

# INVOLVEMENT OF RURAL WOMEN IN AGRIBUSINESS

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# INVOLVEMENT OF RURAL WOMEN IN AGRIBUSINESS

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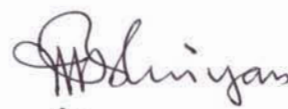
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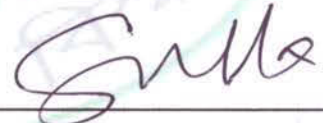
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## CERTIFICATE

This is to certify that the thesis entitled "*INVOLVEMENT OF RURAL WOMEN IN AGRIBUSINESS*." 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 bonafide research work carried out by *Tahmina Sultana*, Registration No. 00810, under my supervision and guidance. No part of this thesis has been submitted for any other degree or diploma.

I further certify that any help or sources of information as has been availed of during the course of this work has been duly acknowledged & style of the thesis have been approved and recommended for submission.

Dated:  
Dhaka, Bangladesh



Professor Md. Shadat Ulla  
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**Dedicated To**  
**My Beloved Parents**

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# LIST OF CONTENTS

CHAPTER	TITLE	PAGE
	ACKNOWLEDGEMENT	i
	LIST OF CONTENTS	ii
	LIST OF TABLES	v
	LIST OF FIGURES	vi
	LIST OF APPENDICES	vi
	ABSTRACT	
<b>CHAPTER I</b>		
	<b>INTRODUCTION</b>	<b>1</b>
1.1	General background	1
1.2	Statement of the problem	3
1.3	Objectives of the study	3
1.4	Justification of the study	4
1.5	Scope of the study	4
1.6	Limitation of the study	5
1.7	Assumption of the study	5
1.8	Definition of key terms	5
<b>CHAPTER II</b>		
	<b>REVIEW OF LITERATURE</b>	<b>8</b>
2.1	Concept of involvement and or participation	8
2.2	Relationship between selected characteristics of the respondents and their involvement or participation	11
2.2.1	Age	11
2.2.2	Education	12
2.2.3	Annual family income	12
2.2.4	Farm size	13
2.2.5	Cosmopolitaness	14
2.2.6	Extension contact	14
2.2.7	Innovativeness	15
2.2.8	Role of decision making	15
2.3	The conceptual framework of the study	15

## **CHAPTER III**

	<b>METHODOLY</b>	<b>17</b>
3.1	Locale of the study	17
3.2	Population and sample of the study	17
3.3	Variables and measurement techniques	20
3.3.1	Measurement of independent variables	20
3.4	Measurement of dependent variable	23
3.4.1	Involvement of rural women in selling of agricultural products	24
3.4.2	Involvement of rural women in purchasing of agricultural products	24
3.4.3	Involvement of rural women in overall agribusiness	24
3.5	Measurement of problems faced in involving agribusiness	25
3.6	Statement of hypothesis	26
3.7	Data gathering instrument	26
3.8	Collection of data	26
3.9	Analysis of data	27

## **CHAPTER IV**

	<b>RESULTS AND DISCUSSION</b>	<b>28</b>
4.1	Selected characteristics of the rural women	28
4.1.1	Age	30
4.1.2	Education	30
4.1.3	Annual family income	31
4.1.4	Farm size	32
4.1.5	Cosmopolitaness	33
4.1.6	Extension contact	34
4.1.7	Innovativeness	35
4.1.8	Role of decision making	36
4.2	Involvement of rural women in agribusiness	36
4.2.1	Involvement in selling of agricultural products	37
4.2.2	Involvement in purchasing of agricultural production	37
4.2.3	Involvement in overall agribusiness	38
4.3	Relationship between the selected characteristics of the women and their extent of involvement in agribusiness	38
4.3.1	Age of the rural women and their involvement in agribusiness	39
4.3.2	Education of the rural women and their involvement in agribusiness.	40

4.3.3	Annual family income of the rural women and their involvement in agribusiness.	40
4.3.4	Farm size of the rural women and their involvement in agribusiness.	41
4.3.5	Cosmopolitaness of the rural women and their involvement in agribusiness.	41
4.3.6	Extension contact of the rural women and their involvement in agribusiness.	42
4.3.7	Innovativeness of the rural women and their involvement in agribusiness.	43
4.3.8	Role of decision making of the rural women and their involvement in agribusiness.	43
4.4	Problem faced by the rural women in involving agribusiness.	44

## **CHAPTER V**

	<b>SUMMARY, CONCLUSIONS AND RECOMMENDATIONS</b>	<b>45</b>
5.1	Summary	45
5.2	Conclusions	46
5.3	Recommendations	47
5.3.1	Recommendations for policy implications	47
5.3.2	Recommendations for further study	48
	<b>REFERENCES</b>	<b>50</b>
	<b>APPENDICES</b>	<b>i</b>



## LIST OF TABLES

TABLE NO.	TITLE	PAGE
3.1	Distribution of population size and a reserve list of the rural women of selected three villages of Sirajganj district.	20
4.1	Distribution of the respondents according to their selected characteristics	29
4.2	Distribution of the rural women according to their Age	30
4.3	Distribution of the rural women according to their Education	31
4.4	Distribution of the rural women according to their Annual family income	32
4.5	Distribution of the rural women according to their Farm size	33
4.6	Distribution of the rural women according to their Cosmopolitaness	34
4.7	Distribution of the rural women according to their Extension contact	35
4.8	Distribution of the rural women according to their Innovativeness	35
4.9	Distribution of the rural women according to their Role of decision making	36
4.10	Distribution of the rural women according to their Involvement in agribusiness	37
4.11	Co-efficient of correlation between the selected characteristics of the rural women and their involvement in agribusiness	39
4.12	Ranking of the problems according to their descending order of PFI	44

## LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
2.1	The conceptual framework of the study	16
3.1	A map of Sirajganj district showing Kazipur Upazila	18
3.2	A map of Kazipur upazila showing study area	19

## LIST OF APPENDICES

APPENDICES	TITLE	PAGE
Appendix A	An English Version of the Interview Schedule	i
Appendix B	Correlation Matrix	x

# INVOLVEMENT OF RURAL WOMEN IN AGRIBUSINESS

## ABSTRACT

The aim of the study was to determine the extent of involvement of rural women in agribusiness. Attempts were also made to determine eight selected characteristics of the rural women and their relationship with involvement in agribusiness. Data were collected by interviewing 120 randomly selected women of Kazipur Upazila of Sirajganj District during 25 February, 2008 to 31<sup>st</sup> March, 2008. Appropriate scales were developed in order to measure the variables. Coefficient of correlation was used to ascertain the relationship between the concerned dependent & independent variables. Majority (68.4%) of the rural women had low involvement compared to 18.3% very low and 13.3% medium involvement in agribusiness. Among the selected characteristics of the rural women, farm size, cosmopolitaness, extension contact and innovativeness had significant and positive relationships with their involvement in agribusiness. On the other hand, age, education, annual family income and role of decision making had insignificant and positive relationships with their involvement in agribusiness. On the basis of Problem Faced Index, "Lack of freedom of right" ranked first followed by "Lack of women empowerment" and "Lack of freedom of speech" among the problems faced by the rural women in agribusiness.

**Introduction**

**Chapter I**

# CHAPTER I

## INTRODUCTION

### 1.1 General Background

Agribusiness is of critical importance to a country under all conditions at each stage in its development. Agri-business is a complex enterprise that integrates agricultural farming, value added processing, packaging and delivery activities. With the increase of global demand for agri-business product, demand for these agri-business factors also increase, including demand for woman labor. To maximize future agri-business productivity, producers now think to sink the problem of differential treatment of women and men workers. Bangladesh is an agro-based country having limited resources with ever increasing population of 140 million showing growth rate of 1.42 (BBS, 2006). Women constitute almost half of the population where male and female ratio is 104:100 (BBS, 2002). Eighty five percent of total populations live in the rural areas. Moreover a vast number (approximately 45%) of our rural people are landless and about 55% of the land owners are small farmers. Landless families possess a small piece of land in the homestead area. Women of landless families cultivate different kinds of vegetables, fruits and earn more money than medium and large farm size family (Halim, 1991). This income may meet a part of house hold expenditure for an average of 5.5 member family sizes (Anonymous, 1991).

Agribusiness although an ever lasting business and part of rural economic in Bangladesh, is almost overlooked. Money is essential for development of economic status. Women contribute in their families participating in income generating activities since time immemorial, which is not duly recognized from their male counterpart. But it is experienced that without recognition women have chance to be frustrated. As agribusiness becomes more integrated into the global economy, which is now tremendously increasing for the development of women themselves and their long desired empowerment. Most of the agribusiness by the rural women is homestead gardening centered. Regrettably to be mentioned have that the homestead

areas are not utilized properly. So, the productions of vegetables are not increasing as women desire..

The pace of development in any country depend upon the involvement and commitment of all the women concerned with development activities, specially agricultural production practices, women play significant and crucial role in compassing crop and livestock production, horticulture, pre and post harvest operations, agro-social forestry and fisheries (Anonymous, 1978). Rural Women are involved in various agribusiness by which they can change their living status in personal, social and economic dimensions.

There has been low marketable surplus of the rural people. Land and other production resources are limited and belong to mostly male members of the family. Poor physical infrastructure in villages, poor resources and technological base of the people retard the growth of competitive forces and the choices that create hinderance to the women in penetrating the market. Women market their produce either through male members of their family or through a close relative or neighbor. Women's contribution to production and processing of agricultural produces are not yet fully recognized and the women are not directly involved in marketing. Marketing is the domain of men. They perform the major selling of the household's agricultural and non-agricultural produces. Although women exert some control over the income from small scale selling that they negotiate through their children, all major sales are carried out by men (Ahmed and Miah, 1996).

From the above discussion, we can say that women can play an important role to establish their right in the domain of agribusiness and to boost up economic development. Considering the importance of agribusiness, the researcher has become specially inclined to conduct an investigation on involving the women in agribusiness.

## **1.2 Statement of the Problem**

With a view to conduct an investigation on the various aspects of agribusiness, the researcher undertook a piece of study entitled "Involvement of rural women in agribusiness". The purpose of this study was undertaken to get answers of the following questions:

- a) What is the extent of women's involvement in agribusiness?
- b) What are the characteristics of rural women?
- c) Is there any relationship between the selected characteristics of the rural women and their involvement in agribusiness?
- d) What kinds of problems are being faced by the women in involvement of agribusiness?

## **1.3 Objectives of the Study**

The following specific objectives were undertaken for the present study:

- a) To determine the extent of involvement of rural women in agribusiness
- b) To determine and describe some selected characteristics of rural women. The selected characteristics are-
  - i. Age
  - ii. Education
  - iii. Annual family income
  - iv. Farm size
  - v. Cosmopolitaness
  - vi. Extension contact
  - vii. Innovativeness
  - viii. Role of decision making
- c) To explore the relationship between selected characteristics of rural women and their extent of involvement in agribusiness
- d) To find out the problems faced by the rural women to involve in agribusiness.

#### **1.4 Justification of the Study**

It is presumed that there are certain differences between men and women. Women in agribusiness/ marketing are confronted with barriers reflecting the assumed differences. Psychological, social and religious obstacles seriously counteract women's willingness and ability to perform function of agribusiness /marketing. Agribusiness /marketing is of critical importance to a country under all conditions and at each stage in its development. Available literature reflects that a significant portion of our women are now involved in agricultural production and processing. Agricultural marketing comprises all the operations involved in the movement of food and raw-materials from the place of production to the final consumers. Involvement of women in agribusiness and marketing of homestead produces are quite appreciable in these days. Although in the micro level there is some recognition of the enhanced participation of women in agribusiness /marketing and other economic activities, but in the macro level the women participation in the economic activities is not recognized. A thorough study is, thus, necessitated to measure the extent of involvement of women in agribusiness /marketing and also to determine the share of the markets and marketing tasks performed by the women.

#### **1.5 Scope of the Study**

Involvement of rural women in changing fact under economic pressure in general and rural and farm women in particular the extent of involvement in diversified agribusiness by the rural women varies from place to place and even within the same place. Agribusiness of income sources is a crying need now-a-days. It was a key focus of this study. Government has also given emphasis to involve women in different development activities of the country because they are now a definite strength in the nation building process. How the extent of involvement of rural women in agribusiness was the major empirical part of this research. Findings of the study would be useful to the planners, policy makers, administrators and others associated with the development of rural women.



## **1.6 Limitations of the Study**

Considering time, money and other resources and also to make the study manageable and meaningful, it become essential to impose certain limitations as noted below:

1. The study was confined to a selected area: 3 villages of Kazipur Upazila under Sirajganj district.
2. There were many characteristics of the beneficiaries but only 8 characteristics of them were selected for the study.
3. The researcher had to depend on the data furnished by the selected respondents while interviewing.
4. The study was confined on only rural women in a very small area of the country.

## **1.7 Assumption of the Study**

The following assumptions (Ray and Mondal, 2004) were made by the researcher while undertaking the present study:

1. The subject selected for the study were competent enough to reply adequately to queries designed by the researcher.
2. The responses furnished by the respondents were reliable and valid.
3. Information given by the selected respondents was representative of the whole respective groups of the study area.
4. The researcher who acted as interviewer was well adjusted to the social and cultural environment of the study area.
5. The data collected by the investigator were free from bias and prejudice.
6. The environmental conditions of the rural women were more or less similar throughout the study area.
7. The extent of involvement of rural women in agribusiness gave a representative feature in the context of other areas of Bangladesh.

## **1.8 Definition of Key Terms**

The key terms which have been used throughout the thesis are defined and interpreted as follows:

### **Involvement**

Involvement referred to the extent of participation in agribusiness by the rural women during the years preceeding the interview.

### **Rural women**

In the present study, rural women refers to the married women living in village and engaged in different agribusiness related activities directly or indirectly.

### **Agribusiness**

Agribusiness is a complex enterprise that integrates agricultural farming, value added processing, packaging and delivery activities.

### **Age of rural women**

It is defined as the chronological duration of time from the birth of the rural women to the time of interview.

### **Education**

Education is the process of changing knowledge, skill and attitude of an individual to the desired dimension. It was measured in terms of years of schooling completed by an individual at the time of interview.

### **Annual family income**

Annual family income was defined as the total financial return per year of a family from agriculture and other sources (services, business, labour etc.) during a year.

### **Farm Size**

It refers to the area of land owned by a farmer or his wife on which farming activities are carried out. A respondent was considered to have full benefit from cultivated area either owned by her or obtained on borga system the area being estimated in terms of full benefit to the farmer. The right of a farmer on the land taken on lease from others was regarded as ownership in estimating the farm size.

### **Cosmopolitaness**

It refers to the frequency of movement of the rural women's exposure outside her own social environment, her exposure to nearest village, own upazila, district or places of social and agricultural importance.

**Extension contact**

This term refers to once becoming accessible to the influence of extension education through different extension teaching methods.

**Innovativeness**

The term innovativeness refers to the degree to which an individual is relatively earlier in adopting new ideas than the other members of a social system (Rogers, 1983). Innovativeness of a respondent was measured on the basis of year of adoption of selected technologies i.e. adoption period of ten technologies.

**Role of decision making**

A decision may be conceived simply as a choice to undertake a course of action on significant matters of the family concern of the decision maker. Usually the head of the family acts as a decision maker or he/she may have in such activities with other family members e. g. spouse, sons, daughters etc. and also with relatives, neighbors and friends. The decision-making role in the study refers to activeness of the respondents in the selected matters of the family.

**Selling**

Last step in the chain of commerce where a buyer exchanges cash for a seller's good or service. In business, "nothing happens until someone sells something."

**Purchasing**

Purchasing is a function of business organizations like mills, factories, banks, agribusiness etc. for the procurement of necessary items required by the organizations. In this study purchasing was concerned with procurement of crop production inputs and implements.

**Problem Confrontation**

Problems means any difficult situation which requires some actions to minimize the gap between "what ought to be" and "what is" problem confrontation of the respondent refers to the problem faced by her in involving various activities.

# **Chapter II**

## **Review of Literature**

## **CHAPTER II**

### **REVIEW OF LITERATURE**

The present study is concerned with the involvement of rural women in agribusiness. The researcher intensively searched internet and reviewed related literatures. But no literature was found directly related to the involvement of rural women in agribusiness. But some literatures were found that tried to find out the participation of the rural women in several types of activities. As participation and involvement are similar variable, literature related to participation are presented in this chapter in following three sections.

Section I: Concept of involvement and or participation

Section II: Relationship between selected characteristics of the respondents and their involvement or participation

Section III: Conceptual framework of the study.

#### **2.1 Concept of Involvement or Participation**

‘Participation’ is a word, which is frequently used in development. It has many different meanings. Various studies, project documents and manuals have interpreted participation in different ways (FAO, 1989):

- Participation is the voluntary contribution by people in projects, but without their taking part in decision making.
- Participation is the sensitization of people to increase their receptivity and ability to respond to development projects.
- Participation is an active process, meaning that the person or group in question takes initiatives and asserts his autonomy to do so.
- Participation is the fostering of a dialogue between the local people and the staff involved in project preparation, implementation, monitoring and

evaluation in order to obtain information on the local context and on social impacts.

- Participation is the voluntary involvement of people in self-determined change.
- Participation is involvement in people's development of themselves, their lives, and their environment.

Various attempts have been made to develop a typology of participation (Hart, 1992; Pretty, 1994). Seven types of participation as conceived by Pretty *et al.* (1995) are described below:

- i. Passive participation: people participate by being told what is going to happen or has already happened. It is unilateral announcement by an administration or project management without listening to people's responses. The information being shared belongs only to external professionals.
- ii. Participation in information giving: people participate by answering questions posed by extractive researchers using questionnaire, surveys or similar approaches. People do not have the opportunity to influence proceedings, as the findings of the research are neither shared nor checked for accuracy.
- iii. Participation by consultation: people participate by being consulted, and external people listen to their views. These external professionals define both problems and solutions, and may modify these in the light of people's responses. Such a consultative process does not concede any share in decision making, and professionals are under no obligation to take on board people's views.
- iv. Participation for material incentives: people participate by providing resources, for example labor, in return for food, cash or other material

incentives. Much on-farm research falls in this category, as farmers provide the fields but are not involved in the experimentation or the process of learning. It is very common to see this called participation, yet people have no stake in continuing the activities, when the incentives are withdrawn.

- v. Functional participation: people participate by forming groups to meet predetermined objects related to the project, which can involve the development or promotion of externally initiated social organization. Such involvement does not tend to be at early stages of project cycles or planning, but rather after major decisions have been made. These institutions tend to be dependent on external initiators and facilitators, but may become self-dependent.
- vi. Interactive participation: people participate in joint analysis, which leads to action plans and the formation of new local institutions or the strengthening of existing ones. It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systemic and structured learning process. These groups take control over local decisions, and so people have a stake in maintaining structures or practices.
- vii. Self-mobilization: people participate by taking initiatives independent of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Such self-initiated mobilization and collective action may or may not challenge existing inequitable distribution of wealth and power.

In view of the foregoing discussion, it may be concluded that involvement is nothing but one kind of participation in different activities. Therefore, the researcher also presented the review of relationships of selected characteristics of the respondents related to participation.

## **2.2 Relationship Between Selected Characteristics of the Respondents and Their Involvement or Participation**

### **2.2.1 Age and involvement or participation**

Hasan (2006) mentioned that there was no significant relationship between age of the conventional and organic farmers with their extent of participation in farming activities.

Aktaruzzaman (2006) mentioned that there was significant and positive relationship between age of landless women and their functional participation in Income Generating Activities (IGAs).

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

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

Chowdhury (2000) in his study observed that age of the rural women had insignificant relationship with their opinion for participation in development activities.

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

Begum (1998) in her study showed that age of the rural women had no significant relationship with their poverty alleviation owing to participation in ASA activities.

Islam (1994) showed that age of the women was not significantly related to their extent of participation in agricultural income generating activities.

Akanda (1994) revealed in his study that age of the rural women had significant positive relationship with their participation in the cultivation of homestead vegetables and fruit trees.



### **2.2.2 Education and involvement or participation**

Aktaruzzaman (2006) revealed that there was non-significant relationship between education of landless women and their functional participation in Income Generating Activities (IGAs).

Khan (2004) found that there was significant and positive relationship between education of farmers and their participation in farm and community level activities.

Azad (2003) mentioned that education of the rural women had a significant positive relationship with their participation in decision making regarding farming activities.

Islam (2003) concluded that level of education of the rural women had a significant negative relationship with their participation in goat rearing.

Akhter (2000) in his study observed that education of the women had significant positive correlation with their participation in decision making role in the family with regard to development activities.

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

### **2.2.3 Annual family income and involvement or participation**

Aktaruzzaman (2006) stated that there was non-significant relationship between family income of landless women and their functional participation in Income Generating Activities (IGAs).

Khan (2004) stated that there was non-significant relationship between family annual income of farmers and their participation in farm and community level activities.

Khatun (2004) mentioned significant positive relationship between family annual income of rural women and their participation in homestead management activities.

Farhana (2002) mentioned that annual income of the rural women had a significant positive relationship with their participation in rice production activities.

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

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.

Anwar (1994) found that family income was not associated with the participation of rural youth in agricultural activities.

#### **2.2.4 Farm size and involvement or participation**

Hasan (2006) concluded that farm size of conventional farmers but not of organic farmers was significantly and positively correlated with their extent of participation in farming activities.

Khatun (2004) found non-significant relationship between family farm size of rural women and their participation in homestead management activities.

Islam (2003) mentioned that farm size of the rural women had a significant negative relationship with their participation in goat rearing.

Farhana (2002) stated that farm size of the rural women had a significant positive relationship with their participation in rice production activities.

Islam (2002) in his study observed that farm size of the women had significant positive relationship with their involvement Income Generating Activities(IGAs).

Aker (2000) mentioned that there was a significant positive relationship between farm size of the women and their participation in Income Generating Activities and in decision making role in the family with regard to development activities.

Anwar (1994) in his study did not find any significant relationship between farm size of parents and participation in rural youth in agricultural activities.

### **2.2.5 Cosmopolitanism and involvement or participation**

Amin (2004) concluded that there was no significant relationship between cosmopolitanism of the rural women and their participation in selected aquaculture activities.

Akter (2000) stated that cosmopolitanism of the rural women had a significant positive relationship with their participation in Income Generating Activities.

Akanda (1994) found that non-localite behavior or cosmopolitanism of rural women was negatively correlated with their participation in homestead vegetable cultivation, cultivation of fruit trees and non-farm homestead activities.

### **2.2.6 Extension contact and involvement or participation**

Hasan (2006) concluded that extension contact of organic farmers but not of conventional farmers was significantly and positively correlated with their extent of participation in farming activities.

Khan (2004) observed significant and positive relationship between extension contact of farmer and their participation in farm and community level activities.

Khatun (2004) found non-significant positive relationship between extension contact of rural women and their participation in homestead management activities.

Nahar (1996) in her study found that there was as significant relationship in the extension contact of farm women in homestead farming and their level of contact with information sources.

Islam (1991) reported that the extension contact was significantly related with the extension contact.

Kaur (1988) in his study observed that extension contact and mass media exposure had significant influence upon opinion, level of knowledge and adoption of selected practice by rural women.

### **2.2.7 Innovativeness and involvement or participation**

Aurangozeb (2002) observed that innovativeness of the rural women had significant positive relationship with their adoption of integrated homestead farming technology.

Akanda (1994) found that innovativeness of the rural women had positive relationship of the rural women had positive relationship with participation in homestead vegetable cultivation and cultivation of fruit trees.

Kashem and Halim (1991) reported that innovativeness of the farmers had significant positive correlation with their self-confidence, communication media is adoption of modern rice technology, communication media in livestock production and communication media in adoption of total agricultural technology.

### **2.2.8 Role of decision making and involvement or participation**

The researcher did not find any literature related to role of decision making of the respondents and their involvement of agribusiness.

## **2.3 The Conceptual Framework of the Study**

In this study, it was expected that 'involvement of rural women in agribusiness' as the dependent variable would be influenced by selected characteristics of the respondents as independent variables, viz. age, education, annual family income, farm size, cosmopolitaness, extension contact, innovativeness and role of decision making.

Based on these above discussion and the review of literature, the conceptual framework of this study has been formulated and shown in figure 2.1.

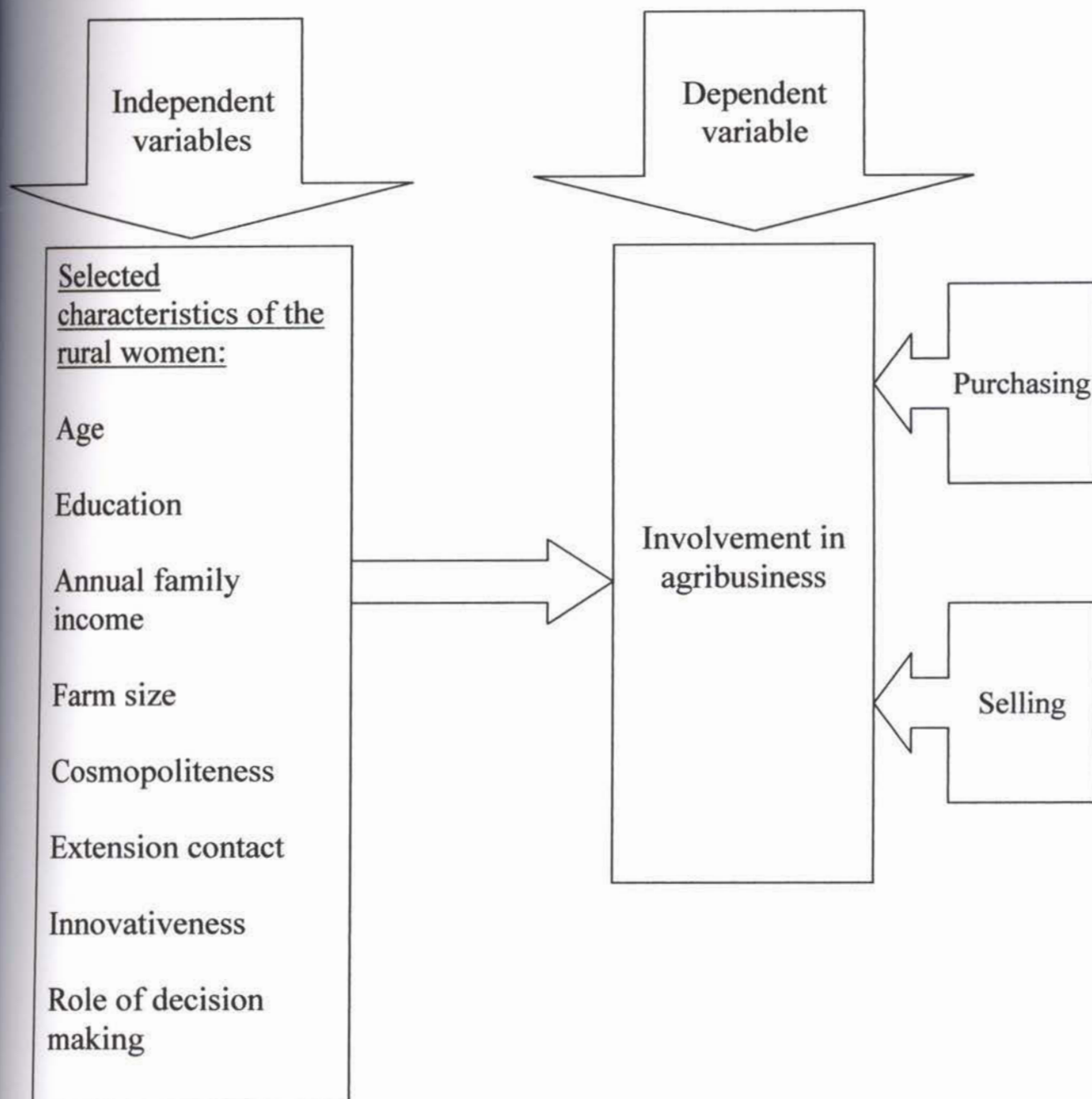


Fig 2.1 The conceptual framework of the study

# **Chapter III**

## **Methodology**

## **CHAPTER III**

### **METHODOLOGY**

Methodology refers to the methods and procedures in the research work. For any scientific investigation methods and procedures are very important and require a very careful consideration. The researcher was very much careful for using proper methods in all aspects of the investigation. The methods and procedures followed in conducting this research have been described in this chapter.

#### **3.1 Locale of the Study**

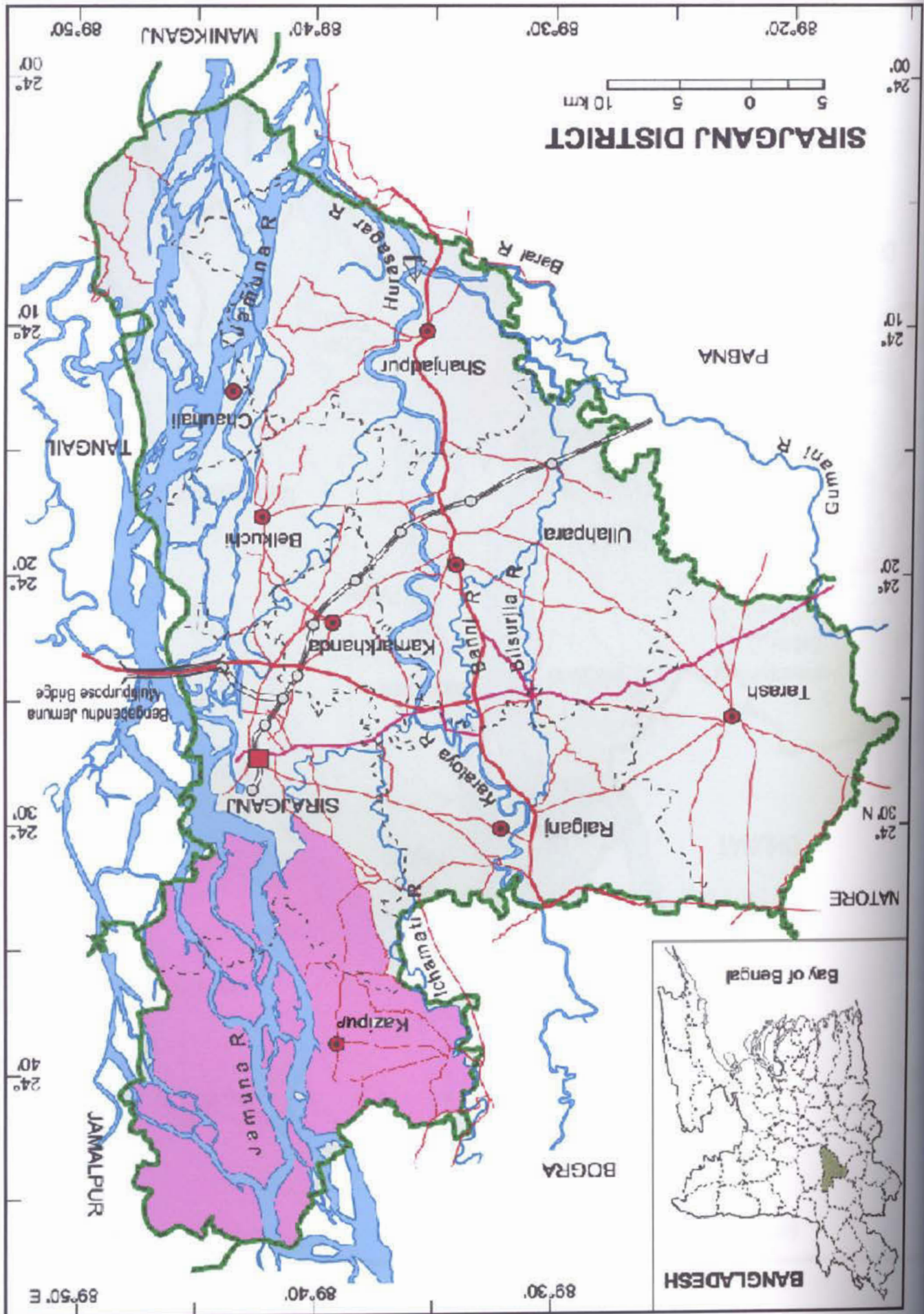
The study area was located at Kazipur upazila under Sirajganj district. Out of 12 unions of Kazipur upazila, Subhagachha union was purposively selected. Again three villages namely, Subhagachha, Gandail, Baoramari were selected randomly from this union. So, particularly these randomly selected villages were the locale of the study. The location of the study area is depicted in figure 3.1.

#### **3.2 Population and Sample Size of the Study**

The number of rural women of these selected villages (Shuvogacha, Gandail, Baoramari) were 200, 165, 235 respectively. Thus, a total of 600 rural women constituted the population of the study. Thus, out of the 600 rural women 120 were (around 20 percent of the population) selected randomly which is shown in Table 3.1. The sampling procedure was followed:

- i. the researcher first collected the list of number of rural women from each village with the help of local leaders and aged persons of respective villages;

Figure 3.1 A map of Sirajganj district showing Kazipur Upazila





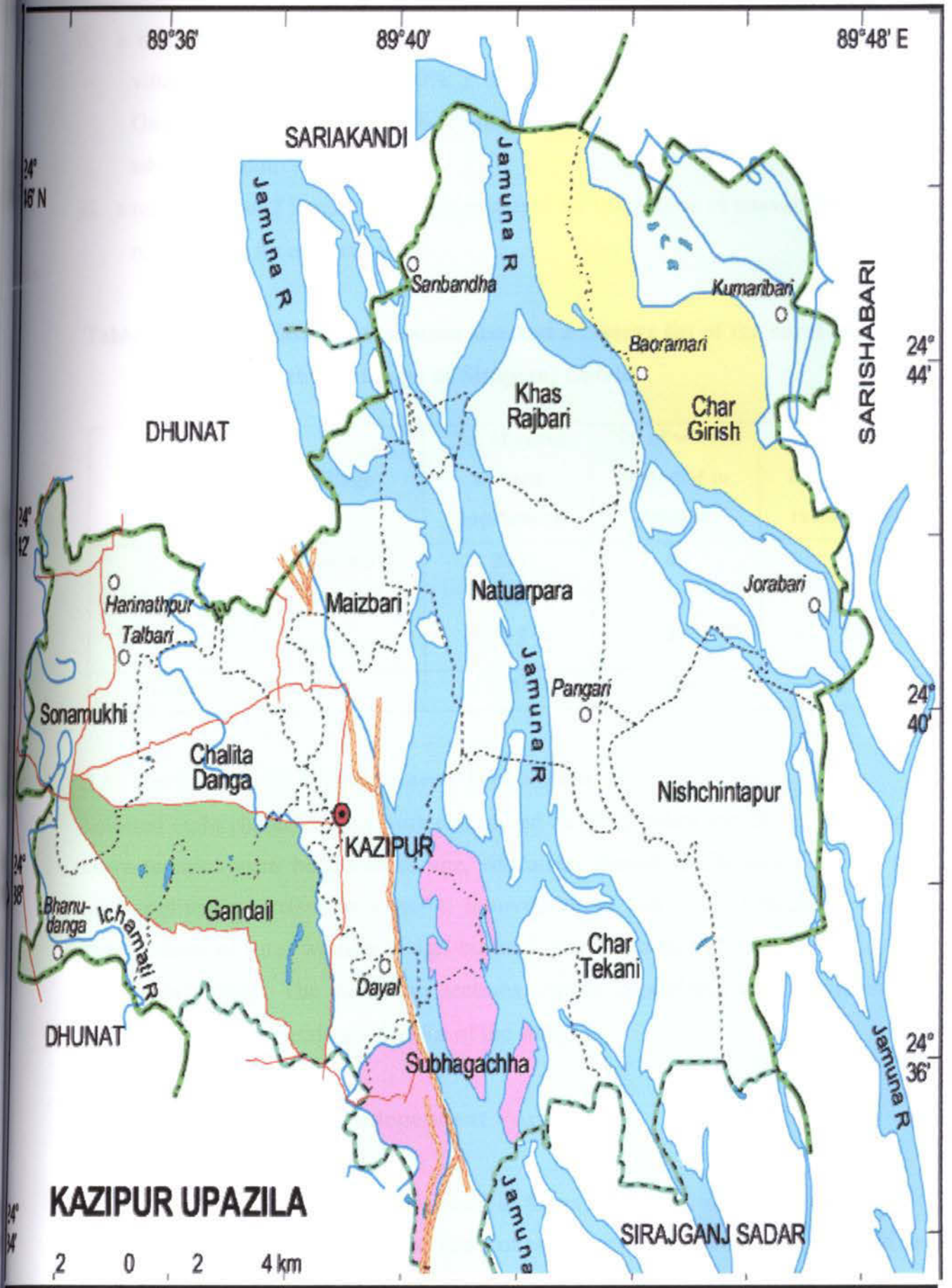


Figure 3.2. A Map of Kazipur Upazila Showing Study Area19

- ii. a number of 120 samples (house-wives) were selected from the three selected village i.e. 40 samples ( 20% ) from Subhagachha, 33 samples (20%) from Gandail, and 47 samples (20%) from Baoramari. Samples were selected by using table of random number and
- iii. a reserve list of 7 house-wives was prepared for use in case of unavailability of the respondents for any reason.

**Table 3.1 Distribution of population size and a reserve list of the rural women of selected three villages of Sirajganj district**

Upazila	Village	No. of rural women (population)	No. of women included in sample	No. of women included as reserve list
Kazipur	Subhagachha	200	40	2
	Gandail	165	33	2
	Baoramari	235	47	3
Total		600	120	7

### 3.3 Variables and Measurement Techniques

Selected eight characteristics were considered as independent variables. The selected characteristics were beneficiaries age, education, annual family income, farm size, cosmopolitaness, extension content, innovativeness and role of decision making. Involvement of rural women in agri-business was selected as dependent variable of the present study. The following sections contain procedures of measurement of independent and dependent variables of the study.

#### 3.3.1 Measurement of Independent Variables

##### Age

The age of a respondent was measured in terms of years from birth to the time of interview which was found on the basis of response (Azad, 2003). A unit score one (1) was assigned for each year of one's age.

### **Education**

Education was measured in terms of one score was given for one year of schooling. One's education score was given for passing each level in an educational institution (Amin, 2004). For example, if a respondent passed the S.S.C. examination, educational score was given as 10. If a respondent did not know how to read and write, her educational score was given as '0' and the respondent who could sign her name was given 0.5.

### **Annual Family Income**

Annual family income of a respondent was measured on the basis of total yearly earning from agriculture and non-agriculture sources (service, business, etc.) earned by the respondent herself and other family members. The incomes from different sources were ascertained in two phases.

1. In the first phase, the yield of the entire crop in the previous year was determined, and then the entire yield was converted into cash income according to the prevailing market price.
2. In the second phase, earnings of each respondent herself and other family members of her family from different sources (like service, business, labour) in the last year was determined. Finally, total annual family income of the respondent was measured by the following formula,

$$\text{Total annual income} = A+B$$

Where,

A= Annual income from agricultural crops.

B= Annual income from non-agricultural sources.

### **Farm Size**

Farm size of a woman was referred to the total area of land owned by the family of the concerned woman. Land including homestead, garden and pond of their family either owned by them or taken as borga or lease was included in the farm size of the family. It was measured in hectares for each respondent using the following formula:

$$FS= A_1+A_2+A_3+1/2 (A_4+A_5) + A_6$$

Where,

FS = Farm size

- A<sub>1</sub> = Homestead land
- A<sub>2</sub> = Own land under own cultivation
- A<sub>3</sub> = Land taken from others on lease
- A<sub>4</sub> = Land taken from others on borga
- A<sub>5</sub> = Own land given to others on borga
- A<sub>6</sub> = Other fallow land

**Cosmopolitaness**

Cosmopolitaness of a respondent referred to a frequency of visiting different external places per unit time. This variable was measured on the basis of the responses of the respondent’s visit of places, against 4-point rating as ‘not at all’, ‘rarely’, ‘occasionally’ and ‘frequently’ and scores were assigned as 0, 1, 2 and 3 respectively (Alam, 2004). Cosmopolitaness was, therefore, determined by adding the total responses against 5 selected visiting places. The scores could range from 0-15, where 0 indicated no cosmopolitaness and 15 indicated very high cosmopolitaness.

Score	Basis for scoring
0	Not at all
1	Rarely
2	Occasionally
3	Frequently

**Extension Contact**

It referred to one’s extent of exposure to different extension teaching methods. It was measured by computing an extension contact score. It was assumed that the more the contact of an individual with 11 extensions teaching methods, the more would be the influence of extension education on her. The score was measured on the basis of her extent of contact with selected extension media. Each respondent was asked to indicate her extent of contact with a particular extension media along a 3-point scale “frequently”, “occasionally” and “no contact”. These responses were scored as 2, 1 and 0, respectively. The extension contact score of a respondent was obtained by

adding her scores for all the selected extension media. The extension contact of a respondent could range from 0 to 22, where, 0 indicating no extension contact and 22 indicating very high extension contact.

### **Innovativeness**

In the present study, innovativeness referred to the extent of adopting modern agricultural, social and other innovations by the rural woman in relation to the use of time. Innovativeness was measured by adding scores against 10 innovations with the help of a 4-point scale. Scores were assigned to each of the innovations in the following way:

<b>No.</b>	<b>Response</b>	<b>Weight</b>
1	Do not use	0
2	Use within 5 years and above after hearing	1
3	Use within 3 to 4 years after hearing	2
4	Use within 1 to 2 years after hearing	3

Thus the innovativeness score of a respondent could range from 0 to 30, where, 0 indicating no innovativeness and 30 indicating very high innovativeness.

### **Role of Decision Making**

Role of decision making by the rural women towards agribusiness was measured by using 3-point scale. There were 10 activities against which the respondents indicated whether they play active role, passive role, and no role. Scores were assigned to the above 3 responses as 2, 1 and 0 respectively for the activities. Score of a respondent was obtained by adding her scores for all 10 activities. Thus the role of decision making score of a respondent could ranged from 0-20, where 0 indicating no decision making and 20 indicating high decision making role.

### **3.4 Measurement of Dependent Variable**

Involvement of rural women in agribusiness was the dependent variable of the study and the extent of involvement was measured by two dimensions.

- a) **Involvement of rural women in selling of agricultural products.**
- b) **Involvement of rural women in purchasing of agricultural products.**

#### **3.4.1 Involvement of rural women in selling of agricultural products**

Involvement in marketing/selling of agricultural products of a respondent was measured by computing involvement score in 25 selected items of different agricultural products during the time of interview. The respondent was asked to indicate their extent of involvement to each of the 25 items along with a 5-point scale. The weightage of the responses were given as 0, 1, 2, 3, and 4, for never, rarely, occasionally, frequently and regularly respectively. By adding the scores obtained from all the 25 items, the involvement score was determined. Thus, the involvement score of a rural women in selling could range from 0- 100, 0 indicating no involvement and 100 indicating very high involvement.

#### **3.4.2 Involvement of rural women in purchasing of agricultural products**

Involvement of rural women in purchasing of agricultural products of a respondent was measured by computing involvement score to obtain involvement score in 15 selected items purchasing in different agricultural products during the time of interview. The respondents were asked indicate their extent of involvement to each of the 15 items along a 5-point scale. These weightage of the responses were given as 0, 1, 2, 3 and 4, for never, rarely, occasionally, frequently and regularly respectively. By adding the scores obtained from all the 15 items, the involvement score was determined. Thus, the involvement score of a rural women in purchasing could range from 0-60, 0 indicating no involvement and 60 indicating very high involvement.

#### **3.4.3 Involvement of rural women in overall agribusiness**

Involvement of rural women in overall agribusiness was measured by summing up the score of involvement of rural women in selling of agricultural products and involvement of rural women in purchasing of agricultural products during the time of interview. Finally, scores for involving for rural women in agribusiness was measured by using the following formula:

$$\text{AIS} = \text{IS} + \text{IP}$$

Where,

AIS = Agribusiness Involvement Score

IS = Involvement in selling of agricultural products

IP = Involvement in purchasing of agricultural products

### 3.5 Measurement of problems faced in involving agribusiness

Fourteen problems in agribusiness in different agricultural products were first selected. These were measured by using a 6-point scale. Scores were assigned to 5 for very high problem, 4 for high problem, 3 for medium problem, 2 for low problem, 1 for very low problem and 0 for no problem. Finally problem in agribusiness score of the rural women was measured by adding up all the scores of all the responses to all the 14 problems faced by that respondent. Thus, the possible score of the problem faced to involve in agribusiness of a respondents could range from 0-70, where 0 indicating no problem and 70 indicating very high problem in agribusiness.

For having a clear understanding of the comparative problem in agribusiness by the women a comparative study was accomplished among the identified 14 problems, through Problem Faced Index (PFI) for each problem by using the following formula.

$$\text{PFI} = (\text{P}_{\text{VH}} \times 5) + (\text{P}_{\text{H}} \times 4) + (\text{P}_{\text{M}} \times 3) + (\text{P}_{\text{L}} \times 2) + (\text{P}_{\text{VL}} \times 1) + (\text{P}_{\text{N}} \times 0)$$

Where,

PFI = Problem Faced Index

$\text{P}_{\text{VH}}$  = No. of respondents faced the problem as very high

$\text{P}_{\text{H}}$  = No. of respondents faced the problem as high

$\text{P}_{\text{M}}$  = No. of respondents faced the problem as medium

$\text{P}_{\text{L}}$  = No. of respondents faced the problem as low

$\text{P}_{\text{VL}}$  = No. of respondents faced the problem as very low

$\text{P}_{\text{N}}$  = No. of respondents faced the problem as no problem

Thus the Problem Faced Index (PFI) for any one of the selected problems could range from 0-600, where 0 indicating no problem and 600 indicates very high problem. After obtaining PFI for each of the 14 problems a rank order was prepared.

### **3.6 Statement of hypothesis**

A hypothesis simply means a mere assumption or some supposition to be proved or disproved. But for a researcher, hypothesis is a formal question that he intends to resolve. According to Kerlinger (1973) "A hypothesis is a conjectural statement of the relation between two or more variables. Hypothesis are always in declarative sentence form and they related either generally or specifically variables to variables." As defined by Goode and Hatt (1952) "A hypothesis is a proposition which can be put to test to determine its validity. It may be contrary to or in accord with the common sense. It leads to an empirical test." In broad sense, hypothesis may be divided into two categories, (a) research hypothesis ( $H_i$ ) and (b) null hypothesis ( $H_o$ ). However, for the present study the hypothesis were formulated in null form.

The following null hypothesis was formulated to explore the relationship between selected characteristics of the rural women.

"There is no relationship between age, education, annual family income, farm size, cosmopolitaness, extension contact, innovativeness, and role of decision making of the rural women and their extent of involvement in agribusiness."

### **3.7 Data gathering instrument**

A structured interview schedule was used for collection of necessary data for the study and closed form questions were included in the schedule. Simple and direct question and also a number of scales were included in the data collecting instrument for gathering data as per objectives. The interview schedule was a pre-test of the draft interview schedule was carried out on 20 women of selected study area to see it's appropriateness for collection of data. Necessary corrections, additions and modifications were made on the basis of the responses of the women. The modified corrected interview schedule was then used in the final form.

### **3.8 Collection of data**

Data were collected personally by the researcher herself through personal interview schedule from the women of the selected villages. The interview was conducted with



the respondents individually in their respective houses. The researcher took all possible care to establish rapport with the respondents so that they would not feel any hesitancy while starting the interview. Whenever the respondents felt any difficulty in understanding any questions, the researcher took utmost care to explain and clarify the same properly. No serious difficulty was faced by the researcher by collecting data. Data collected was started on 25 February, 2008 and completed on 31<sup>st</sup> March, 2008.

### **3.9 Analysis of data**

The analysis was performed using SPSS (Statistical Package for Social Sciences) computer program. Qualitative data were converted into quantitative one whenever necessary. Data obtained from the respondents were put to a master sheet, then compiled, tabulated and analyzed in accordance with the objectives of the study. Descriptive statistical method like range, number, percentage, mean, standard deviation and rank order were used in describing the dependent and independent variables. For exploring the relationship between the selected characteristics of the subjects with their extent of involvement of rural women in agribusiness. Pearsons Product Moment Co-efficient of Co-relation ( $r$ ) was used (Ray and Mandal, 2004). Throughout the study, at least 5% level of probability was used as a basis of rejecting any null hypothesis.

## **Chapter IV**

# **Results and Discussion**

## **CHAPTER IV**

### **RESULTS 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 1<sup>st</sup> section, the selected characteristics of the rural women have been discussed. The 2<sup>nd</sup> section, their extent of involvement in agribusiness of rural women has been discussed. In the 3<sup>rd</sup> section, relationships between the selected characteristics of the rural women and their extent of involvement in agribusiness has been discussed. Finally, in the 4<sup>th</sup> section, the problem faced by the rural women to involve in agribusiness has been shown with rank in descending order.

#### **4.1 Selected characteristics of the rural women**

There were several characteristics of rural women that influenced their extent of involvement in agribusiness. In the present study, eight characteristics of rural women were selected as independent variables, which included age, education, annual family income, farm size, cosmopolitaness, extension contact, innovativeness and role of decision making. A summary profile of the characteristics of rural women is presented in Table 4.1

**Table 4.1 Distribution of the respondents according to their selected characteristics  
(n=120)**

Selected characteristics	measuring unit	Range		Respondents			Mean	SD
		Possible	Observed	Category	No.	%		
Age	year	-	23-65	Young ( $\leq 30$ )	38	31.7	39.75	10.97
				Middle aged (31-45)	52	43.3		
				Old ( $> 45$ )	30	25.0		
Education	years of schooling	-	0-9	Illiterate (0)	26	21.7	1.88	2.40
				Can sign only (0.5)	48	40.0		
				Primary (1-5)	38	31.6		
				Secondary (5-10)	8	6.7		
Annual family income	'000' Tk.	-	20.12-100	Low ( $\leq 40$ )	66	55.0	49.11	29.00
				Medium (41-80)	18	15.0		
				High ( $> 80$ )	36	30.0		
Farm size	ha	-	0.01-0.38	Landless ( $\leq 0.02$ )	12	10.1	0.05	0.07
				Marginal (0.02-0.2)	104	86.7		
				Small ( $> 0.2$ )	4	3.2		
Cosmo Politeness	Score	0-15	0-6	No cosmopolitaness (0)	24	20	1.50	1.03
				Very low (1-5)	86	71		
				Low (4-6)	10	9		
Extension contact	score	0-22	2-9	Very low ( $\leq 3$ )	96	80	4.18	1.57
				Low (4-6)	16	13		
				Medium ( $> 6$ )	8	7		
Innovativeness	Score	0-30	0-17	Less ( $\leq 7$ )	100	83.3	5.15	3.43
				Moderate (8-14)	18	15.0		
				High ( $> 14$ )	2	1.7		
Role of decision making	score	0-20	4-20	Insignificant ( $\leq 7$ )	2	1.7	13.33	2.54
				Moderate (8-14)	88	73.3		
				Great ( $> 14$ )	30	25.0		

#### 4.1.1 Age of the rural women

Age of the rural women ranged from 23-65 years with a mean of 39.75 years and as standard deviation of 10.97. However, based on their age the rural women were classified into three categories as young, middle aged and old. Their distribution is shown in Table 4.2.

**Table 4.2 Distribution of the rural women according to their age**

Category	Respondents		Mean	SD
	No.	%		
Young ( $\leq 30$ )	38	31.7	39.75	10.97
Middle aged (31-45)	52	43.3		
Old ( $>45$ )	30	25.0		
Total	120	100		

Analysis of the data furnished in Table 4.2 reveals that the highest proportion 43.3 % of the respondent women were middle aged while old were the lowest 25 % and young constitutes 31.7 %. The findings were logical because the middle aged and young women (75 %) are more interested, energetic, enthusiastic and amenable in performing agricultural activities. Particularly the middle aged women are well experienced and more interested with their involvement. Thus, decision making regarding the involvement in agribusiness in the study area might be influenced by the middle aged and the young women.

#### 4.1.2 Education of the rural women

Education of the rural women ranged from 0-9 years of schooling and average education of the rural women was 1.88 and standard deviation was 2.40. On the basis of their education scores, the rural women were classified into four categories as illiterate, can sign only, primary and secondary education. Their distribution is shown in Table 4.3.

**Table 4.3 Distribution of rural women according to their education**

Category	Respondents		Mean	SD
	No.	%		
Illiterate (0)	26	21.7	1.88	2.40
Can sign only (0.5)	48	40.0		
Primary (1-5)	38	31.6		
Secondary (5-10)	8	6.7		
Total	120	100		

Table 4.3 indicates that the highest proportion (40 %) of the rural women can sign only whereas second highest 31.6 % had primary education, 6.7 % had secondary education and 21.7 % were illiterate. About 60% of the respondents had no level of education. Out of the 60 % women, 40% of them can sign only being trained through non-formal education programme conducted by some NGOs. These women can sign at the time of receiving credit. It is assumed that educated women are more progressive and innovative than those of illiterate with respect to involvement in agribusiness.

#### **4.1.3 Annual family income of the rural women**

Annual family income of the rural women ranged from 20.12-100 thousand taka with an average of 49.11 and standard deviation of 29.00. The respondents were grouped into three categories depending on the family income as low, medium and high income. Their distribution is shown in Table 4.4.

**Table 4.4 Distribution of rural women according to their annual family income**

Category	Respondents		Mean	SD
	No.	%		
Low ( $\leq 40$ )	66	55.0	49.11	29.00
Medium (41-80)	18	15.0		
High ( $> 80$ )	36	30.0		
Total	120	100		

Data furnished in 4.4 revealed that the major (55 %) proportion of respondents belonged to low income group, 15 % of the respondents had medium income and only 30 % of the respondents had high income. Major proportion of the respondents belonged to low income group because most of the rural women of that area were illiterate, their cultivable land were limited, they engaged themselves in domestic work having no work outside of their home. This is why their annual income was low. Considering the above findings there is a possibility to motivate them to engage in agribusiness to increase their income. In this regard GOs and NGOs can play an important role.

#### **4.1.4 Farm size of the rural women**

Farm size of the rural women of the study area ranged from .01-.38 hectares with an average of .05 hectares and standard deviation of .07. Depending on the farm size the respondents were classified into three categories as landless, marginal and small farms. Their distribution is shown in Table 4.5.

**Table 4.5 Distribution of rural women according to their farm size**

Category	Respondents		Mean	SD
	No.	%		
Landless ( $\leq 0.02$ )	12	10.1	0.05	0.07
Marginal (0.02-0.2)	104	86.7		
Small ( $> 0.2$ )	4	3.2		
Total	120	100		

Data presented in Table 4.5 showed that the highest (86.7 %) proportion of the respondent women had marginal farm category while landless and small farm category were 10.1 % and 3.2 % respectively. Thus, most 86.7 % respondent women were marginal farm category. It indicates that majority of the families possessing small amount of land. Their fertility level was not suitable for producing crops. Considering the above findings there is an urgent need to take necessary steps to improve their farm size more effectively by motivating them to involve in agribusiness.

#### **4.1.5 Cosmopolitanism of the rural women**

The cosmopolitanism score of the rural women ranged from 0-6 against the possible of 0-15, with an average of 1.50 and standard deviation of 1.03. Rural women were classified into three categories as no cosmopolitanism, very low cosmopolitanism and low cosmopolitanism. Their distribution is shown in Table 4.6.



**Table 4.6 Distribution of rural women according to their cosmopolitaness**

Category	Respondents		Mean	SD
	No.	%		
No cosmopolitaness (0)	24	20	1.50	1.03
Very low (1-5)	86	71		
Low (4-6)	10	9		
Total	120	100		

It reveals from the Table 4.6 that highest proportion 71 % of the respondents had very low cosmopolitaness, 9 % of the respondents had low cosmopolitaness and 20 % of the respondents had no cosmopolitaness. Cosmopolitaness of the rural women depends mostly on age, economic condition, farm size, annual income etc. The major portions of the respondents were low in these characteristics which affected their cosmopolitaness.

#### **4.1.6 Extension contact of the rural women**

The score obtained for extension contact of rural women ranged from 2-9 against the possible range of 0-22, with an average of 4.18 and standard deviation of 1.57. The respondent rural women were grouped into three categories as very low, low, medium on the basis of their extension contact. Their distribution is shown in Table 4.7.

**Table 4.7 Distribution of rural women according to their extension contact**

Category	Respondents		Mean	SD
	No.	%		
Very low ( $\leq 3$ )	96	80	4.18	1.57
Low (4-6)	16	13		
Medium ( $> 6$ )	8	7		
Total	120	100		

Data presented in the Table 4.7 showed that the percentage of women with medium extension contact was the lowest (7 %), whereas highest percent (80 %) of the women had very low and 13 % of them had low contact with extension media. Practically there is very little extension programme for rural women in specific. This situation is changing through the interventions of GOs and NGOs but more attention is needed.

#### 4.1.7 Innovativeness of the rural women

The innovativeness score of the rural women ranged from 0-17 against the possible range of 0-30, with an average of 5.15 and standard deviation of 3.43. On the basis of scores for innovativeness, the rural women were classified into three categories as less, moderate and highly innovative. Their distribution is shown in table 4.8.

**Table 4.8 Distribution of rural women according to their innovativeness**

Category	Respondents		Mean	SD
	No.	%		
Less ( $\leq 7$ )	100	83.3	5.15	3.43
Moderate (8-14)	18	15.0		
High ( $> 14$ )	2	1.7		
Total	120	100		

Data presented in table 4.7 indicates that the highest (83.3 %) proportion of rural women were less innovative as compared to 15 % of moderately innovative and 1.7 % of highly innovative. The education, cosmopolitaness, extension contact etc generally influence innovativeness of the rural women. Majority (71.6 %) of the rural women of the study area had can sign only and primary level of education and they had very low

cosmopolitanism and extension contact which perhaps have been reflected in the innovativeness score they obtained.

#### 4.1.8 Role of decision making of the rural women

Role of decision making scores of the rural women towards agribusiness ranged from 4-20 against the possible range of 0-20, with an average of 13.33 and standard deviation of 2.54. The rural women were classified into three categories as insignificant, moderate and great role of decision making. Their distribution is shown in Table 4.9.

**Table 4.9 Distribution of rural women according to their role of decision making**

Category	Respondents		Mean	SD
	No.	%		
Insignificant ( $\leq 7$ )	2	1.7	13.33	2.54
Moderate (8-14)	88	73.3		
Great ( $> 14$ )	30	25.0		
Total	120	100		

Data presented in Table 4.9 indicates that the highest (73.3 %) proportion of the rural women had moderate decision making as compared to 25 % of the great and 1.7 % insignificant role of decision making towards the agricultural activities.

#### 4.2 Involvement of rural women in agribusiness

This section describes dependent variable which is divided into two subsections are as follows:

- i. Involvement in selling of agricultural products.
  - ii. Involvement in purchasing of agricultural products.
- Involvement in overall agribusiness.

A summary profile of dependent variables have been presented in Table 4.10.

**Table 4.10 Distribution of the respondents according to their involvement in agribusiness**

Items	Respondents			Mean	SD
	Category	No.	%		
Involvement in selling	Very low ( $\leq 5$ )	28	23.3	7.63	2.88
	Low (6-11)	82	68.4		
	Medium ( $> 11$ )	10	8.3		
Involvement in purchasing	Very low ( $\leq 8$ )	32	26.7	11.37	3.83
	Low (9-15)	72	60.0		
	Medium ( $> 15$ )	16	13.3		
Involvement in overall agribusiness	Very low ( $\leq 13$ )	22	18.3	19.00	5.84
	Low (14-25)	82	68.4		
	Medium ( $> 25$ )	16	13.3		

#### **4.2.1 Involvement in selling of agricultural products**

Involvement scores of rural women in selling ranged from 3-18 against the possible range of 0-100 with an average of 7.63 and standard deviation 2.88. On the basis of involvement in selling scores, the rural women were classified into three categories as very low, low and medium involvement (Table 4.10).

Data presented in Table 4.10 showed that the highest 68.4 % of the rural women had low involvement in selling compared to 23.3 % of very low involvement and only 8.3 %, medium involvement. The area being river eroded the farm size of most of the respondents were marginal, their cosmopolitaness were very low and their education level was can sign only and primary. So, most the women consume their product leaving almost nothing to sell. So most of the respondents involvement were low selling.

#### **4.2.2 Involvement in purchasing of agricultural products**

The involvement scores of the rural women in purchasing ranged from 5-21 against the possible range 0-60 with an average of 11.37 and standard deviation of 3.83. On the basis of involvement in purchasing scores, the rural women were classified into three categories as very low, low and medium involvement (Table 4.10).

Data presented in Table 4.10 showed that the highest (60 %) proportion of the rural women had low involvement in purchasing compared to 26.7 % of very low involvement and only 13.3 % medium involvement. The area was river eroded and therefore their farm size were marginal, most of families were male headed and depending on one persons income, therefore, their annual income were limited. Besides the product they produce were not sufficient need their demand still they could not purchase product due to their low income level. So most of the rural women involvement was low in purchasing categories.

### **4.2.3 Involvement in overall agribusiness**

The involvement in agribusiness scores of rural women ranged from 11-35 against the possible range of 0-160, with an average of 19.00 and standard deviation of 5.84. On the basis of involvement scores, the rural women were classified into three categories as very low, low and medium involvement Table 4.10.

Data presented in Table 4.10 showed that the highest 68.4 % of the rural women had low involvement compared to 18.3 % of very low and 13.3 % medium involvement. All women of area are rural based, owing marginal farms, having low level of education (can sign only and primary), their cosmopolitaness being very low. So most of them had low involvement in agribusiness.

### **4.3 Relationship between the selected characteristics of the rural women and their extent of involvement in agribusiness**

In this section relationship between eight independent variables that is selected characteristics of the rural women viz. age, education, annual family income, cosmopolitaness, extension contact, innovativeness and role of decision making and the dependent variable ie. overall involvement in agribusiness has been measured. The summary of correlation analysis had been presented in Table 4.11 and the correlation matrix in the appendix II.

**Table 4.11 Co-efficient of co-relation between the selected characteristics of the rural women and their involvement in agribusiness.**

Dependent variable	Independent variable	'r' values with 118 d.f.	Tabulated value of 'r'	
			At 5% level	At 1% level
Involvement of rural women in agri-business	Age	0.025 <sup>NS</sup>	0.176	0.230
	Education	0.095 <sup>NS</sup>		
	Annual family income	0.142 <sup>NS</sup>		
	Farm size	0.524 <sup>**</sup>		
	Cosmopolitaness	0.459 <sup>**</sup>		
	Extension contact	0.458 <sup>**</sup>		
	Innovativeness	0.259 <sup>*</sup>		
	Role of decision making	0.020 <sup>NS</sup>		

NS Non Significant

\*\* significant at 1% level of probability

\* significant at 5% level of probability

#### **4.3.1 Relationship between age of the rural women and their involvement in agribusiness**

In order to determine the relationship between age of the rural women and their involvement in agribusiness was examined by testing the following null hypothesis:

“There is no relationship between age of the rural women and their involvement in agribusiness”.

The relationship was insignificant as the computed value of 'r' (0.025) was less than the table value ( $r \pm 0.176$ ) with 118 degrees of freedom at 0.05 level of probability.

Hence, the concerned null hypothesis was accepted. The researcher, therefore, concluded that age of the rural women had insignificant relationship with their involvement in agribusiness i.e. there was no relationship between the concerned two variables. Thus, it could be said that, at least for the present study age of the rural

women did not play any significant role on their extent of involvement in agribusiness.

#### **4.3.2 Relationships between education of the rural women and their involvement in agribusiness**

Relationship between level of education of the rural women and their involvement in agribusiness was determined by testing the following null hypothesis

“There is no relationship between education of the rural women and their involvement in agribusiness”.

The relationship between the concerned two variables was positively insignificant as the computed value of ‘r’ (.095) was less than the table value ( $r \pm 0.176$ ) with 118 degrees of freedom at 0.05 level of probability.

Hence the concerned null hypothesis was accepted. The researcher, therefore, concluded that education of the rural women had insignificant positive relationship with their involvement in agribusiness.

#### **4.3.3 Relationship between annual family income of the rural women and their involvement in agribusiness**

The relationship between annual family income of the rural women and their involvement in agribusiness was examined by testing the following null hypothesis.

“There is no relationship between annual family income of the rural women and their involvement in agribusiness”.

The relationship between two variables was positively insignificant as the computed value of ‘r’ (0.142) was less than the table value ( $r \pm 0.176$ ) with 118 degrees of freedom at 0.05 level of probability.

Hence the concerned null hypothesis was accepted. The researcher, therefore, concluded that the annual family income of the rural women had insignificant positive

relationship with their involvement in agribusiness. So from the above relation it can be concluded that annual family income has no effect on involvement in agribusiness.

#### **4.3.4 Relationship between farm size of the rural women and their involvement in agribusiness**

The relationship between farm size of the rural women and their involvement in agribusiness was examined by testing the following null hypothesis

“There is no relationship between farm size of the rural women and their involvement in agribusiness”.

The relationship between two concerned variables was positively significant as the computed value of ‘r’ (0.524) was higher than the Table value ( $r \pm .230$ ) with 118 degrees of freedom at 0.01 level of probability.

Hence the concerned null hypothesis was rejected. The researcher, therefore, concluded that the farm size of the rural women had significant positive relationship with their involvement in agribusiness.

Therefore, it was concluded that farm size of the rural women greatly affected their involvement in agribusiness. Farhana (2002) and Akter (1989) supported these findings. The respondents having more farm land could involve in more income generating activities. Accordingly, it could be postulated that farm size of the rural women played significant role on their extent of involvement in agribusiness.

#### **4.3.5 Relationship between cosmopolitanism of the rural women and their involvement in agribusiness**

The relationship between cosmopolitanism of the rural women and their involvement in agribusiness was examined by testing the following null hypothesis

“There is no relationship between cosmopolitanism of the rural women and their involvement in agribusiness”.



The relationship between two variables was positively significant as the computed value of 'r' (0.459) was higher than the table value ( $r \pm .230$ ) with 118 degrees of freedom at 0.01 level of probability.

Hence the concerned null hypothesis was rejected. The researcher, therefore, concluded that the cosmopolitaness of the rural women had significant positive relationship with their involvement in agribusiness.

Therefore, it was concluded that rural women who are more cosmopolite have more involvement in agribusiness. Movement outside one's periphery creates opportunity for learning, seeing new innovations, contact with others which ultimately changes attitude. However, cosmopolitaness of the rural women greatly affected their involvement in agribusiness.

#### **4.3.6 Relationship between extension contact of the rural women and their involvement in agribusiness**

The relationship between extension contact of the rural women and their involvement in agribusiness was examined by testing the following null hypothesis

"There is no relationship between extension contact of the rural women and their involvement in agribusiness".

The relationship between two variables was positively significant as the computed value of 'r' (0.458) was higher than the table value ( $r \pm .230$ ) with 118 degrees of freedom at 0.01 level of probability.

Hence the concerned null hypothesis was rejected. The researcher, therefore, concluded that the extension contact had immense influence on the involvement of the rural women in agribusiness of agricultural production. It is obvious that contact with extension agents and other extension teaching methods changes attitude of clients radically and she becomes interested to adopt new technology, which has somewhat been reflected here. But there is utmost need for strengthening extension services to reach the rural women.

#### **4.3.7 Relationship between innovativeness of the rural women and their involvement in agribusiness**

The relationship between innovativeness of the rural women and their involvement in agribusiness was examined by testing the following null hypothesis

“There is no relationship between innovativeness of the rural women and their involvement in agribusiness”.

The relationship between two variables was positively significant as the computed value of ‘r’ (0.259) was higher than the table value ( $r \pm .230$ ) with 118 degrees of freedom at 0.01 level of probability.

Hence the concerned null hypothesis was rejected. The researcher, therefore, concluded that the innovative rural women have more education, extension contact etc. and more innovative which greatly affected their involvement in agribusiness.

#### **4.3.8 Relationship between role of decision making of the rural women and their involvement in agribusiness**

The relationship between role of decision making of the rural women and their involvement in agribusiness was examined by testing the following null hypothesis

“There is no relationship between role of decision making of the rural women and their involvement in agribusiness”.

The relationship between two variables was positively insignificant as the computed value of ‘r’ (0.020) was (less than) the table value ( $r \pm .176$ ) with 118 degrees of freedom at 0.05 level of probability.

Hence the concerned null hypothesis was accepted. The researcher, therefore, concluded that the role of decision making of the rural women had insignificant relationship in agribusiness.

#### 4.4 Problem faced by the rural women in involving agribusiness

It is obvious that we face a number of problems or constraints in performing any production activity. In case of agricultural production activities, the extent and types of problems are diversified as they are mostly controlled by nature. However, rural women of the study area mentioned 14 basic problems in involving agri-business. In order to understanding the comparative importance the problems have been arranged in rank order according to their PFI as shown in Table 4.12.

**Table 4.12 Ranking of the problems according to their descending order of PFI**

Rank order	Problems	PFI
1	Lack of freedom of right establishment	374
2	Lack of women empowerment	372
3	Lack of freedom of speech	360
4	Political deprivation	352
5	Inability to move alone	344
6	Gender discrimination	336
7	Cannot move alone due to social restriction	334
8	Tendency to deprive women in decision making	332
9	Tendency to deprive women economically	322
10	Tendency to deprive women socially	320
11	Lack of other family members cooperation	318
12	Lack of husband's cooperation	284
13	Lack of self respect	258
14	Lack of social justice	252

Data furnished in Table 4.12 indicates that "Lack of freedom of right establishment" was the topmost important problem and secured 1<sup>st</sup> rank with PFI of 374. This top ranking problem caused due to social and political barrier, religious instructions etc. The second problem was "Lack of women empowerment" with PFI of 372. The reason is that due to religious instructions, social, political and communication barrier, economic insolvency. "Lack of social justice" was the lowest problem according to problem facing index. Problem facing index and rank order of other problems are shown in Table 4.12.

## **Chapter V**

# **Summary, Conclusion and Recommendations**

## CHAPTER V

### SUMMARY CONCLUSION AND COMMENDATIONS

#### **5.1 Summary**

##### **5.1.1 The profile characteristics of the rural women**

Almost 75 % of the respondents were young to middle-aged similarly 71.6 % of them can sign only and had primary level education. Nearly half (55 %) of the respondents had low income and 96.8 % of the respondents had land less to marginal farm size with 0.01-0.38 ha. of land. Seventy one percent of the respondents had very low cosmopolitaness. Four-fifth (80 %) of the respondents had very low extension contact category and 98.3 % of the respondents had less to moderate innovativeness. The study revealed 73.3 % of the respondents had moderate role in decision making.

##### **5.1.2 Involvement of rural women in agribusiness**

###### **5.1.2.1 Involvement of rural women in selling**

It was calculated that the respondent belonging to the very low involvement category was 23.3 %, low involvement was 68.4 % and medium involvement 8.3 %.

###### **5.1.2.2 Involvement of rural women in purchasing**

It was computed that the rural women belonging to the very low involvement was 26.7 %, low involvement was 60 % and medium involvement category was 13.3 %.

###### **5.1.2.3 Involvement of rural women in agribusiness**

It was calculated that the rural women belonging to the very low involvement category was 18.3 %, low and medium involvement category were 68.4 % and 13.3 % respectively.

### **5.1.3 Relationship between the selected characteristics of the rural women and their involvement in agribusiness**

Farm size, cosmopolitaness, extension contact, innovativeness had significant positive relationship with their involvement in agribusiness.

Age, education, annual family income, role of decision making had positive insignificant relationship with their involvement in agribusiness.

Problem faced by the rural women to involve their agribusiness among the fourteen problems of involvement of agribusiness, the top most important was "Lack of freedom of right establishment" with problem facing index of 374, "Lack of women empowerment" with problem facing index of 372 ranked first and second respectively against the possible PFI 120-600, the least responsible problem with PFI of 252 was "Lack of social justice".

### **5.2 Conclusions**

Based on the findings and its logical interpretation the following conclusions have been drawn.

1. The study indicated that, 68.4 % of the respondents had low involvement in agribusiness 18.3 % had very low and 13.3 % of the respondents had medium involvement in agribusiness. There is no high involvement group. It may be concluded that the involvement in agribusiness of the rural women is not satisfactory.
2. Moreover 96.8 % of the rural women had landless to marginal farm size land and 3.2 % of the respondents had small farm size. The relationship between farm size of the rural women and their involvement in agribusiness had positively significant relationship. Probably rural women having high farm size had more scope to involve in agribusiness activities. This is why farm size of the rural women had positive significant relationship to involve in agribusiness.

3. Most of the respondents (80 %) had very low to low cosmopolitaness in agribusiness. Cosmopolitaness of the rural women had positive and significant relationship with their involvement in agribusiness. It means that cosmopolitaness of the rural women might be help for the rural women to more involvement in agribusiness.

4. Most of the respondents (93 %) had very low to low extension contact in agribusiness. Extension contact of the rural women had positive and significant relationship with their involvement in agribusiness. Therefore, it is concluded that the extension contact had immense influence on the involvement of the rural women in agribusiness of agricultural production. It is obvious that contact with extension agents and other extension teaching methods change attitude of clients radically and this might be help for the rural women to more involvement in agribusiness.

5. Most of the respondents (98.3 %) had less to moderate innovativeness in agribusiness. Innovativeness of the rural women had positive and significant relationship with their involvement in agribusiness. Therefore, it is concluded that innovativeness had influence on the involvement of the rural women in agribusiness of agricultural products.

6. Age, education, annual family income, role of decision making had non significant positive relationship with their involvement in agribusiness in most cases. It implies that age, education, annual family income, role of decision making of the rural women had no profound influence on their involvement in any activity.

### **5.3 Recommendations**

#### **5.3.1 Recommendations for policy implications**

1. The findings indicated that rural women had very low, low and medium but none of them had high involvement. Therefore, it may be recommended that extensive development programmes should be designed and implemented by GOs and NGOs considering agribusiness as income generating unit and rural women as the key operator.

2. As the strong positive relationship was present between farm size and involvement of rural women in agribusiness, it may be recommended that strategy should be taken to implement agro based business programmes in an integrated approach involving private and public sector organizations. The findings indicated that firm size, cosmopolitaness, extension contact and innovativeness had positively significant relationship with their involvement in agribusiness. It may be recommended that initiatives should be taken to make the inputs necessary for scientific/improved management for various agribusiness activities available in the rural areas. Extension services should be strengthening particularly for women.

3. Different kinds of printed materials such as poster, leaflet, handbook, booklet should be distributed among the rural women to encourage their involvement in agribusiness activities.

4. There were 14 problems creating disturbances to undertake the agribusiness activities. It is therefore, recommended that GOs and NGOs authorities should take necessary steps to minimize the problem faced by the rural women in agribusiness.

### **5.3.2 Recommendations of further study**

1. The present investigation explored the relationships of 8 selected characteristics of the rural women with their involvement in agribusiness. But besides these characteristics, there might be several other characteristics and situational factors which might have influenced them in agribusiness. Therefore, there is further need for exploring the relationships of other characteristics of the rural women with their involvement in agribusiness.

2. Findings indicate that there was no relationship of age, education, annual family income and role of decision making of the rural women with overall involvement in agribusiness. Further research is necessary to verify such relationship.

3. Involvement is the measurement of implementation of technologies by the rural women. It is a continues process due to change of social system, change of technologies, change of human behavior, change of involvement patterns etc. So, it is



suggested that there should be further research involving rural women in various aspects of agribusiness activities.

4. Involvement of rural women in agribusiness activities may be determined by using other techniques and methods which may be used in conducting further research.

5. This study was conducted on female farmer but male farmers are equally important. So, a similar study may be conducted with male farmers.

6. Finally, this is a micro level study conducted in three selected villages at Kazipur upazila under Sirajganj district. So, findings of this study need verification by similar research in other parts of the country.

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## Appendix A

### (English version of the Interview Schedule)

Department of Agricultural Extension and Information System

Sher-e-Bangla Agricultural University

Sher-e-Bangla Nagar, Dhaka-1207

#### AN INTERVIEW SCHEDULE

ON

#### Involvement of Rural Women in Agri-business

Name of the respondent: \_\_\_\_\_ Sample No: \_\_\_\_\_

Village: \_\_\_\_\_ Union: \_\_\_\_\_

Upazila: \_\_\_\_\_ District: \_\_\_\_\_

(Please answer the following questions)

#### 1. Age:

How old are you? \_\_\_\_\_ Years

#### 2. Education:

a) Do not know reading and writing \_\_\_\_\_

b) Do not know reading and writing, but can sign only \_\_\_\_\_

c) Never attended school but can little read and write \_\_\_\_\_

d) Studied up to \_\_\_\_\_ class

#### 3. Annual family income:

Please mention your annual family income from different sources



**A. Income from agricultural crops:**

Sl. No.	Name of crops	Production (Kg or Mound)	Price/Kg or Mound	Total Price (Tk)
1	Rice			
2	Wheat			
3	Jute			
4	Sugarcane			
5	Maize			
6	Potato and sweet potato			
7	Pulses			
8	Oil seeds			
9	Vegetables			
10	Fruits			
11	Poultry			
12	Cattle			
13	Fishes			
14	Others			
	Sub-total (A)			

**B. Income from non-agricultural sources:**

Sl. No.	Sources of income	Total price (Tk)
1	Services	
2	Business	
3	Day labor	
4	Others	
	Sub-total (B)	

Total income = (A+B) = \_\_\_\_\_ Taka

#### 4. Farm size:

Please mention your farm size

Sl. No.	Types of land	Area of land	
		Local unit	Hectare
1	Homestead land		
2	Own land under own cultivation		
3	Own land given to others' on barga		
4	Land taken from others' on barga		
5	Land taken from others' on lease		
6	Own pond		
7	Own garden		
8	Other fallow land (if any)		
	Total		

#### 5. Cosmopolitaness:

Please indicate how frequently you visit the following places within a specific period.

Sl. No.	Place of visit	Frequency of visit			
		Frequently (3)	Occasionally (2)	Rarely (1)	Not at all (0)
1	Visit to other village	9 or more times/month	5-8 times/month	1-4 times/month	0 (Zero) times/month
2	Visit to other thana town	7 or more times/month	5-6 times/month	1-4 times/month	0 (Zero) times/month
3	Visit to own district town	5 or more times/month	3-4 times/month	1-2 times/month	0 (Zero) times/year
4	Visit to other district town	6 or more times/year	3-5 times/2years	1-2 times/year	0 (Zero) times/year
5	Visit to capital city or other metropolitan city	3 or more times/year	2 times/year	Once/year	0 (Zero) times/year

## 6. Extension contact:

Please indicate your extent of contact with the following media:

Sl. No.	Contact media	Extent of contact		
		Frequently (2)	Occasionally (1)	No contact (0)
1	Block supervisor			
2	Result demonstration			
3	Training workshop			
4	Agriculture dealer			
5	Village farmer			
6	Village leader or local matbar			
7	N.G.O. worker a) BRAC b) ASA c) CARE d) PROSHIKA e) Grameen Bank f) GKS g) CLP h) TMSS i) Palli Unnayan Prayas j) Other N.G.O., if any			
8	Leaflet /Bulletin			
9	Radio			
10	Television			
11	Newspaper			

### 7. Innovativeness:

Please indicate the extent of use of the following technologies:

Sl. No.	Name of technology	Period of adoption			Do not use (0)
		Within 1 to 2 years after hearing (3)	Within 3 to 4 years after hearing (2)	Within 5 years after hearing (1)	
1	Use of modern variety of different vegetables				
2	Use of power pump				
3	Use of power tiller				
4	Use of compost				
5	Use of bio-fertilizer				
6	Use of guti urea				
7	Use of mixed fertilizer				
8	Use of IPM				
9	Use of pesticides				
10	Use of herbicide/ weedicide				

### 8. Role of decision making:

Please mention the extent of your opinion in decision making:

Sl. No.	Decision making activities	Extent of decision making		
		Active role (2)	Passive role (1)	No role (0)
1	Adoption of crop varieties			
2	Selling / buying of animals/ property			
3	Keeping and selling of poultry birds			
4	Spending of money			
5	Marriage of children/ near relatives			
6	Health and family care			
7	Vaccination to children			
8	Sending children to school			
9	Purchasing of land			
10	Buying inputs			

### 9. Involvement of rural women in agri-business:

A) Please indicate your extent of involvement in selling the following agricultural product:

Sl. No.	Selling items	Extent of involvement				
		Regularly (4)	Frequently (3)	Occasionally (2)	Rarely (1)	Never (0)
1.	Bottle gourd					
2.	Potato					
3.	Tomato					
4.	Bean					
5.	Bitter gourd					
6.	Sweet gourd					
7.	Wax gourd					
8.	Cauliflower					
9.	Cabbage					
10.	Papaya					
11.	Cucumber					
12.	Radish					
13.	Chili					
14.	Paddy					
15.	Wheat					
16.	Jute					
17.	Pulse					
18.	Ground nut					
19.	Maize					
20.	Cow					
21.	Goat					
22.	Hen					
23.	Egg					
24.	Milk					
25.	Seed					

B) Please indicate your extent of involvement in purchasing the following agricultural product:

Sl. No.	Purchasing items	Extent of involvement				
		Regularly (4)	Frequently (3)	Occasionally (2)	Rarely (1)	Never (0)
1	Vegetable					
2	Paddy					
3	Wheat					
4	Jute					
5	Ground nut					
6	Maize					
7	Pulse					
8	Cow					
9	Goat					
10	Hen					
11	Egg					
12	Milk					
13	Seed					
14	Fertilizer					
15	Pesticide					

**10. Please indicate your problem that you usually face in involving yourself in agri-business:**

Sl. No.	Problem	Extent of problem					
		Very high (5)	High (4)	Medium (3)	Low (2)	Very low (1)	None (0)
1	Lack of Self respect						
2	Gender discrimination						
3	Lack of social justice						
4	Can not move alone due to social restriction						
5	Lack of Husband's cooperation						
6	Lack of Other family members cooperation						
7	Inability to move alone						
8	Lack of freedom of speech						
9	Lack of freedom of right establishment						
10	Political deprivation						
11	Lack of women empowerment						
12	Tendency to deprive women socially						
13	Tendency to deprive women economically						
14	Tendency to deprive women in decision making						

Thanks for your co-operation.

Dated .....

Signature of the interviewer



## Appendix B

### Correlation matrix

Selected characteristics	Age	Education	Annual income	Farm size	Cosmopolitaness	Extension contact	Innovativeness	Role of decision making	Involvement in agribusiness
Age	1	-0.522**	0.435**	0.033	-0.048	-0.216	-0.315*	-0.164	0.025
Education	-0.522**	1	-0.120	0.049	0.201	0.059	0.217	-0.072	0.095
Annual income	0.435**	-0.120	1	-0.060	-0.032	-0.730**	-0.516**	0.145	0.142
Farm size	0.033	0.049	-0.060	1	0.306*	0.319*	0.017	-0.290*	0.524**
Cosmopolitaness	-0.048	0.201	-0.032	0.306*	1	0.307*	0.212	-0.051	0.459**
Extension contact	-0.216	0.059	-0.730**	0.319*	0.307*	1	0.530**	-0.201	0.458**
Innovativeness	-0.315*	0.217	-0.516**	0.017	0.212	0.530**	1	-0.006	0.259*
Role of decision making	-0.164	-0.072	0.145	-0.290*	-0.051	-0.201	-0.006	1	0.020
Involvement in agribusiness	0.025	0.095	0.142	0.524**	0.459**	0.458**	0.259*	0.020	1

\*\* Correlation is significant at 1% level of probability

\* Correlation is significant at 5% level of probability