USE OF COMMUNICATION SOURCES IN RECEIVING AGRICULTURAL INFORMATION BY THE RURAL WOMEN

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CERTIFICATE

This is to certify that the thesis entitled, **"Use of Communication Sources in Receiving Agricultural Information by the Rural Women"** 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** embodies the result of a piece of bona fide research work carried out by **KAMRUZZAMAN, Registration No. 04-01225** 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, received during the course of this investigation has been duly acknowledgement.

Dated :

Dhaka, Bangladesh.

(Prof. Md. Shadat Ulla)
Supervisor

Dedicated

to My

Parents & Teachers

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The Author

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ABSTRACT

The purpose of the study was to have an understanding on the communication sources of the rural women regarding agricultural activities. The focus of the study was the involvement of rural women in agricultural activities in Surjyamani union under Bauphal upazila of Patuakhali district. Attempts were also made to determine and describe the selected characteristics of the rural women and to determine the relationship of the selected characteristics of the rural women with their use of communication sources. Data were collected from a random sample of 100 rural women of two selected village, namely Ramnagar and Nurainpur of Patuakhali district. Data revealed that more than half (59%) of the respondent had low use of communication sources in their agricultural activities as compare to 33% having medium and only 8% use of high communication sources. The characteristics such as age and time spent in agricultural work had no relationship with their use of communication sources. The other characteristics such as level of education, family size, annual family income, farm size, organizational participation and agricultural knowledge of the rural women had significant positive relationship with their use of communication sources in agricultural activities. Utilization of ten technologies by the rural women, the communication sources score ranged from 12 to 45 against the possible score 0 to160 to utilize these technology for their agricultural activity. It indicates very poor use of communication sources by the rural women in the study area.

CHAPTER 1

INTRODUCTION

1.1General Background

Bangladesh is an agro-based over-populated country. Development of socio-economic condition of Bangladesh fully depends upon the development of the village. Women in rural Bangladesh are major but largely unrecognized contributors to agricultural and economic productivity. Half of these human resources consist of women and the majority of them live in rural areas.

It is estimated that women are almost half of the total population of the world. In Bangladesh, 49.06 % of the populations are women of which 72.6% live in the rural area (BBS, 2011). Vertical increases may be possible through more intensive production and more involvement of women in production, activities. About 70% population of this country directly or indirectly live on agriculture(BBS, 2011). But agriculture in Bangladesh remains to be almost traditional and the technologies which are being developed did not reach the bonafied users more effectively for their applications.

Women's involvement in rural development, more particularly in agricultural development in Bangladesh, is the most important strategy designed to improve the social and economic life of specific group of farming community. Undoubtedly, the improvement provides various benefits of development to the target groups who seek a livelihood in rural areas. The basic aim of the government of Bangladesh (GOB) is to raise farm productivity and family income for socio economic welfare of the society for which it is intended to.

Women of these landless families cultivated different kinds of vegetables, fruits and earn money more than medium and large family (Halim, 1991). This income may meet a part of house hold expenditure for an average of 5.5 member family size (Anonymous, 1991). Women are the majority of the world's agricultural

producers, playing important roles in agriculture sector and as well as in fisheries, livestock management. Rural women play a key role in agricultural sector production by working with full passion in production of crops right from the soil preparation till post harvest and food security activities (Habib, 1996; ESCAP, 1996; Ahmed & Hussain, 2004).

Women contribute significantly in agricultural production but it has hardly been recognized. Because of the existence of a traditional society, male generally dominates in development activities in Bangladesh. The situation now seems to be changing considerably due to the introduction of new technologies in agriculture and rural life. In the economic development of Bangladesh the role of women cannot be over looked. Traditionally the women and their activities were confined in the homestead area (Halim, 1982). Akhter (1990) reported that women contribute to family income through homestead gardening activities such as fruit and vegetable gardening, poultry rearing, goat rearing etc. This income may meet a part of their household expenditure. The women are also involved with homestead agricultural production activities such as cultivation of vegetables, fruits, timber etc. and rearing of small'animals (goat, sheep) and poultry birds to supply goods and increase family income (Akther, 1990). Halim (1982) reported that the women are potential producer of the homestead agricultural products. But due to lack of knowledge, utilization of proper technology and proper communication sources the production remains below the expected level.

Although rural women are heavily engaged in agricultural activities but in the past very few organized efforts have been made to find out the comparative effectiveness of different communication media in disseminating homestead gardening information to the rural women.

From the above discussion, we can say that women can play an important role to fight against malnutrition and to boost up economic development specially both

from economic and nutritional point of view. The researcher becomes keenly interested to conduct an investigation on involvement of rural women in homestead vegetable cultivation.

1.2 Statement of the Problem

Women may be the key operators of the homestead production and are also actively involved in the field of agriculture. Women can contribute in both homestead gardening and field cropping. It is expected that the participation of women in development process could attribute significantly in h balanced socio economic growth and development of the country. So it is essential to provide adequate knowledge and training in order to provide them to perform their job in a better way in the various field of development activities especially increasing agricultural production. Very few researchers have as far been conducted on the use of communication sources the rural women in Bangladesh. But there are urgent needs to identify the information sources used by the rural women regarding agricultural purpose. Hence, the present study mainly deals with the communication sources of rural women for finding the answers to the following question;

(I) what were the information sources being used by the women regarding agriculture?

(11) What was 'the extent of use communication sources of the rural women?

(III) Which of the characteristics of the rural women were related with their communication sources regarding agriculture?

(IV) What were the weightage of the communication media used by the rural women regarding agriculture?

For getting answer of the above questions the researcher selected the following objectives of the study.

1.3 Objectives of the study

The following specific objectives of the study were being formulated in order to give proper direction of the study.

1. To determine and describe the use of communication sources by the rural women in receiving agriculture information.
2. To determine and describe some selected characteristics of the rural women. The characteristics are-
    I. Age
    II. Level of education
    III. Family size
    IV. Annual income of family
    V. Farm size
    VI. Time spent in agricultural work
    VII. Organizational participation
    VIII. Agricultural knowledge
3. To explore the relationship between selected characteristics of the rural women and their use of communication sources.

1.4 Scope of the Study

Finding of the study will be particularly applicable in a selected area of Surjyamani under Bauphal upazila under Patuakhali District. However, the findings may also have application for other areas of Bangladesh where the physical, socio-economic and cultural conditions do not differ much from those of study area. Thus, the findings will be helpful to the researcher, planners, policy makers and extension workers for promoting rural development also help to development of socio economic condition of the rural women.

1.5 Limitations of the Study

The present study was conducted to have an understanding about communication sources of the rural women regarding agricultural activity. But considering the time, money and necessary resources available, the study was conducted with the following limitations:

1. The study was confined to only one union.
2. The respondents for data collection were kept limited within the women of the rural families.
3. Characteristics of rural women were many and varied but in the present study, only eight characteristics were selected for investigation.
4. There are many communication sources from where rural women can receive information for their agricultural activities. But only few communication sources were selected for this study.

1.6 Significance of the Study

Now a day various government and non-government organizations are taking programs for increasing agricultural production. It is very much important to improve production technology of agriculture otherwise not possible to fulfill our food demand in our increasing population. Rural women play a vital role in agricultural production. Homestead gardening, poultry rearing, working in the crop field etc. agricultural activities are participating in rural women. So it is too much important to know new technologies, modern varieties, modern cultivation process etc. by rural women.

Surjomoni union is one of the most important unions in Patuakhali district. Most of the people are literate but most of the people who doing agricultural work are not literate also they are backward in agricultural activities. They are not aware of modern agriculture. Women of this union participate in agricultural activity. They are engaged with their agricultural production activities for a long period of time in day.Their participation and income generation activities improve the condition of their family.

But this may be due to the fact that they are not using the modem technologies, as they do not know about them or not motivated to use them commercially. Rural women usually perform agricultural activities with their indigenous knowledge. The change agent could motivate the women to change their present practices.

For better control over their activities and understanding, and to bring a desired change, the rural women should have exposure with different communication sources to get agricultural information and technologies. As a result the time and scope will fully be utilized and the production will be the satisfactory. Therefore this study would be very useful to policy planners in order to develop an extension approach for agricultural production program.

1.7 Hypothesis

To test relationship between the rural women involve in use of communication sources in receiving agricultural information and their selected characteristics, a null hypothesis was developed.

The null hypothesis of the study was "there is no relationship between selected each of the characteristics of the rural women and their involvement in use of communication sources in receiving agricultural information."

1.8 Assumptions

An assumption is the supposition that an apparent fact or principal is true in the light of available evidence (Gode, 1945). The researcher had the following assumptions were made in conducting the study:

1. The respondents included in the sample were capable of furnishing proper responses to the questions included in the interview schedule.
2. The researcher personally collected data was well adjusted himself to the social environment of the study area. Hence the data collected from the respondents were free from any biasness and with no hesitation.
3. The responses furnished by the respondents were valid and reliable.
4. Views and opinions furnished by the rural women were the representative views and opinions of all the rural women of the study area.

1.9 Definitions of Terms

Some significant terms used in the study have been defined as follows:

Agriculture

Agriculture is the science, art or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products.

Communication

Communication is a process of purposeful and mutual transmission or exchange of information in order to affect the desired change of behavior.

Rural women

It refers to the women living in villages and is engaged in gardening directly or indirectly.

Communication source

Communication source refer to the sources of information through which various information are diffused to the rural women or farmers.

Agricultural Information

Agricultural information refers to information need for the farmer relevant to agricultural work/activity.

Age

Age of a rural woman was defined as the period of time in years from her birth to the time of interview.

Education

Education refers to the development of desirable knowledge, skill and attitude in the individual through reading, writing and other related activities. It was measured in terms of actual grades or class passed by a respondent.

Family size

Family size of a rural woman was defined as the number of individuals who live in the same residence and eat together. This includes the respondent herself, her husband, children and other permanent dependents if any.

Farm size

Farm size refers to the cultivated area either owned by a farmer or benefit derived from the land as borga or lease system. Farm size was measured in terms of hectares.

Time Spent in Gardening

It refers to the number of hours of a day her or her family members kept she or they involved in homestead gardening activities.

Agricultural knowledge

It is the extent of basic understanding of a rural woman in different aspects of agriculture subject matters i.e. vegetable, fruit plants, varieties, production, plant protection etc. It also includes the basic understanding of the use of different agriculture inputs and practices.

Annual family income

Income that comes by the family member annually is called annual family income. It's come by agricultural production, poultry rearing, fish culture, services etc. It was measured in taka.

Organizational participation

Organizational participation of a rural woman refers to her participation in various social organizations as ordinary member, executive committee member and executive officer.

Integrated pest management

The attempt to prevent pathogens, insects and weeds from causing economic crop losses by using a variety of management methods that are cost effective and cause the least damage to the environment.

Crop rotation

Crop rotation is a process of growing different crops in regular recurrent succession on a piece of land for specific period of time.

Integrated Crop Management (ICM)

ICM is a system of crop production which conserves and enhances natural resources while producing food on an economically viable and sustainable foundation. It is based on a good understanding of the interactions between biology, environment and land management systems.

ICM is particularly appropriate for small farmers because it aims to minimize dependence on purchased inputs and to make the fullest possible use of indigenous technical knowledge and land use practices.

Intercultural operation

The operation which are taken at different crop growth stages of crops after seed sowing or planting of seedlings till before harvesting are known as intercultural operations or after cares.

High-yielding varieties

(HYVs) are any of a group of genetically enhanced cultivars of crops such as rice, maize and wheat that have an increased growth rate, an increased percentage of usable plant parts or an increased resistance against crop diseases. Those crops formed the basis for the Revolution. In general, they require a higher level of agricultural care, such as intensive disease control, higher fertilizer levels and controlled water supply. While those crops have enabled the multiplication of agricultural production, their increased demands of fertilizers, pesticides and water control have drawn criticism from environmentalists. Another name is high-response variety, as the high yield requires high input.

Guti urea

Urea briquette, popularly known as 'guti urea', is produced from traditional urea fertilizer using locally made machines. While traditional urea fertilizer is used thrice for a crop, Guti urea is used only once.

Organic farming

Vegetable and livestock production using natural sources of nutrients (such as compost, crop residues, and manure) and natural methods of crop and weed control, instead of using synthetic or inorganic agrochemicals. Also called low input farming.

Post harvest technology

Post-harvest technology involves all treatments or processes that occur from time of harvesting until the foodstuff reaches the final consumer.

Efficient techniques for harvesting, conveying/transportation, handling, storage, processing/preservation, packaging, etc are components of the post-harvest chain.

CHAPTER 2

REVIEW OF LITERATURE

The present study is concerned with the involvement of rural women in use of communication sources for agricultural activities. This chapter deals with the review of past studies and findings related to the present study. This chapter is divided into three sections. First section deals with the findings on use of communication sources by the rural women in agricultural activities in general and the second section is devoted to a discussion on the findings of studies exploring relationship between the selected characteristics of the respondents and their use of communication sources. The third section deals with the conceptual model of the study.

2.1 General Review on use of communication sources by the rural women in agricultural activities:

Elahi (1977) recommended that personal contact was an excellent medium for channeling information to rural communities where the mass media could not penetrate because of educational under development.

Hooda (1987) observed that with regard to the utilization of source of communication radio was found to be the most impersonal source of information. In case of personal source, friends and relatives were the most utilized source of information followed by progressive farmers.

Parveen (1993) revealed that individual contact of women in modern village was positively significant with attitude towards homestead agricultural production and it was significant in case of traditional village.

Wahyuni (1990) found that women's communication network and perceptions of themselves as individuals significantly affected women's roles in small hold farming systems.

Miah and Rolls (1990) in their study have identified some of the reasons enhances the flow of agricultural information among the farmers in Bangladesh. They observed that the social, political and economic factors of the farming community play an important role in the flow of extension messages among the farmer.

Bhuiyan (1988) observed that when single communication media was considered irrespective of categories it was found that the highest proportion of citations in all stages of adoption process was neighbors, friends and relatives.

Gura (1986) suggested that rural women need to be recognized as a group with specific extension and training needs, group approaches, compared to methods of extension that are general to individuals. He said that group approach of women rather than individual approach might help to reduce the social and cultural restrictions. The female agricultural extension worker would be helpful to reach rural women.

Orojobi (1980) found in a study that the private sources of agricultural information of Nigerian farmers were friends, other farmers, local leaders, traditional meetings, extension agents, radio, demonstrations, television, agricultural shows and printed materials.

Akanda (1994) in his study found that highest proportion of the rural women had participation in vegetable cultivation while only 0.5 percent of them had high participation in the cultivation of fruit trees.

Islam and karim (1994) observed in a village of Jossore district, Bangladesh that women participate in vegetable production 20-80% while men by 20-50% in various farm group.

Thapa *et al.* (1996) suggested that both hired labor and off- farm income substitute for women's labor in agriculture. Women who have more young children are more likely to be involved in agriculture conversely.

Patil *et al.* (1984) found in a study that contact farmers received information on improved agricultural technology from neighbor farmers (59.13%), progressive farmers (56.12%), village extension worker (91.84%), agricultural officer (31.63%), group discussion (16.33%), demonstration (14.28%), radio (88.77%) and news paper (60.20%).

Auragozeb (2002) studied on adoption of integrated homestead farming technologies by the rural women in RDRS. He found that the highest proportion (71%) of rural women had high 21% medium and 8% had low integrated homestead farming technology.

2.2 Review of Past Studies Concerning Relationship of Selected Characteristics of the Rural Women with their use of Communication sources

Eight characteristics of the rural women were selected as independent variables of the study. The researcher has studied the relationship of each of the selected characteristics with their use of communication sources. However, succinct reviews of literature on the relationship of each independent variable with use of communication sources are presented in this section.

Age

Kandam and Sabale (1983) observed in a study that age of the farmers had statistically significant association with the extent of use of communication media.

Ahmed (1977) in his study found that age of the farmers had no significant influence on the use of information sources in the adoption of improved farm practices.

Rahman (1974) concluded in his study that the age had no significant influence on the use of information sources.

Haque (1972) observed in a study that statistically there was no relationship between age and use of information sources.

Latif (1974) observed that there was no relationship between age of the farmers and their communication exposure.

Aurangozeb (2002) found that age of the rural women had significant negative relationship with their adoption of integrated homestead farming technologies.

Islam (2002) in his study found that age of the rural women had no significant relationship with their involvement in income generating activities.

Salahuddin (2003) in his study found that the age of the rural women had significant negative relationship with their involvement in homestead vegetable production.

Level of education

Kashem and Jones (1988) found in their study that education of small farmers had significant positive correlation with their contact with information sources.

Devi (1995) found that education of women had a significant positive impact on labor force participation.

Bhuiyan (1988) concluded in his study that education and the use of communication media in the adoption of farm practices were positively correlated.

In Dhande (1982) observed that the education of the respondent was positively and significantly related to information sources utilization score.

Ahmed (1977) in his study showed that education of farmers has a significant relationship with information sources in the adoption of plant protection measures.

Latif (1974) found in his study that there was no relationship between education of rural women and their communication exposure.

Rahman (1996) observed that level of education of the women had positive relationship with their participation in rural development activities.

Chowdhuri (2000) in his study found that education of the rural women had significant positive relationship with their opinion for participation.

Islam (2002) in his study found that education of the women had significant positive relationship with their involvement in income generating activities and decision making in household and health care.

Family size

Rao (1994) reported that rural women's participation in agriculture was positive correlation with the size of their family.

Latif (1974) observed that there was no relationship between family size of the farmers and their communication exposure in receiving agricultural information.

Ahmed's (1977) study showed that family size had significant influence on the use of information sources in the adoption of plant protection measures.

Islam (2002) in his study found that family size of the rural women had non-significant relationship with their involvement in income generating activities.

Kadam and Sabale (1983) found in a study that size of family of the farmers had on association with the extent of use of communication media.

Nahar (2000) reported that there was no relationship between family size and participation of women in homestead vegetable cultivation, poultry, farming and goat rearing but she found a significant positive relationship between family size and participation in post-harvest practices.

Annual income of family

Ahsan (2002) found that annual income of rural women had no significant relationship with their involvement in homestead vegetable production.

Nahar (2000) in her study found that family income had negative relationship with their participation in homestead vegetable cultivation, post harvest practices, poultry rearing and goat rearing.

Akhter (1989) opined that on an average the income from homestead varied from 5 to 13.14 thousand taka in a year.

Akanda (1994) observed in his study that family income had significant positive relationship with their participation in the cultivation of fruit trees and non-farm household activity but not with homestead vegetable cultivation.

Farm size

Latif (1974) found in his study that there was a positive relationship between farm size and communication exposure of the rural women.

Ahmed (1977) showed in a study that farm size had significant influence on the use of information sources in the adoption of plant protection measures.

Halim (1991) in his evaluation report on farming system Research activities of homestead component mentioned that women of small farm family spent more time in agricultural activities as compared to medium and large farm family in Kazirshimla side (upland), whereas in Naogaon site (low lying area), women of medium farm family spent more time in agricultural activities.

Rahman (1974) concluded in his study that a positive correlation was found between the farm size of the farmers and their use of communication sources.

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

Time spent in agricultural work

No literature was found as the relationship between times spent in agricultural work and use of communication sources.

Organizational participation

Latif (1974) concluded that the organizational participation of the rural women had a significant positive relationship with the use of communication media.

Roy (1981) in his study indicated that organizational participation of small income farmers had significant positive effect on their communication behavior receiving information on the use of balanced doses of fertilizer.

Rahman (1974) in his study revealed that organizational participation had significant positive relationship with the use of communication sources by the Jute seed growers.

Bhuyan (1988) indicated in his study that the relationship between organization participation and the use of communication media was not significant. Dhande (1982) observed that organization participation of the respondents was positively and significantly related to information source utilization score.

Agricultural knowledge

Kashem and Halim (1991) showed that the use of communication media in adoption of modern rice technologies had significant positive correlation with agricultural knowledge.

Akhter (2000) in his study found that agricultural knowledge of the women had significant positive relationship with their participation in decision working role in the family with regard to development activities.

Kashem and Jones (1988) found in their study agricultural knowledge of the rural women rendered signification positive correlation with their contact with information sources.

Parveen (1995) in her study observed that the level of existing knowledge of farm women on the use of modern technologies revealed that 58% of moderate knowledge, 35% had high while 7% of farm women possessed poor knowledge.

2.3 Conceptual Model of the Study

In the light of review of literature, it is conceived that communication sources of the rural women regarding agricultural information is greatly motivated and influenced by some of the characteristics. In scientific research, selection and measurement of variables constitute an important task. The hypothesis of a research while constituted properly contains at least two important elements i.e "a dependent variable" and "an independent variables." A dependent variable is that factor which appears, disappears or varies as the researcher introduces, removes or varies the independent variable (Townsend, 1953). An independent variable is that factor which is manipulated by the researcher in his attempt to ascertain its relationships to an observed phenomenon. A simple conceptual framework for the study is made on the basis of review of literature which is shown below:

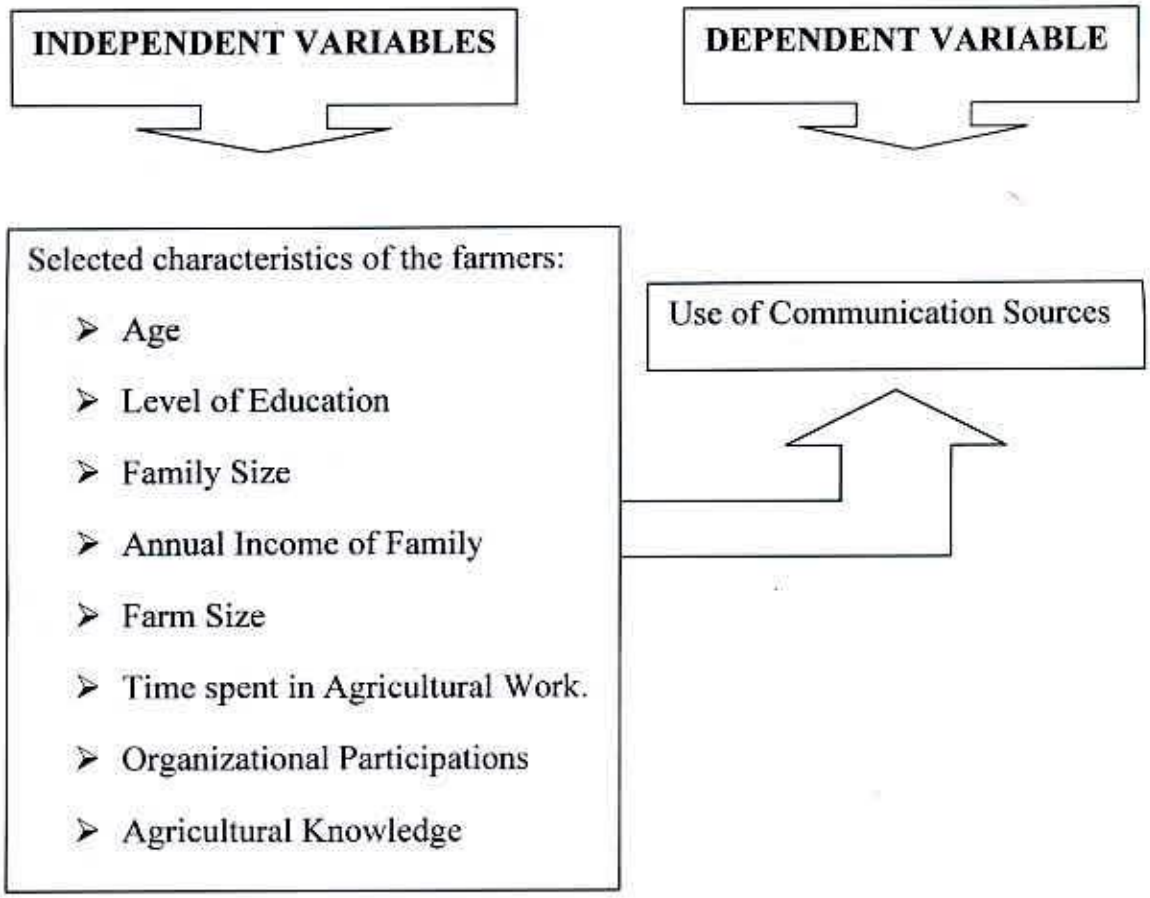

Figure 1: Simple Conceptual framework of the study

CHAPTER 3

METHODOLOGY

Methodology is very important in scientific research. Importance of methods and procedures in conducting any research can hardly be over emphasized. A researcher should be careful in formulating methods and procedures in conducting research. The researcher has the great responsibility to clearly describe what shorts of research design, methods and procedures: Thus, methods and procedures followed in conducting this study are discussed in this chapter.

3.1 The Locale of the study

The study was conducted at the Surjyamani union of Bauphal upazilla under Patuakhali district. There were 11(eleven) villages in surjyamani union. Out of eleven villages two villages were selected purposively. The selected villages were Ramnagar and Nurainpur. Considering time, money and resources of the researcher, the study was kept confined to theses villages.

3.2 Populations and Sampling Design

The numbers of villages of Surjyamani union were eleven and total numbers of family head male and female were 10047. Among them 5083 were male and 4964 were female. It was difficult to conduct on all the female of 11 villages within a short period of time. So out of 11 villages two villages were selected purposively and the rural women of these two selected villages constituted the population of the study. The numbers of farm family of these two selected (Ramnagar and Nurainpur) villages were 315 and 180 respectively. Thus a total of 495 rural women constituted the population of the study. Out of 495 rural women around 20% were selected randomly as the sample of the study. The sampling procedure was as follows:

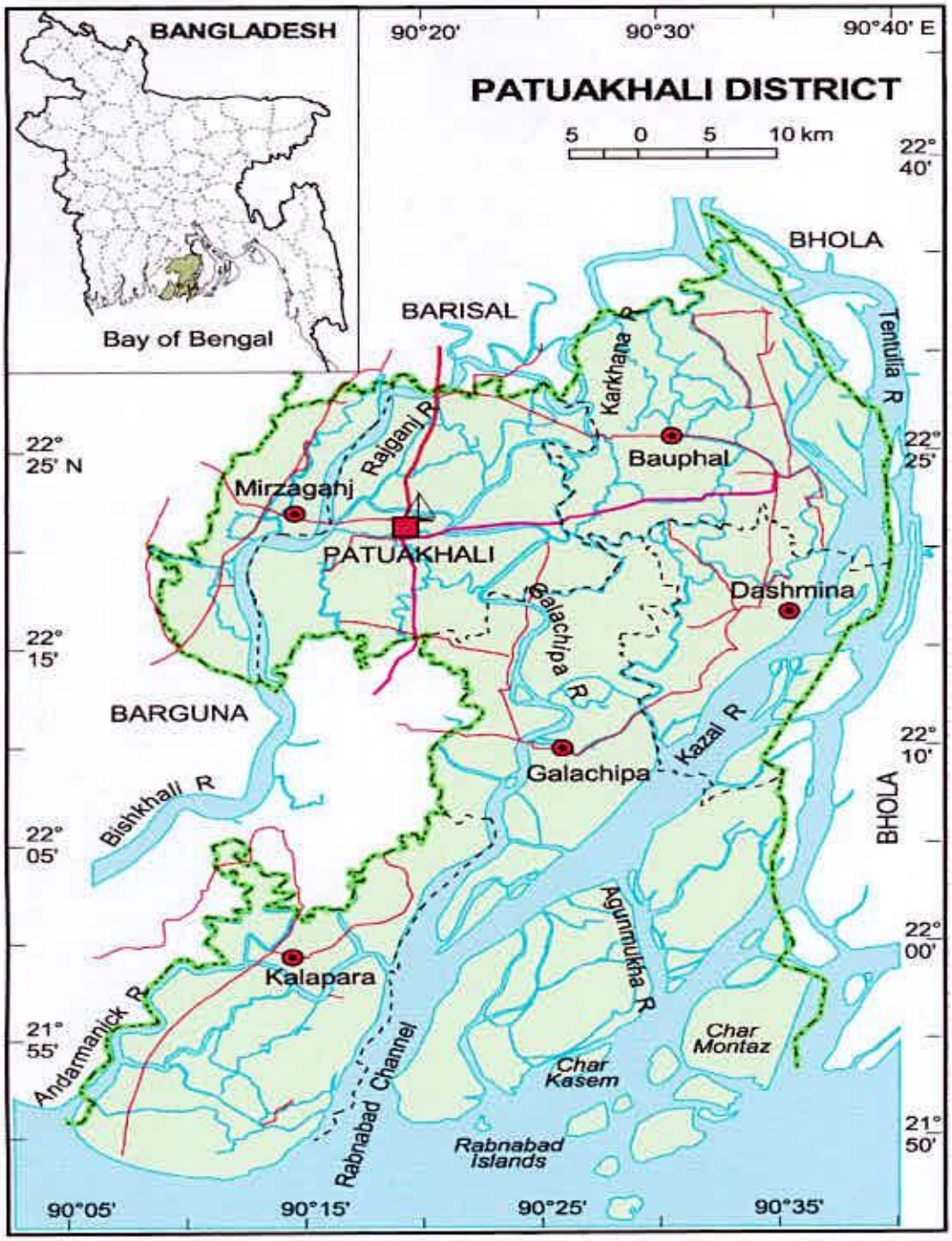

Fig 3.1 A Map Patuakhali District Sowing Bauphal Upazila.

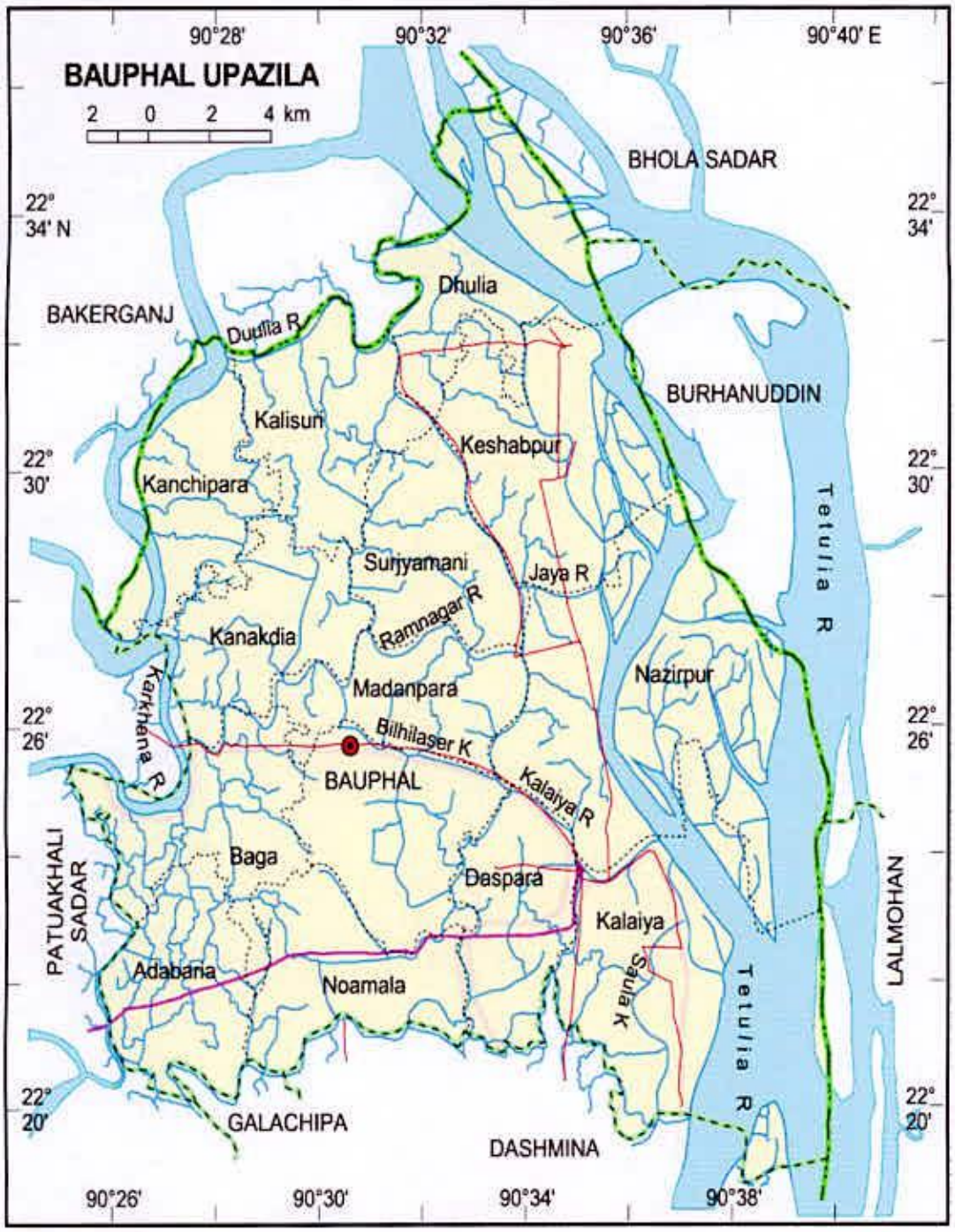

Figure 3.2 A map of Bauphal upazila showing Surjyamani Union

- The researcher first prepared the list of rural women of these two villages with the help of union council, local leaders and aged persons of respective villages.
- A number of 100 sample housewives were selected randomly from the two selected villages as shown on the Table 3.1.
- A reserve list of 10 housewives (10% sample) was prepared for use in case of unavailability of the respondents of the sample of any reason.

Table 3.1 Distribution of population sample and reserve list of the rural women in two selected villages of Surjyamani union under Patuakhali district

Union	Villages	No. of Rural women (population)	No. of rural women included as sample	No. of rural women included as reserve list
Surjyamani	Ramnagar	315	58	6
	Nurainpur	180	42	4
Total		495	100	10

3.3 Preparation of Data Gathering Instrument

Keeping the objectives of the study in view, an interview schedule was prepared for collection of data. The questions and statements contained in the schedule were simple, direct and easily understandable to the rural women. The schedule contained close and open form of questions. Scales were constructed for measuring some variables. Numerical data were obtained in the case of age, level of education, family size, annual family income, farm size, time spent in agricultural work, organizational participation, agricultural knowledge, use of communication sources of the rural women.

The schedule was prepared in Bengali for clarity of understanding on the part of respondents. The draft interview schedule was pre-tested by administering the same on 10 homestead rural women of the study area of Surjyamani union in actual field situation before finalizing the same for collection of data. Necessary alternations, modifications and adjustment were made in the schedule on the basis of the experience of the pre-test. A copy of the English version of the interview schedule appears at Appendix- A.

3.4 Collection of Data

The researcher himself collected data. A house-to-house survey was conducted by the researcher to collect data. All possible efforts were made to explain the purpose of the study to the respondents in order to get valid and relevant information from them.

For data collection, interviews were conducted with the respondents at their homes during their leisure period. While starting interview with any respondent the researcher established appropriate rapport so that she did not feel hesitance to furnish proper responses to the questions, statements in the schedule. In some cases the researcher failed to meet with respondents at their homes for interviews. However this problem was resolved by repeating the visit. The total collection process of data took 30 days from 1st March to 30th March 2012.

3.5 Processing of Data

Data obtained from the respondents were coded, compiled, tabulated and analyzed in accordance with the objectives of the study. Qualitative data were converted to quantitative data by means of suitable scoring to facilitate analysis and interpretation.

3.6 Variables of the Study

Independent and dependent variables of the study are presented below:

3.6.1 Independent Variable

The selected individual characteristics of the rural women were considered as independent variables, which were as follows:

i. Age
ii. Level of education
iii. Family size
iv. Annual income of family
v. Farm size
vi. Time spent in agricultural work
vii. Organizational participation
viii. Agricultural knowledge

3.6.2 Dependent Variable

The dependent variable of the study was:

- Communication sources of the rural women regarding agricultural activity were the dependent variable of the study. Various communication sources were used by the rural women regarding information on agriculture.

3.7 Measurement of Variables

In order to conduct this study in accordance with the objectives it was necessary to measure the variables. The procedure for measuring the variables is described below:

3.7.1 Measurement of independent variables

Eight characteristics of rural women as mentioned above were the independent variables of this study. The measurement procedures of these selected characteristics are described below:

3.7.1.1 Age

Age of a rural woman referred to the period of time from her birth to the time of interview and it was measured in terms of complete actual years. A score of one was assigned for each year of age.

3.7.1.2 Level of Education

Education of a respondent was measured on the basis of her number of years of schooling in educational institutions. If a respondent had the education equal to the level of class five (5), her education score was taken as 5. If a respondent passed the final examination of S.S.C, her education score was taken as 10. If a respondent could sign her name only then the education score of the respondent was taken as 0.5. If a respondent did not know how to read and write, her education score was taken as zero (0).

3.7.1.3 Family size

Family size of the rural women was determined by the total number of male and female members in her family including herself, adult, adolescence, infant and other dependents. The total number of family members was considered as the

family size of a respondent. For example, if a respondent has 5 members in her family, then her family size was 5.

3.7.1.4 Annual family income

It was the total income earned by respondent and other members of her family from various sources such as agriculture, business and others. Family income was measured in 'thousand' taka per year.

3.7.1.5 Land possession

Farm size was estimated in terms of full benefit the respondent get from the land she operated farming operation. The Land possession of a respondent was measured in hectares by using the following formula:

Land Possession = a + b +'/2 (c + d) + e+ f+ g

Where,

a = Homestead

b = Own land under own cultivation

c = Land given to others on borga

d = Land taken from others on borga

e = Land taken from others on lease

f = Own pond

g = fellow land

3.7.1.6 Time spent in agricultural work

Time spent in agricultural work of a respondent was measured by the number of hours in a day she had kept herself involved in performing agricultural activities mentioned by the respondent herself.

3.7.1.7 Organizational participation

It was measured by computing an organizational participation score on the basis of a respondent's nature of participation in different selected organizations. The scale for computing organizational participation for a particular organization shown below:

Organizational participation score = P X D. Where,

P = Participation score

D = Duration (year)

Participation score was assigned as:

Score	Position hold
0	No participation
1	General member
2	Executive member
3	Executive officer

The duration score was assigned as year.

Finally organizational participation score was measured by summing up all the score for participating in all the organizations.

3.7.1.8 Agricultural knowledge

It refers to the possession of knowledge by a respondent on different aspects of agriculture. Agricultural knowledge of a rural woman was measured by asking

15 different questions related to homestead gardening. Two (2) score was assigned for each question. The total assigned score for all the questions was 30. A respondent answering a question correctly obtained full score, while for wrong answer, she obtained zero score. Partial score was given for partial correct answer. Thus the agricultural knowledge score of a respondent could range from 0 to 30, where 0 indicated very low knowledge and 30 indicated very high knowledge.

3.7.2 Measurement of dependent variable

Use of communication sources of the rural women was the dependent variable of the study. The use of communication sources of the rural women regarding agricultural activities was ascertained.

It was calculated on the basis of number of contact made by a rural woman with their use of communication sources regarding information for performing selected agricultural technology. There were ten (10) technologies and different types of communication channel were used to adopt these technologies by the rural women.

Weightage were assigned to each of the items according to their logical frequencies of contact to each communication channel to compute the communication sources score of the rural women as following manner:

Sl No.	Communication channel	Nature of visit	Weightage
1.	AEO	>7-8 times/year	4
		5-6 times/year	3
		4-3 times/year	2
		1-2 times/year	1
		Not at all	0
2.	SAAO	>3 times/month	4
		3 times/month	3
		2 times/month	2
		Once per month	1
		Not at all	0
3.	Ngo Worker	>3 times/month	4
		3 times/month	3
		2 times/month	2
		Once per year	1
		Not at all	0
4.	Neighbor/friends & Television	>5 times/month	4
		4-5 times/month	3
		2-3 times/month	2
		Once per month	1
		Not at all	0
5.	Agricultural fair	>4 times/year	4
		3-4 times/year	3
		2 times/year	2
		Once per 3year	1
		Not at all	0
6.	Group discussion	>4 times/month	4
		3-4 times/month	3
		2 times/month	2
		Once per year	1
		Not at all	0
7.	Ideal farmer	>5 times/month	4
		4 times/month	3
		2-3 times/year	2
		Once per year	1
		Not at all	0

8.	Agricultural meeting	>3times/month	4
		1-3 times/month	3
		2 times/year	2
		once per year	1
		Not at all	0
9.	Method demonstration	>2times/year	4
		1-2 times/year	3
		1 times/2 year	2
		Once per 3 year	1
		Not at all	0

There were 10 technologies and for each of the technologies the respondents were asked to indicate that extent of contact against 4 (four) communication media ; the weightage for each medium could range from 0 to 4. Thus the total communication media score of a respondent could range from 0 to 160; 0 indicated no use of communication media and 160 indicated very high use of communication media.

3.8 Analysis of Data

After completion of data collection the responses were coded, tabulated and analyzed according to the objectives of the study. Local units were converted into standard units. The responses to the questions in interview schedules were transferred to a master sheet to facilitate tabulation. Necessary tabulation and cross tabulation were also computed.

3.9 Statistical Analysis

After data collection, these were compiled, tabulated and analyzed statistically in accordance with the objectives of the study. The statistical measures such as range, mean, standard deviation, number and percentage distribution and rank order were used for describing both the independent and dependent variables. Tables were also used in presenting data for clarity of understanding. To find out the relationship between selected characteristics of rural women and their use of communication sources Pearson's Product Moment Co-efficient of Correlation was used. Five percent (0.05) level of probability was used as the basis for determining statistical significance.

CHAPTER 4

RESULT AND DISCUSSION

Purpose of this chapter, is to describe the findings of the present study. In accordance with the objectives of the study, the findings are presented in four sections. In the first section, the selected characteristics of the rural women have been discussed. The second section deals with the communication sources of the rural women regarding agricultural activities. The third one describes with the relationship between individual characteristics of the rural women with their communication sources regarding agricultural activities. The last section deals with the rank order of use of different communication sources regarding agricultural activities.

4.1 Selected characteristics of the rural women

This section deals with the classification of the rural women according to their various characteristics. Women may play an important role in the agricultural production. By the characteristics, behavior of an individual can be largely determined. Eight individual characteristics of the rural women selected which formed the independent variables. There characteristics of the rural women have described in this section. Characteristics profiles of the rural women may be seen at a glance (Table 4.1)

Table 4.1 Characteristics profiles of the rural women

Sl No	Name of characteristics	Scoring method	Categories	Possible score	Observed score	Respondents		Mean	S.D
						Number	Percent		
1	Age	No. of years	Young (up to 30)	Unknown	23-47	36	36	32.85	5.854
			Middle(31-45)			61	61		
			Old(>45)			3	3		
2	Level of education	Years of schooling	No education(0)	"	0-12	4	4	5.40	3.378
			Primary(1-5)			50	50		
			Secondary(6-10)			41	41		
			Above secondary (11 & above)			5	5		
3	Family size	No. of members	Small(up to 6)	"	4-11	49	49	6.54	1.585
			Medium(7-9)			47	47		
			Large(>9)			4	4		
4	Annual family income	Thousand taka	Low (up to 200)	"	95-440	34	34	257.7	94.67
			Medium(201-300)			31	31		
			High(>300)			35	35		
5	Farm size	Hectare	Small(Up to 0.5)	"	0.30-1.75	32	32	.7093	.3087
			Medium(0.51-1.5)			64	64		
			Large(>1.50)			4	4		
6	Time spent in agricultural work	No. of hours	Low(<3)	0-24	2-6	25	25	3.42	1.130
			Medium(3-5)			73	73		
			High(>5)			2	2		
7	Organizational participation	Score	No participation(0)	"	0-7	17	17	2.35	1.629
			Low(1-3)			61	61		
			Medium (4& above)			22	22		
8	Agricultural knowledge	Score	Low(5-12)	0-30	7-22	54	54	12.60	3.908
			Medium(13-20)			40	40		
			High(>20)			6	6		

4.1.1 Age

Age of the rural women ranged from 23 to 47 years, the average being 32.85 years and the standard deviation was 5.854. On the basis of their age, the rural women were classified into three categories: "young" (up to 30), "middle aged (31-45) and "old" (>45).The distribution of the rural women according to their age is shown in table 4.1.

Data contained in the table 4.1 indicates that, the highest proportion of the rural women (61 percent) felt in the "middle age" category, while 36 percent of them are "young age" category and only 3 percent in the "old" category.

The findings indicate that a large portion (97 percent) of the rural women were young and middle aged and may use more communication sources for their agricultural activities than the old aged rural women.

4.1.2 Level of education

The education of the rural women was measured by the level of their education i.e. to the grade (class) passed by them in the educational institutions. Education score range from 0 to 12. The average being 5.40 and standard deviation was 3.378. On the basis of their educational scores, the rural women were classified into four categories, namely "no education" (0), "primary" (1-5), "secondary" (6-10) and "above secondary" (11 or above). The distribution of the rural women according to their education is shown in table 4.1.

The majority (50 percent) of the rural women had primary level of education while 4 percent no education, 41 percent secondary education and only 5 percent above secondary level of education. Rural women need to have some education in order to use various communication sources properly. It is shown that 96 percent of the rural women had education of various degrees from primary to above

secondary level. It is observed that about only (4 percent) of rural women had no education. For that reason the women having no education may suffer to use the communication sources. As a result they could not receive the useful and important agricultural information.

4.1.3 Family Size

The family size of rural women ranged from 4 to 11 members. The average was 6.54 with a standard deviation of 1.585. On the basis of their family size the rural women were classified into the following three categories: "small family"(up to 6), "medium family" (7-9) and "large family" (8 or above). Table 4.1 contains the distribution of the rural women according to their family size.

Data presented in Table 4.1 shows that highest propitiation (49 percent) of the rural women had small families compared to 47 percent having medium families and 4 percent had large families. The findings indicate that majority (96 percent) of the rural women had small to medium families and likely to maintain better contact with various communication sources for obtaining information.

4.1.4 Annual family income

The observed family annual income of the respondent of rural women range from 95 to 440 thousand Tk, the average being Tk 257.71 thousand and standard deviation of 94.673. On the basis of their annual family income the rural women classified into three categories: "low" (up to 200), "medium" (201-300) and "high" (>300) thousand. Table 4.1 contains the distribution of the rural women according to their annual family income.

Data furnished in table 4.1 revealed that the highest proportion (35 percent) of the rural women had high annual family income. From the table we see that law (34 percent) and medium (31 percent) that is very close in highest proportion. So

above findings there is needed to take all possible attempts by extension agencies to increase more income.

4.1.5 Farm size

Farm size of the rural women of the study area ranged from 0.30 to 1.75 hectares with the average of 0.7093 and standard deviation of 0.30874. Depending of the farm size the respondents were classified into three categories: "small" (up to 0.5), "medium" (0.5-1.5) and "large" (>1.50). Table 4.1 contains the distribution of the rural women according to their farm size.

Data furnished in table 4.1 indicate that the highest propitiation (64 percent) of the respondents rural women belonged to the medium farm category compared to 32 percent having small farm size and only 4 percent large farm size. Thus, most (96 percent) of the respondents women were in small to medium farm category. It indicates that majority of the families possessing small amount of land. Farmers are becoming landless for various reasons of which fragmentation of land due to inheritance is the most important one. Women of small and medium farm are more active in the agricultural work. So, an appropriate program is needed depending on the farm size to increase skill of rural women in different productive activities and to improve life style.

4.1.6 Time spent in agricultural work

Time spent in gardening by the rural women in the study area ranged from 2 to 6 hours per day with an average of 3.42 and the standard deviation was 1.130. Based on the score obtained, the rural women were grouped into three categories and those are "low" (<3), "medium" (3-5) and "high" (>5). Table 4.1 contains the distribution of the rural women according to their time spent in agricultural work.

Data presented in table 4.1 indicate that the highest proportion (73 percent) of the rural women felt in medium time spent in agricultural work in compare to 32

percent having lo time spent in agricultural work and only 4 percent in high time spent in agricultural work. This information indicated a possibility of higher communication exposure of the rural women because a rural women spent 3.42 hours per for agricultural activities.

4.1.7 Organizational participation

Organizational participation scores of the rural women ranged from 0 to 7 with an average of 2.35 and a standard deviation was 1.629. On the basis of their organizational participation scores, the rural women were classified into three categories: "no participation" (0), "low" (1-3) and medium (4 & above). The distribution of rural women according to their organizational participation is shown in table 4.1.

Data presented in table 4.1indicates that the highest proportion (61 percent) of the rural women had low organizational participation compared to 17 percent having no participation and 22 percent had medium organizational participation. Though participation in organization an individual comes in contact with other people, so they can learn new ideas and way of doing things. The findings of this study indicate that the highest percentage of the rural women had low organizational participation compared too little percentage in medium participation. The rural women with more organizational participation are expected to use of more communication media regarding agricultural activities.

4.1.8 Agricultural knowledge

Agricultural knowledge of the rural women in the study area ranged from 7 to 22 with an average 12.60 and standard deviation being 3.908. Based on scores obtained, the rural women group into three categories and those are "low" (5-12), "medium" (13-20) and "very high" (>20). Table 4.1 contains the distribution of rural women according to their agricultural knowledge.

Data presented in Table 4.1 indicated that the highest proportion (54 percent) of the rural women had low agricultural knowledge compared to 40 percent medium and 6 percent had high agricultural knowledge. This information indicates that majority (94 percent) rural women had low to medium agricultural knowledge meaning a good communication exposure. The mean value of the data indicates such a communication exposure of the rural women.

4.2 Use of communication sources of rural women regarding agricultural activities

Use of communication sources of rural women was the dependent variable of the study. It was measured by computing a communication exposure score on the basis of their use of forty (40) communication sources regarding agricultural information.

The possible range use of communication sources score of a respondent could range from '0' to '160'. But the computed communication sources of the respondents range from 12 to 45 with an average of 25.27 and standard deviation of 6.347. The rural women were classified into three (3) categories on the basis use of communication sources score as shown in the table 4.2.

Table 4.2 Number & percentage distribution of rural women according to their use of communication sources.

Categories	Respondents		Mean	Standard deviation
	Number	Percentage		
Low use(up to 25)	59	59.0	25.27	6.347
Medium use(26-35)	33	33.0		
High use(>36)	8	8.0		
Total	**100**	**100**		

Data presented in table 4.2 show that more than half (59 percent) of the respondent had low use of communication sources regarding agricultural information while 33 percent of them had medium use and only 8 percent high use. Thus the majority (92 percent) of the rural women had low to medium use of communication sources. It indicates very poor use of communication sources in respected area by the rural women for agricultural activity.

4.3 Relationship between individual characteristics of the rural women and their use of communication sources

The chapter attempts to explain the relationship of the selected characteristics of the respondents and their involvement in use of communication sources regarding agricultural activities. The selected independent variable were age, level of education, family size, annual family income, farm size, time spent in agricultural work, organizational participation and agricultural knowledge. Use of communication sources of the rural women regarding agricultural activities was the only dependent variable of the study. Correlation co-efficient (r) was used to test the null hypothesis concerning the relation between the dependent and independent variable. Summary result of the test of co-efficient of correlation between the independent and dependent variables are shown in Table 4.3.

Table 4.3 Relationship between eight characteristics of the rural women and the use of communication sources regarding agricultural activities

Dependent variable	Independent variable	Co-efficient of correlation (r)	Tabulated value of 'r' with 98 d.f	
Use of communication sources	Age	-0.017NS	5%	1%
	Level of education	0.482**	0.196	0.256
	Family size	0.250*		
	Annual family income	0.404**		
	Farm size	0.399**		
	Time spent in agricultural work	0.012NS		
	Organizational participation	0.361**		
	Agricultural knowledge	0.689**		

NS = Not significant

*= Significant at 5% level

**= Significant at 1% level

4.3.1 Relationship between age of the rural women and their use of communication sources in agricultural activities

The relationship between age of the rural women and their use of communication sources was determined by testing the following null hypothesis: "There was no relationship between age of the rural women and their use of communication sources."

The co-efficient of correlation 'r' between age of the rural women and their communication sources was -0.017 (Table-4.3) that was the lower than tabulated value (r=0.196) with 98 degree of freedom at 0.05 level of probability.

Hence the concerned null hypothesis could not be rejected. The researcher, therefore, conducted that age of the rural women had no significant relationship with use of communication sources in agricultural activities. This indicates that the use communication sources of the rural women were not influenced significantly by the various age levels.

4.3.2 Relationship between level of education of the rural women and their use of communication sources in agricultural activities

The association existing between level of education of the rural women and their use of communication sources was examined by testing the following null hypothesis: "There was no relationship between level of education of the rural women and their use of communication sources."

The computed co-efficient of correlation between level of education of the rural women and their use of communication sources was 0.482 (Table 4.3) which was larger than the concerned tabulated value (r= 0.256) with 98 degree of freedom at 0.01 level of probability. So the null hypothesis was rejected.

The researcher therefore concluded that level of education of the rural women had significant positive relationship with their involvement in use of communication sources in agricultural activities. A person having more education is likely to be more conscious and dynamic with his/her outside world. This indicates that the higher the education of the rural women, the higher the use of communication sources for their agricultural activities.

4.3.3 Relationship between family size of the rural women and their use of communication sources in agricultural activities

The relationship between family size of the rural women and their involvement in overall use of communication sources was determined by testing following null hypothesis: "There was no relationship between family size of the rural women and their use of communication sources."

The computed co-efficient of correlation between family size of the rural women and their use of communication sources was 0.250 (Table 4.3) which was larger than the concerned tabulated value (r= 0.196) with 98 degree of freedom at 0.05 level of probability. So the null hypothesis was rejected. A positive trend of relationship was found to exist between family size and use of communication sources of the rural women.

The researcher therefore concluded that family size of the rural women had significant positive relationship with their involvement in use of communication sources in agricultural activities.

4.3.4 Relationship between annual family income of the rural women and their use of communication sources in agricultural activities

The relationship between annual family income of the rural women and their use of communication sources was examined by the testing of the following null hypothesis: "There was no relationship between annual family income of the rural women and their use of communication sources."

The computed co-efficient of correlation between annual family income of the rural women and their use of communication sources was 0.404 (Table 4.3) which was larger than the concerned tabulated value (r= 0.256) with 98 degree of freedom at 0.01 level of probability. Hence, the concerned null hypothesis was rejected.

The researcher, therefore, concluded that annual family income of the rural women had significant positive relationship with their use of communication sources in agricultural activities. This indicates that respondents had higher income involvement in more in agricultural activities and use of communication sources.

4.3.5 Relationship between farm size of the rural women and their use of communication sources in agricultural activities

The relationship between farm size of the rural women and their use of communication sources in agricultural activities was examined by the testing of the following null hypothesis: "There was no relationship between farm size of the rural women and their use of communication sources."

The computed co-efficient of correlation between farm size of the rural women and their use of communication sources was 0.399 (Table 4.3) which was larger than the concerned tabulated value (r= 0.256) with 98 degree of freedom at 0.01 level of probability. Hence, the concerned null hypothesis was rejected.

The researcher, therefore, concluded that farm size had significant positive relationship with the use of communication sources in agricultural activities. This indicates that the rural women with large farm size had more use of communication sources.

4.3.6 Relationship between times spent in agricultural work by the rural women and their use of communication sources

The null hypothesis used to test the relationship between time spent in agricultural work by the rural women and their use of communication sources was: "There was no relationship between time spent in agricultural work by the rural women and their use of communication sources."

The computed co-efficient of correlation between time spent in agricultural work by the rural women and their use of communication sources was 0.012 (Table 4.3) which was smaller than the concerned tabulated value (r= 0.196) with 98 degree of freedom at 0.05 level of probability. Hence, the concerned null hypothesis could not be rejected. A very weak positive trend was found to exist between time spent in agricultural work and use of communication sources by the rural women.

Therefore, the researcher concluded that, time spent in agricultural work by the rural women had no significant relationship with their use of communication sources. This indicate that the use of communication sources of the rural women was not influenced significantly by the various time spent in agricultural activities. Thus, statistically it indicates that the variables were independent of each other.

4.3.7 Relationship between organizational participation of the rural women and their use of communication sources

The relationship between organizational participation of the rural women and their use of communication sources was examined by testing the following null hypothesis: "There was no relationship between organizational participation of the rural women and their use of communication sources."

The computed co-efficient of correlation between organizational participation of the rural women and their use of communication sources was 0.361 (Table 4.3) which was larger than the concerned tabulated value (r= 0.256) with 98 degree of freedom at 0.01 level of probability. Hence, the concerned null hypothesis was rejected. A positive trend of relationship was found to exist between organizational participation and use of communication sources of the rural women.

Hence, the researcher concluded that, organizational participation of the rural women had significant and positive relationship with their use of communication sources in agricultural activities.

4.3.8 Relationship between agricultural knowledge of the rural women and their use of communication sources

The relationship between agricultural knowledge of the rural women and their use of communication sources overall agricultural activities was determined by testing the following hypothesis: "There was no relationship between agricultural knowledge and use of communication sources."

The computed co-efficient of correlation between agricultural knowledge of the rural women and their use of communication sources was 0.689 (Table 4.3) that is which was than the concerned tabulated value (r= 0.256) with 98 degree of freedom at 0.01 level of probability. Hence, the concerned null hypothesis was rejected. A positive trend of relationship was found to exist between agricultural knowledge and use of communication sources of the rural women.

It indicates that the more the knowledge of the rural women, the more will be their involvement in use of communication sources for agricultural activities. Because due to their knowledge they realize the benefit and important of agricultural activities which influence them in participation.

4.4 Rank order of different technology used by the rural women regarding agricultural activities

Use of 10 selected technology was investigated in this study. Extent of use of different technology was measured according to the communication sources use index (CSUI). The ten (10) technologies have been arranged in rank order in Table 4.4 on basis of their communication sources use index.

Table 4.4 Rank Order of technology according to their Communication Sources Use Index (CSUI)

Technology	Communication Sources				CSUI	Ranked order
	Regularly	Frequently	Occasionally	Rarely		
Homestead Gardening	5	23	79	185	432	1
Organic Farming	2	17	58	220	397	2
Intercultural Operation	0	21	52	198	365	3
Integrated Crop Management (ICM)	0	15	44	210	343	4
High Yielding Variety (HYV)	0	13	37	206	319	5
Post Harvest Technology	0	12	31	184	270	6
Integrated Pest management (ICM)	0	7	25	112	183	7
Crop Rotation	0	1	21	64	108	8
Sustainable Farming technology	0	0	3	78	84	9
Gutti Urea	0	0	0	26	26	10

To calculate CSUI formula= regularly (4) X 4 + frequently (3) X 3 + occasionally (2) X2 + rarely (1) X1.

In homestead gardening,

regularly use communication sources in 5 times, frequently in 23 times, occasionally in 79 times and rarely in 185 times.

So, CSUI in Homestead gardening= 5X4+23X3+79X2+185X1

= 20+69+158+185

= 432.

The information presented in table shows that there were variations in the extent of use of different technology. Homestead gardening was used as the technology to the highest extent (432) and it was closely followed by organic farming (397), Intercultural operation (365), Integrated crop management (343) and so on.

CHAPTER 5

5.1 Summary

5.1.1 Introduction

The study was conducted in two villages, namely Ramnagar and Nurainpur of Surjyamani union under Patuakhali district. Though the rural women have more or less some restriction to conduct their activities outside in the field, but they can contribute to raise family economy and nutritional status by producing crops in her respective area. To achieve this they have to adopt the required technologies and to accept suggestions by the change agents.

In the light of this noble task the researcher has planned to undertake a study on the communication sources of rural women in agricultural activities. The study was conducted with the following specific objectives.

1. To determine and describe the use of communication sources by the rural women in receiving agriculture information.

2. To determine and describe some selected characteristics of the rural women. The characteristics are-
    i. Age
    ii. Level of education
    iii. Family size
    iv. Annual income of family
    v. Farm size
    vi. Time spent in agricultural work
    vii. Organizational participation
    viii. Agricultural knowledge

3. To explore the relationship between selected characteristics of the rural women and their use of communication sources.

5.1.2 Methodology

The rural women of two villages namely Ramnagar and Nurainpur under Surjomoni union of Patukhali district are the population of the study. One hundred of rural women were randomly selected as the sample of the study from a population of 10047 of the study area. The selected characteristics of the rural women were the independent variables. The use of communication sources of the rural women regarding agricultural activities was the dependent variable. The collected data were coded, complied, tabulated and analyzed in accordance with the objectives of the study.

For determining the relationship between the selected characteristics of the rural women and their use of communication sources in agricultural activities, coefficient of correlation 'r' was used. Various statistical measures were used in describing the variables.

5.1.3 Findings

A summary of the findings in respect of the specific objectives of the study is given below:

5.1.3.1 Selected characteristics of the rural women

Eight characteristics of the rural women were selected. Findings in respect of the selected characteristics are summarized below:

Age

Age of the rural women ranged from 23 to 47 years and the mean was 32.85. The highest proportion (61 percent) of the rural women were middle aged, while 36 percent young and 3 percent old age.

Level of education

Education of the rural women ranged from 0 to 12 years of schooling, while the average years of schooling were 5.40. The highest proportion (50 percent) rural women were primary education, while 41 percent of the rural women had secondary education, 5 percent had above secondary and only 4 percent had no education.

Family size

The number of family members of the rural women ranged from 4 to 11 members with an average of 6.54. The highest proportion (49 percent) of rural women had small families as compared to 47 percent having medium families and only 4 percent having large families.

Annual family income

The annual family income of the respondent women is ranged from Tk 95 to 440 thousand, the average being Tk 257.71 thousand. The highest proportion (35 percent) of the respondent had large family income while 34 percent had low family income and 31 percent had medium income.

Farm size

Farm size of the responded ranged from 0.30 to 1.75 ha with an average of 0.7093 ha. The proportion of (64 percent) of the respondent women had medium farm size, while 32 percent had small farm size and only 4 percent had large farm.

Time spent in agricultural work

The time spent in agricultural work of the respondent ranged from 2 to 6 hours per day and an average time spent was 3.42 hours. The highest proportion (73 percent) of the rural women spent medium time in agricultural work compared to

25 percent of the respondent spent low time and only 2 percent spent high time in agriculture.

Organizational participation

The organizational participation of the respondent scores ranged from 0 to 7. The average organizational participation score of the rural women was 2.35. The highest proportion (61 percent) of the rural women had low participation compared to 17 percent had no participation and 22 percent had medium participation.

Agricultural knowledge

Agricultural knowledge of the rural women ranged from 7 to 22. The average agricultural knowledge of the rural women score was 12.60. The highest proportion (54 percent) of the rural women had low agricultural knowledge compared to 40 percent had medium agricultural knowledge and 6 percent had very high agricultural knowledge.

5.1.3.2 Use of communication sources of the rural women regarding agricultural activities

It was found that 59 percent of the rural women had low use of communication sources while 33 percent had medium use and only 8 percent had high use of communication sources.

5.1.3.3 Relationship of the selected characteristics of the rural women with their use of communication sources

This deals with the relationship of the eight selected characteristics of the rural women with their use of communication sources regarding agricultural activities.

Coefficient of correlation 'r' was used to determine the relationship between the dependent and independent variables.

Relationship

Age

Age of the rural women had no relationship with their use of communication sources.

Level of education

Education of the rural women had positive and significant relationship with their use of communication sources.

Family size

Family size of the rural women had significant and positive relationship with their use of communication sources in agricultural activities.

Annual family income

There was positive and significant relationship in annual family income and use of communication sources.

Farm size

Farm size of the rural women had positive and significant relationship with their use of communication sources.

Time spent in agricultural work

Time spent in agricultural work had no relationship with their use of communication sources of the rural women.

Organizational participation

Organizational participation of the rural women had significant and positive relationship with their use of communication sources regarding agricultural activities.

Agricultural knowledge

Agricultural knowledge of the rural women had significant and positive relationship with their use of communication sources regarding agricultural activities.

5.1.3.4 Rank order according to CSUI

Extent of use of different communication sources was measured according to communication sources use index (CSUI). According to the CSUI, it was found that the rural women use communication sources for 10 technologies in their agricultural activities. Homestead gardening was used as technology with the highest extent (432) and it was closely followed by organic farming (397), intercultural operation (365) etc. and so on gutti urea (26) were used as the lowest extent.

5.2 Conclusions

On the basis of the findings of the study and the logical interpretation of their meaning in the light of other relevant facts the researcher wishes to draw the following conclusions:

1) Majority (50 percent) of the rural women had primary level of education. Education of the rural women had positive and significant relationship with their use of communication sources. This means that higher the education of the rural women had higher use of communication sources.

2) The findings indicate that 96 percent of the respondents had small to medium family size. The family size of the respondent had positive significant relationship with their use of communication sources. Therefore, it may be concluded that the rural women who had small family involved more in agricultural work rather than large family.

3) More than 65 percent of the rural women had low to medium family income. Annual family income of the rural women had positive relationship with their use of communication sources. It indicates that more the family income of the respondent more the use of communication sources.

4) The findings indicate that 96 percent of the respondents had small to medium farm size. Farm size of the respondents had positive significant relationship with their use of communication sources.Hence it may be concluded that the rural women had large farm size involved more in agricultural activity and more use of communication sources.

5) More than 78 percent of the rural women had no to low organizational participation. Organizational participation of the rural women had positive and significant relationship with their use of communication sources. Thus, it may be concluded that organizational participation enables women to border their mental make-up as well as decision making abilities towards

the choosing of appropriate communication sources for getting useful information.

6) Agricultural knowledge of the respondents had positive and significant relationship with their use of communication sources. More than 94 percent of the rural women had low to medium agricultural knowledge. The findings indicates that the respondents had more the agricultural knowledge had more use of technology and communication sources and get better output from agricultural work.

7) The statistical analysis revealed that the characteristics such as age and time spent in agricultural work of the rural women had no relation with their use of communication sources. This means that the characteristics were independent of the use of communication sources of the rural women.

8) The findings indicate that 92 percent of the respondent had low to medium use of communication sources. It indicates the poor use of communication sources by the respondents. For increasing agricultural production it is essential to use more communication sources for technology upgrade. Therefore, the findings lead to the conclusion that the rural women had inadequate use of communication sources, which might result poor yield from agricultural work.

9) Technology improve agricultural production also improve the rural life. But low use of communication sources on technology our agricultural production and socio economic development not improve.

5.3 Recommendation

Based on the findings and conclusion of the study, the recommendations are presented below in two sub sections:

5.3.1 Recommendation for policy implication

1. The study revealed that the rural women had inadequate use of various communication sources, which might result poor output from agriculture. Therefore it may be recommended that the concerned GO and NGOs engaged in extension activities with the rural women should make necessary arrangements for improving the communication sources of the rural women.

2. Young aged rural women constituted about $1/3^{rd}$ of the study and they are the key operation in agricultural activities. Young aged women can play a very useful role in the adoption of technology on agricultural activities. It is therefore recommended that in conducting extension program, the concerned agency should involve as many as young rural women.

3. Education of the rural women showed significant positive relationship with their use of communication sources. It is therefore, recommended that all GOs and NGOs may take steps for widening literacy program for intensive agricultural production and adoption of technology.

4. Annual family income of the rural women had a significant positive relationship with their use of communication sources. It is therefore recommended that all GOs and NGOs should take more effective steps for increasing income of the rural women by creating greater opportunities for their income generating activities.

5. For encouraging adoption of agricultural practices by the rural women there is an urgent need for a sound system of communication sources for providing adequate innovative information to the rural women.

6. The Department of Agricultural Extension (DAE) needs to pay more attention to ensure the availability of communication sources to the rural women as much as possible regarding agricultural activities.

5.3.2 Recommendation for further study

1. It is suggested that similar study of this nature should be conducted in all field of Bangladesh to provide further valuable information to draw generalization regarding participation of rural women in use of communication sources.

2. Involvement is the measurement of implementation of technologies by the rural women. It is continuous process due to change of social system, change of technologies, change human behavior, change of involvement patterns etc.

3. The study was limited to some technologies, in future; some other technologies should be chosen to assess the use of communication sources by the rural women.

4. Finally, this is a micro level study where only two selected village of Surjyamani union under Patuakhali districtwere under study. So, findings of this study need verification by similar research in other part of the country.

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An interview schedule on

"Use of Communication Sources in Receiving Agricultural Information by the Rural Women"

Sample No.....

Name: .....

Father's Name/ Husband's Name: .....

Village: ..... Union: .....

Dist: .....

Please answer the following questions:

1) Age:

How old are you? .....Years.

2) Level of education

Please mention your educational level:

- Can't read and write ( )
- Can sign only ( )
- Attended class up to ( )

3) Family size

Please mention the number of your family members (including yourself):

Type of Members	Number	
	Male	Female
Adult (more than 18 years)		
Adolescence (5 to 18 years)		
Infant (less than 5 years)		
Total		

4) Annual income of family

Please mention you and your family member's annual income from different sources:

SL. No.	Source of income	Amount of (Taka)
1.	Agriculture (Cereal crops, pulse crops, vegetables)	
2.	Livestock (cow, goat etc)	
3.	Poultry	
4.	Fish culture	
5.	Business	
6.	Services	
7.	Labor	
8.	Others(if any)	
Total		

5) Farm Size

Please mention your land area furnishing the following info:

SL. No.	Type of land use	Area of land	
		Local unit	Hectare
1.	Homestead		
2.	Own land under own cultivation		
3.	Land given to others on borga		
4.	Land taken from others on borga		
5.	Land taken from others on lease		
6.	Own pond		
7.	Fellow land		
Total			

6) Time spent in agriculture work

How many hours in a day (24 hours) generally you spend for agricultural activities?

..... Hours

7) Organizational Participation

Have you involvement with any organization/ Institution? Yes: ..... No: .....

SL. No.	Name of the organization	Nature of participation (with duration)			
		No participation	General member	Executive member	Executive officer
1.	Different NGO's				
2.	Mohila Somobay Somity				
3.	Union Council				
4.	School committee				
5.	Other (specify)				

If yes, please mention the nature and duration of your participation following organization:

8) Agricultural knowledge

Please answer the following questions:

SL.No.	Questions	Score	Mark obtained
1.	Mention two functions of urea fertilizer.	2	
2.	Name two vegetables that cultivation in summer.	2	
3.	Name two vegetables that cultivation in winter.	2	
4.	Name two major elements for compost preparation.	2	
5.	Name two advantages of applying organic manure.	2	
6.	Name two insecticides for controlling insect of vegetables.	2	
7.	Name two HYV of rice.	2	
8.	Name two harmful effects of pesticides.	2	
9.	Mention the names of three important plant nutrients most essential for vegetable cultivation.	2	
10.	How much rice seed is required to cultivate one biga of land?	2	
11.	Name two symptoms of brinjal diseases that affected by plant.	2	
12.	Name two methods of insect control other then insecticide.	2	
13.	Which is the appropriate month of releasing fish in the pond?	2	
14.	Mention two deficiency symptoms of N fertilizer	2	
15.	State two qualities of good seed?	2	
	Total	30	

9) Use of communication sources in receiving agricultural information

Select/Identify some technologies of which the respondents seek information

Sl No.	Name of technologies	Communication channel	Regularly(4)	Frequently(3)	Occasionally(2)	Rarely(1)	Not at all (0)
1.	Integrated pest Management (IPM)	SAAO	>3times/month ( )	3 times/month ( )	2 times/month ( )	1times/month ( )	
		Neighbor/ Friends	>5 times/month ( )	4-5 times/month ( )	2-3 times/month ( )	1times/month ( )	
		Ngo Worker	>3 times/month ( )	3 times/month ( )	1-2 times/month ( )	1times/year ( )	
		Television	>5 times/month ( )	4-5 times/month ( )	2-3 times/month ( )	1 times/month ( )	
2.	Integrated Crop Management(ICM)	SAAO	>3times/month ( )	3 times/month ( )	2 times/month ( )	1times/month ( )	
		AEO	>7-8 times/year ( )	5-6 times/year ( )	4-3 times/year ( )	1-2 times/year ( )	
		Agricultural fair	>4 times/year ( )	3-4 times/year ( )	1-2 times/year ( )	1 times/3year ( )	
		Group discussion	>4 times/month ( )	3-4 times/month ( )	1-2 times/month ( )	1times/year ( )	
3.	Homestead Gardening	SAAO	>3times/month ( )	3 times/month ( )	2 times/month ( )	1times/month ( )	
		Ideal farmer	>5 times/month ( )	1-5 times/month ( )	2-3 times/year ( )	1 times/year ( )	
		Agricultural meeting	>3 times/month ( )	1-3 times/month ( )	2 times/year ( )	1times/year ( )	
		Ngo worker	>3 times/month ( )	3 times/month ( )	1-2 times/month ( )	1times/year ( )	
4.	Intercultural operation technology	SAAO	>3times/month ( )	3 times/month ( )	2 times/month ( )	1times/month ( )	
		AEO	>7-8 times/year ( )	5-6 times/year ( )	4-3 times/year ( )	1-2 times/year ( )	
		Ngo worker	>3 times/month ( )	3 times/month ( )	1-2 times/month ( )	1times/year ( )	
		Agricultural meeting	>3 times/month ( )	1-3 times/month ( )	2 times/year ( )	1times/year ( )	
5.	High yielding variety(HYV)	SAAO	>3times/month ( )	3 times/month ( )	2 times/month ( )	1times/month ( )	
		AEO	>7-8 times/year ( )	5-6 times/year ( )	4-3 times/year ( )	1-2 times/year ( )	
		Ngo worker	>3 times/month ( )	3 times/month ( )	1-2 times/month ( )	1times/year ( )	
		Ideal farmer	>5 times/month ( )	1-5 times/month ( )	2-3 times/year ( )	1 times/year ( )	
6.	Gutti urea	SAAO	>3times/month ( )	3 times/month ( )	2 times/month ( )	1times/month ( )	
		Ngo worker	>3 times/month ( )	3 times/month ( )	1-2 times/month ( )	1times/year ( )	
		Method Demonstration	>2 times/year ( )	1-2 times/ year ( )	1 times/2 year ( )	1 times/3 year ( )	
		Agricultural meeting	>3 times/month ( )	1-3 times/month ( )	2 times/year ( )	1times/year ( )	

7.	Organic farming	Ideal farmer/Neighbor	>5 times/month ( )	1-5 times/month ( )	2-3 times/year ( )	1 times/year ( )	
		SAAO	>3times/month ( )	3 times/month ( )	2 times/month ( )	1times/month ( )	
		Agricultural meeting	>3 times/month ( )	1-3 times/month ( )	2 times/year ( )	1times/year ( )	
		Ngo worker	>3 times/month ( )	3 times/month ( )	1-2 times/month ( )	1times/year ( )	
8.	Crop rotation	SAAO	>3times/month ( )	3 times/month ( )	2 times/month ( )	1times/month ( )	
		AEO	>7-8 times/year ( )	5-6 times/year ( )	4-3 times/year ( )	1-2 times/year ( )	
		Group discussion	>4 times/month ( )	3-4 times/month ( )	1-2 times/month ( )	1times/year ( )	
		Ideal farmer	>5 times/month ( )	1-5 times/month ( )	2-3 times/year ( )	1 times/year ( )	
9.	Sustainable farming technology	AEO	>7-8 times/year ( )	5-6 times/year ( )	4-3 times/year ( )	1-2 times/year ( )	
		SAAO	>3times/month ( )	3 times/month ( )	2 times/month ( )	1times/month ( )	
		Agricultural meeting	>3 times/month ( )	1-3 times/month ( )	2 times/year ( )	1times/year ( )	
		Television	>5 times/month ( )	4-5 times/month ( )	2-3 times/month ( )	1 times/month ( )	
10.	Post harvest Technology	SAAO	>3times/month ( )	3 times/month ( )	2 times/month ( )	1times/month ( )	
		Agricultural meeting	>3 times/month ( )	1-3 times/month ( )	2 times/year ( )	1times/year ( )	
		Ngo worker	>3 times/month ( )	3 times/month ( )	1-2 times/month ( )	1times/year ( )	
		Ideal farmer	>5 times/month ( )	1-5 times/month ( )	2-3 times/year ( )	1 times/year ( )	

Respondent Signature.....

বাংলা

গ্রামীন মহিলাদের কৃষি সম্পত্তি তথ্য গ্রহনে যোগাযোগের উৎস সমূহের ব্যবহার

নমুনা ঃ
নাম ঃ
পিতার নাম/স্বামীর নাম ঃ
গ্রাম ঃ ইউনিয়ন ঃ
জেলা ঃ
দয়া করে নিম্নের প্রশ্নের উত্তর দিন।

১. বয়স ঃ
আপনার বয়স কত?---------বছর

২. শিক্ষ্যাগত যোগ্যতা ঃ
দয়া করে আপনার শিক্ষ্যাগত যোগ্যতা বলুন।

(ক) লেখা এবং পড়া জানা নাই ( )
(খ) কেবল স্বাক্ষর জানা ( )
(গ) পাশকৃত শ্রেণী ( )

৩. পারিবারিক পরিধি ঃ
দয়া করে আপনার পরিবারের সদস্য সংখ্যা বলুন (আপনি সহ)

কি ধরনের সদস্য	সংখ্যা	
	পুরুষ	মহিলা
প্রাপ্ত বয়স্ক (১৮ বছরের চেয়ে বেশী)		
অপ্রাপ্ত বয়স্ক (৫-১৮ বছর)		
শিশু (৫ বছরের কম)		
মোট		

৪. পরিবারের বাৎসরিক উপার্জন ঃ
দয়া করে আপনি এবং আপনার পরিবারে বিভিন্ন মাধ্যম থেকে বাৎসরিক উপার্জন বলুন

ক্রমিক সংখ্যা	আয়ের উৎস	পরিমান (টাকা)
১	কৃষি (দানা শস্য,ডাল,সবজি)	
২	গৃহপালিত পশু (গরু,ছাগল)	
৩	হাঁস মুরগীর খামার	
৪	মাছ চাষ	
৫	ব্যবসা	
৬	চাকুরী	
৭	কায়িক শ্রম	
৮	অন্যান্য (যদি থাকে)	
মোট		

৫. খামারের পরিধি ঃ

দয়া করে আপনার জমির পরিমান সংক্রান্ত তথ্য বলুনঃ

ক্রমিক সংখ্যা	ব্যবহৃত জমির প্রকারভেদ	জমির পরিমান	
		স্থানীয় পরিমাপ	হেক্টর
১	বাড়ি ঘর		
২	নিজের চাষকৃত জমির পরিমাণ		
৩	অন্যকে বর্গা দেয়া জমির পরিমাণ		
৪	অন্যের জমি বর্গা নেয়া জমির পরিমাণ		
৫	অন্যের লিজ নেয়া জমির পরিমাণ		
৬	নিজের পুকুর		
৭	পতিত জমি		
মোট			

৬. কৃষি কাজে ব্যবহৃত সময় ঃ

সাধারনত এক দিনের (২৪ ঘন্টার) কত সময় আপনি কৃষি কাজে ব্যবহার করেন ঃ

.....ঘন্টা

৭. সংগঠনে অংশগ্রহন ঃ

আপনি কি কোন সংগঠনের/প্রতিষ্ঠানের সাথে জড়িত? হ্যাঁ..... না.....

যদি হ্যাঁ হয় দয়া করে নিম্ন লিখিত প্রতিষ্ঠানে আপনার অংশগ্রহনের প্রকৃতি ও সময় বলুন ঃ

ক্রমিক সংখ্যা	প্রতিষ্ঠানের ধরন	অংশ গ্রহনের প্রকৃতি (সময় সহ)			
		অংশ গ্রহন নাই	সাধারন সদস্য	সম্মানিত সদস্য	সম্মানিত অফিসার
১	বিভিন্ন এন জিও				
২	মহিলা সমবায় সমিতি				
৩	ইউনিয়ন পরিষদ				
৪	স্কুল কমিটি				
৫	অন্যান্য (যদি থাকে)				

৮. কৃষি বিষয়ক জ্ঞান ঃ

দয়া করে নিম্নের প্রশ্নের উত্তর দিন ঃ

ক্রমিক সংখ্যা	প্রশ্ন	স্কোর	প্রাপ্ত নম্বর
১	ইউরিয়া সারের দুটি কাজ বলুন	২	
২	গ্রীষ্মের দুটি সবজির নাম বলুন	২	
৩	শীতকালীন দুটি সবজির নাম বলুন	২	
৪	জৈব সারের দুটি গুরুত্বপূর্ণ উপাদানের নাম বলুন	২	
৫	জৈব সারের দুটি উপকার বলুন	২	
৬	সবজির পোকা দমনের দুটি কীটনাশকের নাম বলুন	২	
৭	দুটি হাইব্রিড ধানের নাম বলুন	২	
৮	বালাই নাশকের দুটি ক্ষতিকারক দিকের নাম বলুন	২	
৯	সবজি চাষে তিনটি গুরুত্বপূর্ণ সবজির পুষ্টি উপাদানের নাম বলুন	২	
১০	এক বিঘা জমি চাষ করার জন্য কি পরিমাণ ধান বীজ দরকার	২	
১১	বেগুন গাছের দুটি রোগের লক্ষন বলুন যা গাছের আক্রান্ত করে	২	
১২	কীটনাশক বাদে গাছের পোকা দানের দুটি প্রদ্ধতির নাম বলুন	২	
১৩	পুকুরে মাছ ছাড়ার জন্য উপযুক্ত মাসের নাম বলুন	২	
১৪	নাইট্রোজেন সারের ঘাটতির দুটি লক্ষন বলুন	২	
১৫	ভাল বীজের দুটি বৈশিষ্ট্য বলুন	২	
	মোট	৩০	

৯. কৃষি সম্পর্কিত তথ্য পাওয়ার জন্য যোগাযোগ মাধ্যমের ব্যবহার নিধারিত কিছু প্রযুক্তির উপর সাড়াদানকারী তথ্য সংগ্রহ ঃ

ক্রমিক নং	প্রযুক্তির নাম	যোগাযোগ মাধ্যম	নিয়মিত (৪)	অনিয়মিত (৩)	মাঝে মাঝে (২)	খুবি কম (১)	কখনই না (০)
১	সমন্ধিত বালাই ব্যবস্থাপনা (আই পি এম)	উপ সহকারী কৃষি কর্মকর্তা	>৩ বার/মাস	৩ বার/মাস	২ বার/মাস	১ বার/মাস	
		প্রতিবেশী / বন্ধু	>৫ বার/মাস	৪-৫ বার/মাস	১-২ বার/মাস	১ বার/বছর	
		এন জিও কর্মী	>৩ বার/মাস	৩ বার/মাস	১-২ বার/মাস	১ বার/বছর	
		টেলিভিশন	>৫ বার/মাস	৪-৫ বার/মাস	২-৩ বার/মাস	১ বার/মাস	
২	সমন্ধিত শষ্য ব্যবস্থাপনা	উপ সহকারী কৃষি কর্মকর্তা	>৩ বার/মাস	৩ বার/মাস	২ বার/মাস	১ বার/মাস	
		কৃষি সম্প্রসারন কর্মকর্তা	>৭-৮ বার/বছর	৫-৬ বার/বছর	৪-৩ বার/বছর	১-২ বার/বছর	
		কৃষি সভা	>৩ বার/মাস	১-৩ বার/মাস	২ বার/বছর	১ বার/বছর	
		সম্মনিত সিদ্ধান্ত	>৪ বার/মাস	৩-৪ বার/মাস	১-২ বার/মাস	১ বার/বছর	
৩	বাড়ির আঙ্গীনায় বাগান	উপ সহকারী কৃষি কর্মকর্তা	>৩ বার/মাস	৩ বার/মাস	২ বার/মাস	১ বার/মাস	
		অনন্য কৃষক	>৫ বার/মাস	১-৫ বার/মাস	২-৩ বার/বছর	১ বার/বছর	
		কৃষি সভা	>৩ বার/মাস	১-৩ বার/মাস	২ বার/বছর	১ বার/বছর	
		এন জিও কর্মী	>৩ বার/মাস	৩ বার/মাস	১-২ বার/মাস	১ বার/বছর	
৪	আন্ত পরিচর্যা প্রযুক্তি	উপ সহকারী কৃষি কর্মকর্তা	>৩ বার/মাস	৩ বার/মাস	২ বার/মাস	১ বার/মাস	
		কৃষি সম্প্রসারন কর্মকর্তা	>৭-৮ বার/বছর	৫-৬ বার/বছর	৪-৩ বার/বছর	১-২ বার/বছর	
		কৃষি সভা	>৩ বার/মাস	১-৩ বার/মাস	২ বার/বছর	১ বার/বছর	
		এন জিও কর্মী	>৩ বার/মাস	৩ বার/মাস	১-২ বার/মাস	১ বার/বছর	
৫	উচ্চ ফরনশীল জাত	উপ সহকারী কৃষি কর্মকর্তা	>৩ বার/মাস	৩ বার/মাস	২ বার/মাস	১ বার/মাস	
		কৃষি সম্প্রসারন কর্মকর্তা	>৭-৮ বার/বছর	৫-৬ বার/বছর	৪-৩ বার/বছর	১-২ বার/বছর	
		অনন্য কৃষক	>৫ বার/মাস	১-৫ বার/মাস	২-৩ বার/বছর	১ বার/বছর	
		এন জিও কর্মী	>৩ বার/মাস	৩ বার/মাস	১-২ বার/মাস	১ বার/বছর	
৬	গুটি ইউরিয়া	উপ সহকারী কৃষি কর্মকর্তা	>৩ বার/মাস	৩ বার/মাস	২ বার/মাস	১ বার/মাস	
		পদ্ধতি প্রর্দশন	>২ বার/বছর	১-২ বার/বছর	১ বার/২বছর	১ বার/৩বছর	
		কৃষি সভা	>৩ বার/মাস	১-৩ বার/মাস	২ বার/ বছর	১ বার/বছর	
		এন জিও কর্মী	>৩ বার/মাস	৩ বার/মাস	১-২ বার/মাস	১ বার/বছর	
৭	জৈব চাষা বাদ	উপ সহকারী কৃষি কর্মকর্তা	>৩ বার/মাস	৩ বার/মাস	২ বার/মাস	১ বার/মাস	
		অনন্য কৃষক	>৫ বার/মাস	১-৫ বার/মাস	২-৩ বার/বছর	১ বার/বছর	
		কৃষি সভা	>৩ বার/মাস	১-৩ বার/মাস	২ বার/ বছর	১ বার/বছর	
		এন জিও কর্মী	>৩ বার/মাস	৩ বার/মাস	১-২ বার/মাস	১ বার/বছর	
৮	শষ্য আবর্তন	উপ সহকারী কৃষি কর্মকর্তা	>৩ বার/মাস	৩ বার/মাস	২ বার/মাস	১ বার/মাস	
		অনন্য কৃষক	>৫ বার/মাস	১-৫ বার/মাস	২-৩ বার/বছর	১ বার/বছর	
		কৃষি সম্প্রসারন কর্মকর্তা	>৭-৮ বার/বছর	৫-৬ বার/বছর	৪-৩ বার/বছর	১-২ বার/বছর	
		সম্মনিত সিদ্ধান্ত	>৪ বার/মাস	৩-৪ বার/মাস	১-২ বার/মাস	১ বার/বছর	

৯	টেকসই কৃষি প্রযুক্তি	উপ সহকারী কৃষি কর্মকর্তা	>৩ বার/মাস	৩ বার/মাস	২ বার/মাস	১ বার/মাস	
		কৃষি সম্প্রসারন কর্মকর্তা	>৭-৮ বার/বছর	৫-৬ বার/বছর	৪-৩ বার/বছর	১-২ বার/বছর	
		কৃষি সভা	>৩ বার/মাস	১-৩ বার/মাস	২ বার/ বছর	১ বার/বছর	
		টেলিভিশন	>৫ বার/মাস	৪-৫ বার/মাস	২-৩ বার/মাস	১ বার/মাস	
১০	সংগ্রহ পরবর্তি প্রযুক্তি	উপ সহকারী কৃষি কর্মকর্তা	>৩ বার/মাস	৩ বার/মাস	২ বার/মাস	১ বার/মাস	
		এন জিও কর্মী	>৩ বার/মাস	৩ বার/মাস	১-২ বার/মাস	১ বার/বছর	
		কৃষি সভা	>৩ বার/মাস	১-৩ বার/মাস	২ বার/ বছর	১ বার/বছর	
		অনন্য কৃষক	>৫ বার/মাস	১-৫ বার/মাস	২-৩ বার/বছর	১ বার/বছর	

স্বাক্ষর.....

APPENDIX- B

Correlation matrix showing the interrelationships among the entire variable

	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	Y
X_1	1								
X_2	-.698**	1							
X_3	.587**	-.192	1						
X_4	.595**	-.125	.724**	1					
X_5	.439**	-.010	.661**	.843**	1				
X_6	-.090	-.058	-.224*	-.029	-.093	1			
X_7	.084	.147	.188	.249*	.198*	.007	1		
X_8	-.384**	.789**	.004	.131	.181	-.051	.330**	1	
Y	-.017	.482**	.250*	.404**	.399**	.012	.361**	.689**	1

NS = Non-Significant
** = Correlation is significant at the 0.01 level (2-tailed)
* = Correlation is significant at the 0.05 level (2-tailed)

X^1 = Age
X^2 = Level of education
X^3 = Family size
X^4 = Annual family income
X^5 = Farm size
X^6 = Time spent in agricultural work
X^7 = Organizational participation
X^8 = Agricultural Knowledge
Y = Use of communication sources