00		
	High change (3)	5	4.55		
Change in source of drinking water	No change (0)	69	62.73	0.47	0.67
	Low change (1)	30	27.27		
	Medium change (2)	11	10.00		
	High change (3)	0	0.00		
Change in family asset	No change (0)	54	49.09	0.82	0.97
	Low change (1)	31	28.18		
	Medium change (2)	16	14.55		
	High change (3)	9	8.18		

a) Change in annual income: Table 4.2.1 shows that the highest proportion (30.91 percent) of respondents had medium change in annual income. Equal proportion (30.00 percent) of the farmers had low change in annual income. Only 12.73 percent of the respondent farmers changed their income at higher level. It is revealed from the table that 26.36 percent had no change in their annual income after taking agricultural loan from Bangladesh Krishi Bank. Sarker (2007) found that 58 percent of the respondent had medium change in family income and Khan (2006) found 76 percent of the respondent had low change in family income.

b) Change in housing: It was found from the result table that about half (46.36 percent) of the respondents could not able to change their housing condition but about one-third (32.73 percent) of the respondent farmers could change in low level, 15.46 percent could change in medium level and 5.45 percent could changed in high scale.

c) Change in sanitation: It was revealed that majority (58.18 percent) of the respondents could not able to change their sanitation. 27.27 percent had low change, 10.00 percent had medium change and only 4.55 percent of the respondent farmers had high change in sanitation after involvement with Bangladesh Krishi Bank.

d) Change in source of drinking water: Data in Table 4.2.1 show that most (62.73 percent) of the respondents had their own tube well for drinking water and they had no change in drinking water. 27.27 percent had low change, 10.00 percent had medium change in case of source of drinking water.

e) Change in family asset: The findings of family asset of the respondents before and after involvement with BKB agricultural loan has been shown in Table 4.2.1. About half (49.09 percent) of the respondents could not improve their family asset, 28.18 percent could improve their family asset at low scale, 14.55 percent could improve at medium scale and 8.18 percent of the respondents improved their family asset possession in high scale after their involvement in Bangladesh Krishi Bank. Sarker (2007) found 52percent of the respondent could improve their family asset possession in medium scale compared to 31 percent of them could improve in low scale and 17 percent in higher scale.

4.2.2 Impact of Bangladesh Krishi Bank agricultural loan

Impact of Bangladesh Krishi Bank (BKB) agricultural loan score was found to range from 0 to 10 against the possible range of 0 to 15 with an average of 4.00 and standard deviation 2.89. Based on the observed scores the respondents were categorized into three categories as low impact, medium impact and high impact. Data in Table 4.2.2 show the distribution of respondents according to impact of BKB agricultural loan.

Table 4.2.2 Distribution of respondents according to impact of BKB agricultural loan

Category	Farmers		Mean	SD
	No.	Percent		
Low impact (Up to 3)	61	55.46	4.00	2.89
Medium impact (4-7)	29	26.36		
High impact (8-10)	20	18.18		

Total	110	100.00		
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Data presented in Table 4.2.2 revealed that more than half (55.46 percent) of the respondents belonged to low impact category compared to 26.36 percent having medium impact, while 18.18 percent had high impact after involvement with BKB agricultural loan. Sarker (2007) in his study concluded that 60 percent of the respondents had perceived medium impact compared to 38 percent had perceived low impact and only 2 percent had perceived high impact after involvement with BRDB micro-credit program.

4.3 Relationship between the respondents' selected characteristics and the impact of Bangladesh Krishi Bank agricultural loan on socio-economic condition of small farmers

The purpose of this section is to explore the relationship of nine selected characteristics of the respondents with the impact of Bangladesh Krishi Bank agricultural loan. The nine selected characteristics constituted the independent variables and the impact of agricultural loan is the dependent variable.

Karl Pearson correlation co-efficient 'r' was used to test the null hypothesis between the two concerned variables. Five percent and one percent level of significance was used as the basis for rejection of null hypothesis. The summary of the results of the correlation co-efficient between the selected characteristics of the respondents and impact of BKB agricultural loan in socio-economic condition of small farmers has been shown in Table 4.3. The correlation matrix is presented in Appendix B.

Table 4.3 Correlation Co-efficient between the selected characteristics of the farmers and impact of BKB agricultural loan

Dependent Variable	Independent Variables	Correlation Co-efficient	Tabulated Value of 'r' at 108 degree of freedom
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			0.05	0.01
Impact on socio-economic condition of small farmers	Age	0.105 ^{NS}	0.183	0.238
	Level of Education	-0.050 ^{NS}		
	Family Size	0.168 ^{NS}		
	Farm Size	0.722 ^{**}		
	Loan Availability	0.809 ^{**}		
	Loan Utilization	0.270 ^{**}		
	Organizational Participation	0.072 ^{NS}		
	Communication with BKB personnel	-0.051 ^{NS}		
	Attitude towards BKB agricultural loan	0.055 ^{NS}		

NS = Non significant

* = Significant at 5 percent (0.05) level

** = Significant at 1 percent (0.01) level

4.3.1 Age and impact of BKB agricultural loan

The relationship between age of the beneficiaries and impact of BKB agricultural loan was examined by testing the null hypothesis: “There is no relationship between age of the beneficiaries and impact of BKB agricultural loan on socio-economic condition of the small farmers”.

As shown in the Table 4.3 the co-efficient of correlation between the concerned variables was computed and found to be ‘r’ = 0.105 which led to the following observation.

- The relationship showed a positive trend.
- The computed value of ‘r’ (0.105) was smaller than the tabulated value (r = 0.183) with 108 degrees of freedom at 0.05 level of significance.
- Hence, the concerned null hypothesis could not be rejected.

Based on the findings, the researcher concluded that age of the respondents had no significant relationship with the impact of Bangladesh Krishi Bank agricultural loan on socio-economic condition of the small farmers. Sarker (2007) also found positive, but non-significant relationship between age and impact of BRDB micro-credit.

4.3.2 Level of education and impact of BKB agricultural loan

The relationship between level of education of the respondents and the impact BKB agricultural loan was examined by testing the null hypothesis: “There is no relationship between level of education of the beneficiaries and impact of BKB agricultural loan on socio-economic condition of the small farmers”.

As shown in the Table 4.3 the co-efficient of correlation between the concerned variables was computed and found to be ‘r’= -0.050 which led to the following observations.

- The relationship showed a tendency in the negative direction between the concerned variables.
- The computed value of ‘r’ (-0.050) was smaller than the tabulated value (r = 0.183) with 108 degrees of freedom at 0.05 level of significance.
- Hence, the concerned null hypothesis in this aspect could not be rejected.

It was therefore suggested that the level of education of the beneficiaries had a negative, but non-significant relationship with the impact of BKB agricultural loan.

4.3.3 Family size and impact of BKB agricultural loan

The relationship between family size of the farmers and the impact BKB agricultural loan was examined by testing the null hypothesis: “There is no relationship between family size of the beneficiaries and impact of BKB agricultural loan on socio-economic condition of the small farmers”.

As shown in the Table 4.3 the co-efficient of correlation between the concerned variables was computed and found to be ‘r’= 0.168 which led to the following observation.

- The relationship showed a tendency in the positive direction between the concerned variables.
- The computed value of ‘r’ (0.168) was smaller than the tabulated value (r = 0.183) with 108 degrees of freedom at 0.05 level of significance.
- Hence, the concerned null hypothesis in this aspect could not be rejected.

It was therefore suggested that the family size of the farmers had a positive, but non-significant relationship with the impact of BKB agricultural loan. This indicated that impact of agricultural loan positively influenced by the respondents' family size. Sarker (2007) also found similar result. But Islam (2001) and Rashid (2001) had found positive non-significant relationship between family size and impact of micro-credit in their studies.

4.3.4 Farm size and impact of BKB agricultural loan

The relationship between farm size of the respondent farmers and the impact BKB agricultural loan was examined by testing the null hypothesis: "There is no relationship between farm size of the beneficiaries and impact of BKB agricultural loan in socio-economic condition of the small farmers".

Computed value of the co-efficient of correlation between the concerned variables was found to be $r = 0.722$ as shown in Table 4.3. The following observations were recorded regarding the relationship between the two variables on the basis of the correlation co-efficient.

- The relationship showed a tendency in the positive direction between the concerned variables.
- The computed value of 'r' (0.722) was found to be greater than the tabulated value ($r=0.238$) at 0.01 level of significance with 108 degrees of freedom.
- The concerned null hypothesis was rejected.

From the above findings, the researcher concluded that farm size of the respondents had a positive and highly significant relationship with the impact of Bangladesh Krishi Bank agricultural loan. This means that farm size was related in changing the socio-economic condition of the respondents. Similar findings were found by Sarker (2007) and Solaiman (2007).

4.3.5 Loan availability and impact of BKB agricultural loan

The relationship between loan availability of the farmers and the impact BKB agricultural loan was examined by testing the null hypothesis: “There is no relationship between loan received by the beneficiaries and impact of BKB agricultural loan on socio-economic condition of the small farmers”.

The co-efficient of correlation between the loan received and the impact of BKB agricultural loan was found to be ‘r’= 0.809 as shown in Table 4.3. The following observations were recorded regarding the relationship between the two variables under consideration:

- The relationship showed a positive trend.
- The computed value of ‘r’ (0.809) was larger than the table value ($r=0.238$) with 108 degrees of freedom at 0.01 level of significance.
- The concerned null hypothesis was rejected.

It was therefore suggested that the loan availability of the farmers had a positive and significant relationship with the impact of BKB agricultural loan on socio-economic condition of small farmers. This means that loan availability of the farmers was related in changing the condition of respondents. Similar finding was also found by Sarker (2002), Solaiman (2007) and Sarker (2007).

4.3.6 Loan utilization and impact of BKB agricultural loan

The relationship between loan utilization by the farmers and the impact BKB agricultural loan was examined by testing the null hypothesis: “There is no relationship between loan utilization by the beneficiaries and impact of BKB agricultural loan on socio-economic condition of the small farmers”.

Table 4.3 showed that the calculated value of ‘r’ = 0.270 which led the following observations:

- The relationship showed a tendency in the positive direction between the concerned variables.

- The calculated value of 'r' (0.270) was found to be larger than the tabulated value of 'r' = 0.238 at 0.01 level of significance with 108 degrees of freedom.
- The concerned null hypothesis in this aspect was rejected.

Based on the finding, it can be concluded that loan utilization of the respondents had positive and highly significant relationship with the impact of BKB agricultural loan. But Sarker (2007) found a non-significant relationship with the impact of BRDB micro-credit.

4.3.7 Organizational participation and impact of BKB agricultural loan

The relationship between organizational participation of the respondent farmers and the impact BKB agricultural loan was examined by testing the null hypothesis: "There is no relationship between organizational participation of the beneficiaries and impact of BKB agricultural loan on socio-economic condition of the small farmers".

Co-efficient of correlation between the two conceded variables was found to be 'r'=0.072 as shown in Table 4.3. The following observations were made regarding the relationship between the two variables under consideration:

- The relationship showed a positive trend.
- The computed value of 'r' (0.072) was smaller than the tabulated value (r=0.183) with 108 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis could not be rejected.

The researcher concluded that organizational participation of the respondent farmers had no significant relationship with the impact of Bangladesh Krishi Bank agricultural loan in socio-economic condition of small farmers. In order to improve the impact of agricultural loan the organizational participation of the respondents should be increased.

4.3.8 Communication with BKB personnel and impact of BKB agricultural loan

The relationship between communication with Bangladesh Krishi Bank personnel by the respondent farmers and the impact of BKB agricultural loan was examined by testing the null hypothesis: "There is no relationship between communication with BKB personnel by

the beneficiaries and impact of BKB agricultural loan on socio-economic condition of the small farmers”.

Table 4.3 showed that the calculated value of ‘r’ = -0.051 which led to the following observations:

- The relationship showed a tendency in the negative direction between the concerned variables.
- The computed value of ‘r’ (-0.051) was found to be smaller than the tabulated value of ‘r’ = 0.183 at 0.05 level of significance with 108 degrees of freedom.
- The concerned null hypothesis in this aspect could not be rejected.

Therefore, the finding reveals that communication of the farmers with BKB personnel had no significant relationship with the impact of Bangladesh Krishi Bank agricultural loan on socio-economic condition of small farmers.

4.3.9 Attitude towards BKB agricultural loan and impact of BKB agricultural loan

The relationship between the attitude of the respondent farmers towards BKB agricultural loan and the impact BKB agricultural loan was examined by testing the null hypothesis: “There is no relationship between attitude of the beneficiaries and the impact of BKB agricultural loan on socio-economic condition of the small farmers”.

Co-efficient of correlation between the concerned variables was found to be ‘r’= 0.055 as shown in Table 4.3. The following observations were made regarding the relationship between the two variables under consideration:

- The relationship showed a tendency in the positive direction between the concerned variables.
- The computed value of ‘r’ (0.055) was smaller than the tabulated value (r=0.183) with 108 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis in this aspect could not be rejected.

The researcher concluded that attitude of the respondent farmers towards BKB agricultural loan had no significant relationship with the impact of agricultural loan on socio-economic condition of the small farmers.

4.4 Problem confrontation by the small farmers in receiving and utilizing Bangladesh Krishi Bank agricultural loan

Five major problems were selected for the study after consulting with the relevant experts which might be faced by beneficiaries in receiving and utilizing agricultural loan. The respondents were asked to indicate the extent of problem against any one of the four alternative responses for each problem, viz. severe, moderate, little and not at all. These were quantified by the scores 3, 2, 1 and 0 respectively. Then a Problem Confrontation Index (PCI) was computed for each problem by summing up the scores of all the respondents against the problem. PCI of a problem indicates the extent of seriousness of problem faced by the beneficiaries. The higher value of PCI of a problem, the greater the magnitude of the problem. Thus, PCI scores could range from 0 to 330, where 0 indicating very low problem and 330 indicating severe problem.

In order to understand the comparative importance of different problems and to identify the severity, the five problems were arranged in rank order and presented in Table 4.4.

Table 4.4 Rank order of the problem faced by the respondents in receiving and utilizing BKB agricultural loan

Sl. No.	Problems	Problem Confrontation Index (PCI)	Rank Order
01	The amount of loan is not adequate in terms of demand	239	1
02	Loan is not available in time of need	236	2
03	Loan disbursement is delayed due to longer process	188	4
04	Loan repayment period is very short	146	5
05	High rate of interest	232	3

Data in Table 4.4 indicated that on the basis of Problem Confrontation Index (PCI), ‘the amount of loan is not adequate in terms of demand’ ranked first followed by ‘loan is not

available in time of need'. 'High rate of interest' was ranked third, 'loan disbursement is delayed due to longer process' was ranked fourth and "loan repayment period is very short' was ranked last.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Introduction

Bangladesh has a primarily agrarian economy. Most Bangladeshis earn their living from agriculture. Bangladesh is one of the least development countries in the world. The economy is poor and vast majority of people live below poverty line, her resource base is narrow and contribution of agricultural sector still dominates the Gross Domestic Product (GDP). Giving the importance of agriculture in the national economy, it is clear that a slow and steady growth in agriculture will impose effective constraints to the achievement of major macro-economic objectives. Agricultural finance should be integrated as much as possible into an overall development approach based on support for agricultural production, the marketing of agricultural products, improvement in management capacity, protection of the environment and risk management.

Bangladesh Krishi Bank (BKB) has been established under the Bangladesh Krishi Bank order 1973 (President's Order No 27 of 1973). BKB is a banking company under the Banking Company Act-1991. The primary objective of BKB is to provide credit facilities to the farmers for the development of agriculture and entrepreneurs engaged in development of agro-based and cottage industries.

Bangladesh Krishi Bank finances for production of all the summer and winter crops, horticulture and nursery etc. The Bank attaches importance to use scientific method and modern technology in fish cultivation. It extends adequate credit support for excavation and re-excavation of ponds, round the year cultivation of species, which have rapid growth, cultivation of sweet water prawn and other

fishes. The Bank makes use of expertise of the concerned government agencies for bringing more ponds/water bodies under cultivation and increasing productivity.

Statement of the Problem

Farmers of Sarishabari upazila cultivate agricultural crops mainly on their land in order to produce food grains for subsistence of their families and for economic gain. They used to cultivate by taking micro-credit from different credit providing organizations. Traditional commercial banks fail to minimize the credit needs to the poor for three main reasons. First, those banks require collateral, which the poor find difficult to provide. Second, their procedures for filling in application forms and completing other formalities for obtaining loans are too cumbersome for the illiterate poor and third, they prefer handling large loans rather than the petty loans that the poor need.

Objectives of the Study

1. To determine and describe the selected characteristics of small farmers of Sarishabari upazila under Jamalpur district;
2. To ascertain the impact of BKB agricultural loan towards the socio economic condition of small farmers;
3. To explore the relationship between the selected factors of the small farmers and the impact of BKB agricultural loan in the socio economic condition;
4. To identify the problems faced by the BKB agricultural loan beneficiaries in receiving and utilizing of loans.

Hypothesis

In studying relationship between the selected characteristics of the respondent farmers (independent variables) and the impact of BKB agricultural loan on socio-economic condition of small farmers (dependent variable) a hypothesis was

formulated which stated the anticipated relationship between the variables. The null hypotheses were framed as “There is no relationship between the selected characteristics of the small farmers of Sarishabari upazila and the impact of Bangladesh Kirshi Bank agricultural loan”.

Methodology

Sarishabari upazila of Jamalpur District was the locale of the study. In the study area 5 branches of Bangladesh Krishi Bank were situated. Out of which Sarishabri branch was selected for the study, which is surrounded by three unions. An update list of all beneficiaries from those three selected unions was prepared with the help of Sub-Assistant Agriculture Officer and branch officials. The list comprised of 1103 farmers, out of which 110 (ten percent) farmers were randomly selected as representative sample by using random number table. Thus, the sample size of the study was 110 farmers.

For data collection an interview schedule was prepared as research instrument. It was prepared keeping the objectives and variables of the research in mind. Data obtained from the respondents were tabulated, coded, compiled and analyzed in accordance with the objectives of the study.

All these variables of the study were measured by computing appropriate scores. Various statistical measures such as mean, standard deviation, percentage and range were used in describing both the independent and dependent variables. To explore the relationship between the independent and dependent variables Correlation Co-efficient was measured.

Findings

The major findings of the study are summarized below:

Selected characteristics of the farmers and impact of BKB agricultural loan

Age: A large proportion (89.09 percent) of the farmers in the study area was middle aged to old aged category and only 10.91 percent was in young aged category.

Level of education: Most (81.82 percent) of the respondents were illiterate or had only primary level of education. 14.55 percent of the respondents have secondary education. And only 3.64 percent of the BKB agricultural loan beneficiaries have higher education.

Family size: The highest proportion (48.18 percent) of the farmers belonged to the small family size category compared to 40.00 percent of the farmers belonged to medium category and a small proportion (11.82 percent) to large family size category.

Farm size: Highest proportion (68.18 percent) of the farmers belonged to medium farm size category whereas 22.73 percent in medium farm size, 7.27 in marginal farm size and only 1.82 percent in large farm size category.

Loan availability: The highest proportions (61.82 percent) of the respondent farmers of the study area were medium loan recipient while 21.82 percent were small loan recipient and 16.36 percent were large loan recipient.

Loan utilization: Majority (40.91 percent) of the respondents had high loan utilization compared to 36.36 percent had medium utilization and 20.00 percent had low utilization. Data also revealed that only 2.73 percent of the respondents had no utilization of loan at all in the assigned purposes.

Organizational participation: About half (47.27 percent) of the farmers of the study area had low organizational participation. A mentionable number (24.55 percent) had no organizational participation and 25.45 percent had medium organizational participation. Only a small proportion (2.73 percent) of the farmers had high organizational participation.

Communication with BKB personnel: Highest proportion (43.64 percent) of the farmers had low communication with BKB personnel regarding agricultural loan while nearly equal proportion (41.82 percent) had medium communication and 14.55 percent of the respondent farmers had high communication with Bangladesh Krishi Bank officer and staff regarding agricultural loan.

Attitude towards BKB agricultural loan: Highest proportion (65.45 percent) of the farmers had medium favorable attitude towards BKB agricultural loan while 26.36 percent had low and 8.18 percent high favorable attitude. Most (73.64 percent) of the respondent farmers had medium to high favorable attitude.

Impact of Bangladesh Krishi Bank agricultural loan in the socio-economic condition of small farmers

a) Change in annual income: The highest proportion (30.91 percent) of respondents had medium change in annual income. Nearly equal proportion (30.00 percent) of the farmers had low change in annual income. Only 12.73 percent of the respondent farmers changed their income at higher level and 26.36 percent had no change in their annual income.

b) Change in housing: About half (46.36 percent) of the respondents could not able to change their housing condition but about one-third (32.73 percent) of the respondent farmers could change in low level, 15.46 percent could change in medium level and 5.45 percent could change in high scale.

c) Change in sanitation: Majority (58.18 percent) of the respondents could not able to change their sanitation. 27.27 percent had low change, 10.00 percent had medium change and only 4.55 percent of the respondent farmers had high change in sanitation.

d) Change in source of drinking water: Most (62.73 percent) of the respondents had their own tube well for drinking water and they had no change in drinking

water, while 27.27 percent had low change and 10.00 percent had medium change in case of source of drinking water.

e) Change in family asset: About half (49.09 percent) of the respondents could not improve their family asset, while 28.18 percent could improve their family asset at low scale, 14.55 percent could improve at medium scale and 8.18 percent of the respondents improved their family asset possession in high scale.

Finally, impact of Bangladesh Krishi Bank (BKB) agricultural loan score was found to range from 0 to 10 against the possible range of 0 to 15 with an average of 4.00 and standard deviation 2.89. More than half (55.46 percent) of the respondents belonged to low impact category, while 26.36 percent had belonged to medium impact and 18.18 percent belonged to high impact after involvement with BKB agricultural loan

Relationship between the respondents' selected characteristics and the impact of Bangladesh Krishi Bank agricultural loan on socio-economic condition of small farmers

Correlation analysis indicates that farm size, loan availability scores and loan utilization scores of the farmers had a positive and highly significant relationship with the impact of BKB agricultural loan in socio-economic condition of small farmers in Jamalpur district. Age, level of education, family size, organizational participation, communication with BKB personnel and attitude towards BKB agricultural loan had no significant relationship with the impact of BKB agricultural loan.

Problem confrontation by the small farmers in receiving and utilizing Bangladesh Krishi Bank agricultural loan

On the basis of Problem Confrontation Index (PCI), 'the amount of loan is not adequate in terms of demand' ranked first followed by 'loan is not available in time of need'. 'High rate of interest' was ranked third, 'loan disbursement is delayed due

to longer process' was ranked fourth and "loan repayment period is very short' was ranked last.

5.2 Conclusion

Conclusions have been drawn on the basis of the findings of the study, the logical interpretation of their meanings and other relevant facts are presented below:

- I. More than half (55.46 percent) of the respondents could change their socio-economic condition in low scale compared to 26.36 percent in medium scale and 18.18 percent in high scale after involvement with BKB agricultural loan program. Therefore it may be concluded that there is an opportunity to improve the socio-economic status of the beneficiaries by increasing more loan facilities for them.
- II. Most (81.82 percent) of the respondents in the study area were illiterate or had only primary level of education. Education makes an individual more responsible and more accountable. Consequently the educated loanee becomes more cautious to utilize their loan properly. Hence, it may be concluded that a literacy program would be very effective for the illiterate loanee for the optimization of loan utilization.
- III. Farm size of the respondent farmers had a positive and highly significant relationship with impact of BKB agricultural loan in socio-economic condition of the small farmers. So, it was concluded that beneficiaries with

large farm size could use more input to their farm with a help of agricultural loan.

- IV. Loan availability and loan utilization had a positive and highly significant relationship with the impact of agricultural loan on socio-economic condition of the farmers. Therefore, it may be concluded that these factors might have a great influence for socio-economic development of the beneficiaries.
- V. On the basis of Problem Confrontation Index (PCI), 'the amount of loan is not adequate in terms of demand' ranked first followed by 'loan is not available in time of need'. 'High rate of interest' was ranked third, 'loan disbursement is delayed due to longer process' was ranked fourth and "loan repayment period is very short' was ranked last. Necessary steps should be taken to mitigate the problems in receiving and utilizing the BKB agricultural loan.

5.3 Recommendations

Based on the findings of the present study and also on the basis of present and past experiences the following recommendations were made:

5.3.1 Recommendations for policy implications

Recommendations based on the findings and conclusions of the study are presented below:

- I. Agri. loan is an important input which supports other inputs for increased production and raising income of the rural small farmers. It is therefore, recommended that sufficient amount of loan need to be supplied timely to the small farmers at a lower interest rate with simple terms and conditions.
- II. The loaners should be allowed more time to return their money after receipt. Otherwise, they may have the tendency to borrow money from village moneylenders and return the loan according to the schedule.
- III. Close supervision should be ensured by the Bangladesh Krishi Bank authorities for proper utilization of fund, otherwise improper utilization of fund will affect in repayment.
- IV. Agri. loan pass book issued by the bank to the farmers should be developed as a device so that credit pass book would be enough to get the loan.
- V. As cited by the respondents, there were five problems in receiving and utilizing the loan. All these problems deserve to be addressed by the BKB personnel. It is, therefore, recommend that the BKB authorities should give attention to the solution of those problems.

5.3.2 Recommendations for further study

A small piece of study cannot provide all information for the proper understanding of the impact of Bangladesh Krishi Bank agricultural loan in socio-economic condition of small farmers. Therefore, the following recommendations were made for further study:

- I. Relationship of nine selected characteristics of the beneficiaries with the impact of agricultural loan was studied in this piece of research work. Further research work should be undertaken with a view to exploring relationship of other socio-economic profiles of the beneficiaries with the impact of agricultural loan.
- II. The present study was conducted in three unions of Sarishbari upazila under Jamalpur district. It is recommended that similar studies should be conducted in other areas of Bangladesh.
- III. Similar study may be conducted by other leading credit providing organizations or other agricultural loan providing banks of the country in order to gain more meaningful insights.

CHAPTER VI

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APPENDIX-A

ENGLISH VERSION OF THE INTERVIEW SCHEDULE

DEPARTMENT OF AGRICULTURAL EXTENSION AND INFORMATION SYSTEM

SHER-E-BANGLA AGRICULTURAL UNIVERSITY, DHAKA-1207

AN INTERVIEW SCHEDULE FOR COLLECTION OF DATA

ON

“IMPACT OF BANGLADESH KRISHI BANK AGRICULTURAL LOAN ON
THE SOCIO ECONOMIC CONDITION OF SMALL FARMERS IN
SARISHABARI UPAZILA OF JAMALPUR DISTRICT”

SL.

NO.....

Name of the respondent :

Village :

Union :

Please answer the following questions (put tick mark on the appropriate place where applicable):

1. Age

How old are you? Years.

2. Level of Education

Please mention your educational level

a) Cannot read and write b) Can sign only

c) I read up-to class

3. Family Size: What is the number of your family member

a) Male b) Female c) Total

4. Farm Size

Please mention your land holdings according to nature of tenure:

Sl. No.	Types of land	Land area	
		Local unit	hectare(ha)
A ₁	Homestead area including pond		
A ₂	Land under own cultivation		
A ₃	Land given to others on share cropping		
A ₄	Land taken from others on share cropping		
A ₅	Land taken from others on lease		
	Total = A ₁ + A ₂ +1/2(A ₃ + A ₄)+ A ₅		

5. Loan Availability

Have you received any loan from the any organizations? Yes No

If yes, from which sources you received loan? Please mention

Sl. No.	Sources of Loan Availability	Amount of Loan Received (Tk)
1	Bangladesh Krishi Bank	
2	SCBs (Sonali, Agrani, Janata and Rupali)	
3	Other Commercial Banks	
4	Grammen Bank	
5	BRDB	
6	NGOs	
7	Co-Operative Society	
8	Friends and Relatives	
9	Neighbors	

6. Loan Utilization

Please indicate the utilization of your last year's loan received from Bangladesh Krishi Bank.

Purpose of Loan Received	Utilization of loan received			Effect of loan utilization		
	Fully in assigned purpose	Partially in assigned purpose	Fully in other than assigned purpose	Profit	Neither loss nor profit	Loss
Agriculture						
Housing						
Education						
Business						
Others						

7. Organizational Participation

Please give a detailed information about your organizational participation according to the following table:

Sl. No.	Name of the organization	Nature of participation				Duration
		No participation	Ordinary member	Executive member	Executive officer	
1	Youth club					
2	School/Mosque/Mondir committee					
3	Bazaar committee					
4	Village development committee					
5	Farmers co-operative association					
6	NGO's Committee					
7	Union parishad					

8. Communication with Bangladesh Krishi Bank Personnel

Sl. No.	BKB personnel	Frequency of contact			
		Frequent	Occasional	Rare	No contact
1	Area manager				
2	Branch manager				
3	Loan officer				
4	Field assistant				

9. Attitude towards Bangladesh Krishi Bank (BKB) Agricultural Loan

Please express your attitude towards Bangladesh Krishi Bank agricultural loan in the following aspects:

Sl. No.	Statement	Nature of Opinion				
		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
1 (+)	Agricultural loan program of BKB is a great step to improve the socio-economic condition of rural people.					
2 (+)	BKB agricultural loan program is better than any other poverty alleviation program.					
3 (+)	Agricultural loan program of BKB creates an opportunity of self-employment.					
4 (+)	Changes have been occurred due to adoption of loan.					
5 (-)	The amount of credit is not sufficient as per need.					
6 (-)	Documentation process is complex than other credit providing organization.					
7 (-)	Branch managers are not interested to provide loan due to lower interest rate compared to other loan.					
8 (-)	Field workers do not supervise regularly.					

10. Impact of Bangladesh Krishi Bank Agricultural Loan

Please give the following information on changes in livelihood status:

a) Changes in annual income

Source of income	Before involvement with BKB (Tk./Year)	After involvement with BKB (Tk./Year)
<u>Agriculture sources</u> a) Rice (Aus, Aman & Boro) b) Wheat c) Maize d) Jute e) Sugarcane f) Pulse & Oil seed g) Vegetable & Fruits h) Livestock i) Poultry j) Fisheries		
<u>Non-agriculture sources</u> a) Service b) Business c) Labor d) Others (please specify)		

Total Income (Tk.)		
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b) Changes in housing

Sl. No.	Item of change	Before involvement with BKB	After involvement with BKB
1	No house at all		
2	Katcha ghar with straw or plastic roof		
3	Katcha ghar with tin roof		
4	Pacca ghar with tin roof		
5	Pacca ghar		

c) Changes in sanitation

Sl. No.	Item of change	Before involvement with BKB	After involvement with BKB
1	Open place or bush		
2	Katcha toilet		
3	Half sanitary toilet		
4	Sanitary toilet		

d) Changes in source of drinking water

Sl. No.	Item of change	Before involvement with BKB	After involvement with BKB
1	Water from river or pond		
2	Water form well		
3	Tube well from own		
4	Tube well from others		

e) Changes in family asset

Item of change	Unit price (Tk)	Before involvement with BKB		After involvement with BKB	
		No	Price	No	Price
1. Khat					

2. Chowki					
3. Chair					
4. Table					
5. Bench					
6. Wooden almirah					
7. Show case					
8. Watch					
9. Radio					
10. Television					
11. Fan					
12. Bi-cycle					
13. Rickshaw					
14. Van					
15. Torch					
16. Cow					
17. Goat					
18. Hen					
19. Duck					

11. Problem Confrontation

What problem do you face in receiving and utilizing BKB agricultural loan?

Please mention

Sl. No.	Nature of Problem	Extent of Problem Confrontation			
		Severe	Moderate	Little	Not at all
1	The amount of loan is not				

	adequate in terms of demand				
2	Loan is not available in time of need				
3	Loan disbursement is delayed due to longer process				
4	Loan repayment period is very short				
5	High rate of interest				

Thanks for your cooperation

Dated

.....
Signature of the Interviewer

APPENDIX-B

Correlation Matrix of the Variables

	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀
X ₁	-									
X ₂	-.180	-								
X ₃	.562**	-.001	-							
X ₄	.016	.060	.115	-						
X ₅	.093	.005	.149	.837**	-					
X ₆	.076	-.045	-.012	.191*	.212*	-				
X ₇	.267**	.144	.248**	-.027	-.026	.384**	-			
X ₈	-.052	.731**	-.036	.091	.051	-.032	.066	-		
X ₉	.535**	.005	.429**	-.035	.057	.147	.240*	.186	-	
X ₁₀	.105	-.050	.168	.722**	.809**	.270**	-.051	.055	.072	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

X₁ = Age

X₃ = Farm Size

X₅ = Loan Availability

X₇ = Organizational Participation

X₉ = Attitude towards BKB Agricultural Loan

X₂ = Level of Education

X₄ = Family Size

X₆ = Loan Utilization

X₈ = Communication with BKB per

X₁₀ = Impact of BKB Agricultural L