

INVOLVEMENT OF THE RURAL WOMEN IN HOMESTEAD FARMING

BY

UMMUL FARA BEGUM TAZKIRA

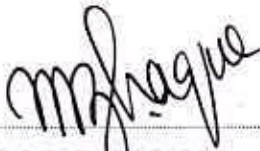
REG. NO.:- 08-03183

*A thesis
Submitted to the Faculty of Agriculture
Sher-e-Bangla Agricultural University, Dhaka-1207
In partial fulfillment of the requirements
for the degree of*

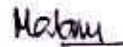
**MASTER OF SCIENCE (MS)
IN
AGRICULTURAL EXTENSION AND INFORMATION SYSTEM**

SEMESTER: JULY-DECEMBER, 2009

APPROVED BY:



(Prof. M. Zahidul Haque)
Supervisor



(Md. Mahbubul Alam)
Assistant Professor
Co-supervisor



(Prof. Dr. Md. Rafiqul Islam)
Chairman
Examination Committee





Department of Agricultural Extension & Information System
Sher-e-Bangla Agricultural University, Dhaka -1207
Tel. +88 02 9144270-9, Ext.-233


Ref: SAU/AEIS

CERTIFICATE

This is to certify that the thesis entitled “**Involvement of the Rural Women in Homestead Farming**” submitted to the Faculty of Agriculture, Sher-e-Bangla Agricultural University, Dhaka, in partial fulfillment of the requirements for the degree of **Master of Science in Agricultural Extension and Information System**, embodies the result of a piece of bona fide research work carried out by Ummul Fara Begum Tazkira, Registration No. 0803183 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 acknowledged.

Dated:.....
Dhaka, Bangladesh



Prof. M. Zahidul Haque
Supervisor

SHER-E-BANGLA AGRICULTURAL UNIVERSITY

*DEDICATED
TO
MY BELOVED PARENTS*



ACKNOWLEDGEMENT

All praises are due to Almighty, the Merciful Allah who has created everything in the universe and who enabled the author to complete this research work.

The author wishes to express her profound gratefulness from the core of heart for her Research Supervisor, Prof. M. Zahidul Haque, Department of Agricultural Extension & Information System, and Co-supervisor, Md. Mahbubul Alam, Assistant Professor of the Department of Agricultural Extension & Information System, Sher-e-Bangla Agricultural University, Dhaka for their keen interest, scholastic guidance, advice, constructive suggestions and constant encouragement from beginning to the end of the research. Their continuous help and co-operation made it possible to complete the research. The author also expresses her heartfelt gratitude to her Supervisor and Co-supervisor for their cordial inspiration, constructive criticism to overcome many errors and showed her the right path during the course of this work.

The author humbly desires to express her deepest and most sincere gratitude to all teachers of the Department of Agricultural Extension & Information Systems, Sher-e-Bangla Agricultural University, Dhaka for their advice and affectionate loving. The author is also grateful to the rural women of selected village who were the respondents of the study area and gave their valuable time for interview during the data collection.

The author is highly obliged to express her deepest sense of love, affection and heartfelt gratitude to her parents, brothers, sisters and relatives for their blessing, moral support, and prayer during the whole period of M.S. study.

Last but not the least, the author feels much pleasure and express cordial appreciation to her friends and well wishers who gave encouragement and support to the author although the study period.

The Author

CONTENTS

	PAGE
ACKNOWLEDGEMENT	i
TABLE OF CONTENTS	ii
LIST OF TABLES	vi
LIST OF FIGURES	vii
LIST OF MAPS	vii
LIST OF APPENDICES	vii
ABSTRACT	viii
CHAPTER	
1. INTRODUCTION	1
1.1 Background of the Study	1
1.2 Statement of the Problem	4
1.3 Specific Objectives of the Study	4
1.4 Justification of the Study	5
1.5 Scope and Limitations of the Study	5
1.6 Assumptions of the Study	6
1.7 Definitions of Terms	6
2. REVIEW OF LITERATURE	9
2.1 Involvement of Rural Women in Farming Activities	9
2.2 Studies Concerning the Relationship between Involvement in Homestead Farming Activities and the Selected Attributes of the Rural Women	11
2.2.1 Age and Involvement	11
2.2.2 Education and Involvement	12
2.2.3 Family Size and Involvement	13
2.2.4 Farm Size and Involvement	14



CONTENTS (Contd.)

	PAGE
CHAPTER	
2.2.5 Annual Family Income and Involvement	15
2.2.6 Cosmopolitaness and Involvement	16
2.2.7 Extension Contact and Involvement	16
2.2.8 Organizational Participation and Involvement	17
2.2.9 Knowledge about Homestead Agriculture and Involvement	17
2.3 Problem faced by the Rural Women and their involvement in Homestead Farming Activities	18
2.4 The Conceptual Framework of the Study	19
3. METHODOLOGY	21
3.1 Locale of the Study	21
3.2 Population and Sample of the Study	21
3.3 Variables of the Study	24
3.3.1 Independent Variables	24
3.3.2 Dependent Variable	24
3.4 Measurement of Variables	25
3.4.1 Measurement of Independent Variables	25
3.4.1.1 Age	25
3.4.1.2 Education	25
3.4.1.3 Family size	25
3.4.1.4 Farm size	25
3.4.1.5 Annual family income	26
3.4.1.6 Cosmopolitaness	26
3.4.1.7 Extension media contact	27
3.4.1.8 Organizational participation	27
3.4.1.9 Knowledge about homestead farming	28

CONTENTS (Contd.)

CHAPTER	PAGE
3.4.2 Measurement of Dependent Variable	28
3.5 Measurement of Problems Faced by the Rural Women in Involving Homestead Farming	29
3.6 Hypothesis of the Study	29
3.7 Instrument for Collection of Data	30
3.8 Collection of Data	30
3.9 Compilation of Data	31
3.10 Statistical Analysis	31
4. FINDINGS AND DISCUSSIONS	32
4.1 Involvement of Rural Women in Homestead Farming	32
4.1.1 Overall involvement of rural women in homestead farming	32
4.1.2 Comparative involvement in four homestead farming	33
4.2 Selected socio-economic Characteristics of the Rural Women	34
4.2.1 Age	34
4.2.2 Education	35
4.2.3 Family size	36
4.2.4 Farm size	36
4.2.5 Annual family income	37
4.2.6 Cosmopolitaness	38
4.2.7 Extension media contact	39
4.2.8 Organizational participation	39
4.2.9 Knowledge about homestead farming	40
4.3 Relationship between the Selected Socio-economic Characteristics of the Rural Women and Their Extent of Involvement in Homestead Farming.	41
4.3.1 Age and involvement in homestead farming	42



CONTENTS (Contd.)

	PAGE
CHAPTER	
4.3.2 Education and involvement in homestead farming	42
4.3.3 Family Size and involvement in homestead farming	43
4.3.4 Farm Size and involvement in homestead farming	44
4.3.5 Annual Family Income and involvement in homestead farming	44
4.3.6 Cosmopolitaness and involvement in homestead farming	44
4.3.7 Extension Contact and involvement in homestead farming	45
4.3.8 Organizational participation and involvement in homestead farming	46
4.3.9 Knowledge about Homestead Farming and involvement in homestead farming	46
4.4 Problems Faced by the Rural Women in Involving Homestead Farming Activities	47
5. SUMMERY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	49
5.1 Summary of Findings	49
5.1.1 Involvement of rural women in homestead farming	49
5.1.2 Selected socio-economic characteristics of the rural women	49
5.1.3 Relationship between the selected characteristics of the rural women and their extent of involvement in the homestead farming	50
5.1.4 Problems faced by the rural women involving in the homestead farming	50
5.2 Conclusions	50
5.3 Recommendations	52
5.3.1 Recommendations for Policy Implication	52
5.3.2 Recommendations for Further Research	53

CONTENTS (Contd.)

	PAGE
REFERENCES	54
APPENDICES	60

LIST OF TABLES

TABLE

3.1	Population and sample of the study	24
4.1	Distribution of the respondents according to their overall involvement in homestead farming	32
4.2	Rank order of the extent of involvement in different homestead farming activities	
4.3	Distribution of the respondents according to their age	34
4.4	Distribution of the respondents according to their education	35
4.5	Distribution of the respondents according to their family size	36
4.6	Distribution of the respondents according to their farm size	37
4.7	Distribution of the respondents according to their family income	37
4.8	Distribution of the respondents according to their cosmopolitaness	38
4.9	Distribution of the respondents according to their extension media contact	39
4.10	Distribution of the respondents according to their organizational participation	40
4.11	Distribution of the respondents according to their knowledge on homestead farming	40
4.12	Correlation Co-efficient between the selected socio-economic characteristics of the rural women and their involvement in homestead farming.	41
4.13	Rank order of the problems faced by the rural women according to their obtained score	47

CONTENTS (Contd.)

PAGE

LIST OF FIGURES

FIGURE

- 2.1 The conceptual framework of the study 20

LIST OF MAPS

MAPS

- 3.1 A map of Mymensingh district showing the study upazila 22
3.2 A map of Mymensingh sadar upazila showing the study villages 23

LIST OF APPENDICES

APPENDIX

- I. English version of the Interview Schedule 60
II. Correlation Matrix of dependent and independent variables (N=107) 65



INVOLVEMENT OF RURAL WOMEN IN HOMESTEAD FARMING

ABSTRACT

The main purpose of the study was to ascertain rural women's extent of involving towards homestead farming. The study explored the relationship of the selected socio-economic characteristics of the rural women and their extent of involving and problem encountered faced by the rural women in performing these farming activities. Two selected villages named Shutiakhali and Chorkhai of Sadar Upazila under Mymensingh district were the locale of the investigation. The villages constituted rural farm families of 1070 of total population (705 from Shutiakhali and 365 from Chorkhai). Data were collected (about 10 percent of the population) from the selected 107 housewives by following a table of random number. The rural women's extent of involvement in farming activities was measured by considering the frequency of performance. Pearson's Product Moment Coefficient of Correlation (r) was used and a correlation matrix of dependent and independent variables were prepared to explore the relationship of the selected socio-economic characteristics of the rural women and their extent of involvement in farming activities. The study reveals that the major portion (43 percent) of the rural women had medium involvement in performing farming activities while 19.6 percent had high involvement in farming activities and the rest had low performance. Out of four farming activities involvement in poultry raising ranked first followed by involvement in vegetable cultivation, goat cattle rearing and post-harvest activities. Pearson's Product Moment Correlation Coefficient (r) was calculated. Among nine characteristics of the rural women, their age, education, farm size, annual family income, cosmopolitaness, extension contact and knowledge about homestead farming showed significant and positive relationship with their extent of involvement in the homestead farming activities. While the rest of the characteristics viz. family size and organizational participation did not have any significant relationship with their extent of involvement in homestead farming and showed a negative trend but family size showed a positive trend. The 'marketing problem' was mentioned as the number one problem regarding homestead farming. While the problems 'disease of poultry' and 'high price of agricultural inputs (fertilizer, pesticide, etc.)' occupied 2nd and 3rd position in order of ranking.



Chapter 1

Introduction

CHAPTER 1 INTRODUCTION



1.1 Background of the Study

Bangladesh is a small deltaic and agro-based country with a population of about 16 crore and 13 lac with an area of 1,47,570 square kilometers (UNFPA, 2009) having an almost equal ratio of men and women, that is 105:100 (BBS,2008). Bangladesh has about 18 million farm households of which 3.8 millions are landless and marginal (BBS, 2005), who are the most disadvantaged and vulnerable group suffering from insecurity of food and nutrition. Development of socio-economic condition of Bangladesh fully depends upon the development of her villages as most of the farmers live in rural areas. The rural population in Bangladesh comprises of 79.1percent and the urban 20.1 percent. Women in rural Bangladesh are large number but mostly unrecognized contributors to agricultural and economic productivity. About 92 percent of the households are male-headed and the remaining 8 percent female-headed (ESCAP, 2005).

An analysis of International Labour Organization & National Population Census revealed that women constituted 38 percent of agricultural labour force in developing countries (Dixon, 1982). For 19 countries of South & South-East Asia Dixon (1982) estimated that 45.3 percent of agricultural labour force consists of women. In Bangladesh the share of women labor in the total economically active population is 39 percent, indicating a relatively lower economic participation by women. On the other hand, women's contribution to the agricultural and household production receives less recognition than their domestic and child-rearing chores which are economic tasks in our view (Kabir *et. al*, 1977). Women have extensive workloads with dual responsibility for farm and household production. They contribute considerably to household income through farm and homestead production and wage labour which is counted as unpaid family labor, is grossly underestimated. The value of unpaid household work constitute of 25-39 percent of the total Gross National Production (GNP) in developing countries (ILO report, 1975).

Women have been involved in agriculture since the habitation of man on this earth and particularly from the dawn of civilization. They are pioneers in plant domestication and planned agriculture (Childe, 1971). But they head one-third of world's households, yet they work two-thirds of the working hours, produce half of the agricultural products and earn one-tenth of income of the world according to a UN report (Shipar, 2000).

Women in rural Bangladesh traditionally undertake home gardening. Farm activities in the homesteads, ranging from selection of seed to harvesting and storing of crops are predominantly managed by women. Women are also responsible for livestock and poultry rearing. Poultry rearing is a traditional activity performed by women for income generation. Feeding livestock, cleaning sheds, securing them properly for the night, and health care are among the activities performed by women. Men are involved in the heavy work with the animals such as taking them out of the compound. Owing to their crucial role in livestock care, women are generally consulted while buying and selling the livestock (Abdullah and Zeidenstein, 1982). Women take care of the farmyard manure collection thus reducing recycling, which has important consequences for soil fertility.

Women in the poor households have been identified as the 'victims' as well as 'managers' of household food security. Women as producers of food and livestock as well as primary meal makers have important responsibilities to ensure household food security. As primary managers of livestock, women ensure supplies of high-quality protein to the country. Women dominate home garden production thus improving the variety and quality of the family diet. Women adopt diverse and intense household resource-use strategies to cope with food deficit situations, such as during the lean season and natural disasters. Women intensify their efforts in homestead production and seek non-farm production options. Despite women's important role in agriculture, the traditional social norms and customary laws combined with the purdah system deprive Bangladeshi women of equitable economic opportunities and access to resources.



In reality among poor households, such clearly demarcated gender divisions of labour do not apply. The traditional gender relations with women's involvement in post-harvest work and men's in fieldwork have not remained static over time. Presently, due to extreme poverty and a food crisis, social norms and traditions are changing and women are appearing in the field as well (Shirin, 1995). About 60-70 percent of women from landless and near-landless households work as agricultural wage labourers, whereas women from larger farms do not participate in field activities (Jahan, 1990). In the Grameen Krishi Foundation working areas in North-West Bangladesh, women equally share all tasks in rice production, even the presumably male task of irrigation (Jordans and Zwatreveen, 1997).

Homestead is the center of all agricultural production activities in rural Bangladesh. Homestead is the dwelling place as well as production unit of vegetables, fruits, fuel, timber, livestock and fisheries in an integrated manner. According to Ninaz (1986) homestead refers to home and adjoining land occupied by a family for the purpose like small scale agricultural production, home-up keeping, sanitation, health and nutrition. In poor countries, household food production is essential in providing large amount of carbohydrate and micronutrients that can not be purchased by low income families. A homestead is a land adjoining area including gardens, courtyard, pond and threshing floor. Its management affects the production of field crops, fishes, fruits & fuels etc. the homestead in South Asian countries vary according to area, pattern, resources and culture, but they resemble in function of agriculture.

Homestead covers a small portion of countries cultivable land. In Bangladesh, out of 8.16 million hectare cultivable land, 0.03 million hectare land (about 5 percent) is under homestead while average individual homestead covers 0.04 hectare. Nearly 4.9 million households (30 percent are non-farm out of total 18 million households. About 70 percent of 10 million farm households have below one hectare land (small farm) (BBS, 2005). Thus homestead farming is the most significant system of production in rural Bangladesh.

1.2 Statement of the Problem

In rural Bangladesh, homestead is the unique piece of land for dwelling as well as the production unit of agricultural and non-agricultural commodities. This is the place where from comes a substantial amount of family nutrition and income. Integrated farming is an age old practice in the homestead area but not in a planned manner. It is said that women perform most of the household activities. In addition to their regular non-agricultural activities, rural women are also involved in many agricultural (productive) activities.

The present study was undertaken to get an answer to the following questions pertaining to homestead farming:

1. What is the extent of women's involvement in different homestead farming activities?
2. Which socio-economic characteristics of the rural women influence their involvement in homestead farming?
3. What types of problems they faced while involving in homestead farming activities?

It was assumed that an assessment of women's involvement in homestead agriculture could be helpful to formulate policy and programmes for the development of women and enhancing overall homestead production.

1.3 Specific Objectives of the Study

The following specific objectives have been formulated for proper direction of the study:

1. To determine the extent of involvement of rural women in homestead farming,
2. To determine and describe the the selected socio-economic characteristics of the rural women. The selected socio-economic characteristics are: age, education, family size, farm size, annual family income, cosmopolitaness, extension media contact, organizational participation and knowledge about homestead farming,

3. To explore the relationship between the selected socio-economic characteristics of the rural women and their extent of involvement in homestead farming,
4. To determine the problems faced by the rural women in involvement in homestead farming activities.

1.4 Justification of the Study

The activities of women are mainly restricted within the household more particularly in looking after children and other family members, preparing and serving food to members of the household and maintaining houses. In addition, rural women do some productive activities including agricultural and non-agricultural works within the homestead (Halim and McCarthy, 1985). Thus, women perform more household activities compared to men. Farouq (1980) reported that women's productive hour ranged from ten to fourteen a day compared to men's such hour from nine to twelve. But many of the activities performed by women are not considered as the productive one's and hence not reflected in the national census (Sattar, 1979). Rural women are mostly underutilized, largely unrecognized though they contribute significantly to agricultural and non-agricultural activities (Akanda, 1994). That's why proper documentation of women involvement in different productive works is necessary to provide due weightage and recognition. On the other hand, there is a need to find out working areas for intensifying their involvement in agricultural production. In a country like Bangladesh, more involvement of women in agriculture particularly homestead farming becomes mandatory to combat the overall food shortage, malnutrition, and also to boost up economic development of the country. Considering the importance of involvement of women in agriculture the researcher selects the topic "Involvement of Rural Women in Homestead Farming".

1.5 Scope and limitation of the Study

Due to the economic pressure, the role of women is changing fast. 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. Findings of the study will be helpful to planners, administrators and others associated with the development of rural women. Considering the money and other necessary resources and also to make the study manageable, the researcher had to impose certain limitations as mentioned below:

- The study was confined to a selected area i.e., two villages of Sadar upazila under Mymensingh district.
- There were many farming activities where the rural women were involved in. Out of these activities like - i) vegetable cultivation, ii) post-harvest activities, iii) poultry raising and iv) Livestock rearing were considered for the study.
- There were many items under each of the homestead agricultural activities, but only three to five items were selected under each of the activity for measuring the extent of involvement.
- Only the housewives of male-headed families were considered as respondents of the study.
- There were many socio-economic characteristics of the housewives but only nine were selected for this study.
- The researcher had to depend on the data furnished by the selected respondents.

1.6 Assumptions of the Study

During the course of study, the researcher had the following assumptions:

- The selected respondents were potent enough to reply the queries made by the researcher.
- The responses furnished by the respondents were reliable and valid.
- Information furnished by the respondents were representative of the whole population of the study area.
- The environmental conditions of the women were more or less similar throughout the study area.

1.7 Definition of Terms

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

Homestead: In this study homestead was considered as “A land adjoining area including gardens, courtyard, pond and threshing floor. The homestead area for this study was defined as the raised land in which the household had its entire dwelling

including living rooms, kitchen, cattle shed, goat shed, front yard, court yard and the area under vegetables, fruit trees, backyard bushes, bamboo bunches etc.”

Age of rural women: Age of a respondent was defined as the span of her life and was operationally measured by the number of years from her birth to the time of interview.

Farming activities: These are referred to the works done by women members of the households for helping agricultural production directly or indirectly. Agricultural activities included post-harvest activities such as threshing, winnowing, drying and preserving grains, vegetables and fruit production, cattle, goat and poultry rearing and such other activities related to production within the homestead area.

Cosmopolitaness: It referred to the rural woman exposure outside her own social environment, her exposure to the nearest village, own union or municipal, own upazila, other upazila, district or places of social and agricultural importance.

Education of rural women: Education referred to the development of desirable knowledge, skill and attitude in the individual through reading, writing and other related activities. It is measured in terms of years of schooling of individual respondent.

Extension contact of rural women: The term extension contact refers to an individual access to or contact to the communication media and source or any extension teaching methods being used for dispersion of new technologies among rural women.

Farm: It referred to a unit of holding organized for production of one or more enterprises like crops, livestock, fish, trees etc. for the purpose of satisfying the farmers' goal. A farm may or may not be of commercial venture.

Farm size: It referred to the area of land owned by a woman farmer or by her husband on which farming activities are carried out. A respondent was considered to have full benefit from cultivated area either owned by him/her or obtained on share cropping system. The area being estimated in terms of full benefit to the farmer. The right of a farmer on the land taken on lease or mortgage from others was regarded as ownership in estimating the farm size.

Organizational participation: Organizational participation of a rural women referred to her participation in different social organizations either as an ordinary member, executive committee member or executive officer within a specific period of time.

Family size: Family size of household was defined as the number of individuals in the family including herself, her husband, children and other dependent members who live and eat together.

Annual family income: Annual family income was defined as the total earning of the respondent and the members of her family from agriculture and other sources (services, business, labor etc.) during a year.

Homestead Farming: It referred to production of agricultural commodities *viz.* crops, livestock, fisheries, forestry etc including post-harvest activities which are usually performed in the homestead of rural area.

Knowledge about homestead farming: It referred to the rationalistic understanding of the rural women about different activities related to agricultural production in the homestead area. In other words, knowledge referred to the development of consciousness and understanding of the rural women about different aspects of homestead agricultural production activities.

Involvement of rural women: It was considered to be an active process, meaning that the person or group in question took initiative toward achieving something. Involvement here meant to participation of rural women in different affairs of homestead farming activities.

Post-harvest activities: It referred to operations done after harvesting of a crop. The operations included threshing, winnowing, drying, grading, sorting and preserving of agricultural produces. These operations usually are performed in the homestead.

Rural women: In the present study, rural women were housewives living in village and engaged in farming activities directly or indirectly.



Chapter 2

Review of literature



CHAPTER 2

REVIEW OF LITERATURE

The present study is concerned with the involvement of rural women in homestead farming in the selected areas. This Chapter deals with the review of past studies and findings related to the present study. In fact, very few research works have been done so far on involvement of rural women in homestead farming in Bangladesh. The researcher, therefore, made exhaustive effort to review the previous research works directly or indirectly related to the present study by different researchers in home and abroad. Literatures reviewed are presented below in four major sections. In the first section, literatures on general context i.e., issues related to the involvement of rural women in farming activities are presented. The second section contained literatures concerning relationship of the selected attributes of women with their involvement in homestead farming. The third one deals with the review of literature highlightly problems faced by rural women and their involvement in farming activities. The last section deals with the conceptual framework of the study.

2.1 Involvement of Rural Women in Homestead Farming Activities

Hasan (2006) found that the highest proportion (98 percent) of conventional rural women had medium involvement in homestead farming activities. On the other hand, cent percent of organic women farm workers had high involvement in homestead farming activities. The average involvement in homestead farming activities by organic women farm workers was significantly higher than that of conventional rural women's farming activities.

Aziz (2004) observed that the involvement in homestead farming by the tribal women were more or less satisfactory in a selected area of Dinajpur district as 61 percent of them had medium participation. However, to meet the ever-growing demand for food, nutrition, there is a need to further enhance the rate and involvement in homestead farming among the farmers.

Alam's (2007) findings in respect of rural women's participation in selected modern agricultural activities indicated that 46 percent of farmers belonged to medium participation category while 40 percent and 14 percent of them were in low and high participation category respectively.

Islam (2007) stated that the highest proportion (41 percent) of the respondents had medium participation in goat rearing compared to 25 percent high, 22 percent low and 12 percent of them had very low participation. He also found that "excreta cleaning of goat" occupied first position among the items of participation under goat rearing.

Nahar (2008) in her study in a selected area of Gazipur district found that involvement of rural women in each of the homestead farming activities i.e. homestead vegetable cultivation, post-harvest activities, poultry raising and goat rearing and the extent of participation is high in all cases which is encouraging. In fact, these activities are mostly performed by women in our country and have rightly been reflected in her study.

Gopalappa (2007) reported that the respondent women were able to involve in the new cropping pattern for sericulture on the household land, and hence they no longer had to hire their labour out. It was concluded that their contribution to the household's farming more greatly appreciated.

Islam *et al.* (1996) studied women's involvement in some agricultural income generating activities like vegetable production, poultry raising and fish culture. The findings indicated that age and family size of participating women had no significant relationship with their extent of participation but education, mass media exposure contact with extension agents, women respondents' attitude and their husbands attitude were found to be significantly associated with rural women extent of participation and involvement in farming activities.

Karim and Wee (1996) mentioned that women were involved in seed collection, seed storage, water management, fertilizer application, daily maintenance and harvesting. In the case of tribal people, vegetables were growing mostly cared by women. Urban women were also eager to grow vegetable in the homestead.

Ajayi (2005) performed analysis based on the descriptive examination of women's agricultural activities in four Local Government Areas giving emphasis on market economy that features very prominently in national income accounting, erroneous belief that most rural women do not make an appreciable contribution to crop production is undermined. He found that most women take part in planting, weeding, harvesting and post-harvest activities of subsistence crops.

2.2 Studies Concerning the Relationship between Involvement in Homestead Farming Activities and the Selected Attributes of the Rural Women

2.2.1 Age and involvement

Aktaruzzaman (2008) mentioned that there was a significant and positive relationship between age of landless women and their functional participation in Income Generating Activities (IGAs).

Nahar (2008) in her study observed that the rural women had significant positive relationship with their their extent of involvement in homestead farming. However younger housewives were involved in homestead farming more actively.

Islam (2006) observed in his study that there was no significant relationship between age of the rural women and their with their involvement in goat rearing.

Khatun (2004) found in her study that there was no significant relationship between age of the rural women and their participation in homestead management activities.

Aziz (2004) observed in his study that age of tribal women had no significant relationship with their involvement in homestead farming.

Parveen(1993) in her study observed that age of a progress village women had influence towards homestead agricultural production. But in case of the traditional village, age was not associated with their involving in homestead farming.

Akanda (1994) mentioned that age of the rural women had significant positive relationship with their involvement in homestead vegetable cultivation and in the cultivation of fruit trees but a negative correlation with non-farm household activities.

2.2.2 Education and involvement

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

Akanda (2005) stated that education of rural women had significant positive relationship with their involvement in the cultivation of fruit trees. However, there was a positive relationship between education and vegetable cultivation.

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

Aziz (2004) in his study found that the level of education of the tribal women had no relationship with their participation in homestead agriculture.

Khatun (2004) revealed significant negative relationship between academic qualification of rural women and their involvement in homestead management activities.

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



Yeasmin (2002) mentioned in her study that there was no relationship between education of the rural women and their extent of involvement in rice production activities.

Akter (2000) mentioned in his study that the education of rural women had a positive significant relationship with their involvement in Income Generating Activities (IGAs) and in decision making role in the family.

Nahar (2000) mentioned that there was a significant positive relationship between knowledge of farm women in homestead farming and their education. She also concluded that family education also had significant positive influence on the knowledge of farm women about homestead farming.

2.2.3 Family size and involvement

Nahar (2008) found that there was insignificant relationship between family size and involvement in vegetable cultivation, poultry raising and goat rearing, and significant relationship between family size and involvement in post-harvest activities.

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

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

Khatun (2004) observed that there was a significant positive relationship between family size of the rural women and their involvement in homestead management activities.

Aziz (2004) found that family size of the tribal women had no significant relationship with their involvement in homestead farming.

Islam (2003) found that there was no significant relationship between the family size of the rural women with their involvement in goat rearing.

Akanda (1994) mentioned that family size of the rural women had significant positive relationship with their involvement in the cultivation of fruit trees. The relationship with homestead vegetable cultivation and non-farm household activities was also positive but not significant.

2.2.4 Farm size and involvement

Nahar (2008) mentioned that rural women with larger farm size had more participation in vegetable cultivation and post-harvest activities but their participation in goat rearing was low. However, rural women of all farm categories participate in poultry raising. Further, rural housewives with small farm size were involved more in goat rearing than those of big farm.

Khatun (2004) found that there was a non-significant relationship between farm size of the rural women and their participation in homestead management activities.

Aziz (2004) mentioned that the farm size of the tribal women had no significant relationship with their participation in homestead farming.

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

Halim (2001) in his evaluation report on Farming Systems 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 kazishrimla site (upland), whereas in Naogaon site (low lying area), women of medium farm family spent more time in agricultural farming activities.

Akanda (1994) in his study mentioned that farm size was one of the most crucial variables in the activity of rural farm family and it influenced all other variables. The

rural women with bigger farm size had more participation in homestead vegetable cultivation, fruit tree cultivation and non-farm household activities. The reasons were that these families had more opportunities, more education, more agricultural knowledge and better extension contact.

2.2.5 Annual family income and involvement

Aktaruzzaman (2006) stated that there was non-significant relationship between family income of landless women and their functional involvement in income generating activities.

Aziz (2004) in his study found that family income of the tribal women had significant relationship with their extent of involvement in homestead farming activities.

Amin (2004) found a non-significant negative relationship between family annual income of rural women and their involvement in selected aquaculture activities.

Khatun (2004) mentioned that there was a significant positive relationship between annual family income of rural women and their involvement in homestead management activities.

Yeasmin (2002) stated in her study that the annual income of the women had a positive and significant relationship with their extent of involvement in rice production activities.

Nahar (2000) found in her study that participation in homestead vegetable cultivation was not related with family income. However, rural women participated in post-harvest activities irrespective of their family income. Rural women with higher family income were reluctant of goat rearing but positively participated in poultry rearing.

2.2.6 Cosmopolitanism and involvement

Aziz (2004) stated that tribal women who were more cosmopolite had more participation in homestead agricultural activities. Movement outside ones periphery creates opportunity for learning seeing new innovations and contact with others, which ultimately changes attitude.

Nahar (2000) in her study found that cosmopolitanism had significantly positive relationship with participation of rural women in homestead agricultural activities in most cases.

Akter (2000) stated that cosmopolitanism of the rural women had a significant positive relationship with their extent of involvement in Income Generation Activities (IGAs).

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

2.2.7 Extension contact and involvement

Aziz (2004) revealed that extension contact had immense influence on the involvement of tribal women in all types of homestead agricultural production activities. It is obvious that contact with extension agents and other extension teaching methods changes attitude of clients radically and they becomes interested to adopt new technology which was somewhat reflected in his study.

Khatun (2004) observed that there was significant positive relationship between communication exposure of rural women and their participation in homestead management activities.

Islam (2003) observed that extension media contact of the rural women had a positive relationship with their participation in goat rearing.

Nahar (2000) in her study found that extension contact had significant and positive relationship with the involvement and in homestead farming activities in most cases.

2.2.8 Organizational participation and involvement

Farhad (2003) found that organizational participation had no significant relationship with their involvement in homestead farming activities.

Hague (2003) observed that organizational participation of the rural women had no significant relationship with their involvement towards extension activities of DAE.

Nurzaman (2000) observed in his study that organizational participation of the rural women had positive correlation with their involvement in homestead farming activities.

Islam and Kashem (1997) observed that organizational participation of the rural women had non significant and show negative trend relationship with their involvement in homestead farming.

Noor (1995) found in his study that there was positive and significant relationship between the farmers and their attitude towards the cultivation of HYV potato.

2.2.9 Knowledge about homestead farming and involvement

Parveen (2007) recommended that knowledge had played a vital role in developing farming activities and makes a favorable attitudes towards the homestead farming activities.

Aziz (2004) in his study found that agricultural knowledge of the women had significant relationship with their involvement in homestead farming.

Nahar (2000) revealed that the relationship between knowledge about homestead farming and involvement in vegetable cultivation and poultry raising were significant whereas post-harvest activities and goat rearing was insignificant.



Ali (1995) stated that agricultural knowledge of the rural women had significant positive relationship with their attitude towards working in group in different agricultural activities.

Akanda (1994) in his study found that agricultural knowledge of the rural women had positive relationship with their involvement in the cultivation of fruit trees. But there was no significant difference in the involvement of rural women in homestead vegetable cultivation and non-farm household activities because of their difference in education.

Verma *et al.* (1988) conducted a study on gain in knowledge and change in attitude through training on improved home making tasks. Their study revealed that attitude of farm women changed significantly after training in home making tasks. They remarked that due to gain in knowledge the attitude becomes more favorable.

2.3 Problem faced by the Rural Women and their involvement in homestead farming activities

Aziz (2004) identified ten problems which faced by the tribal women in homestead farming activities. Among the problems lack of good seeds was ranked first followed by lack of pesticides; whereas lack of capital and natural calamity were ranked last.

Khatun (2004) in her study mentioned and ranked ten problems faced by the rural women in homestead management activities. According to rank order, these were - i) damage of crops by flood; ii) lack of credit facilities; iii) lack of resistant varieties; iv) lack of knowledge in controlling insect pests; v) disease of cattle and goat; vi) lack of technical problem on improved farming; vii) poultry disease; viii) lack of vaccination facilities for poultry birds; ix) inability to continue education due poverty; and x) lack of irrigation facilities.

Islam (2003) reported that lack of proper training about goat rearing was the major problem of the rural women for participation of goat rearing. Other major problems were lack of available grazing land, high mortality rate of kids, lack of adequate goat shed and lack of adequate capital.

Yeasmin (2002) found that the most important problems faced by the rural women in participating rice production activities according to rank order were i) lack of training; ii) hindrance to meet male SAAOs (Sub-Assistant Agriculture Officers) to get agricultural information; iii) damage of stored rice by insects.

2.4 The Conceptual Framework of the Study

Rural women are the crucial force for human development despite the fact that public policies have not guaranteed their subsistence, nutrition, health and due salaries. Their permanent contribution to our household activities, society and country have never been valued nor even recognized (Rosalina, 2002).

In this study, it was expected that 'involvement in homestead farming' as dependent variable which would be influenced by selected characteristics of the respondents as independent variables viz. age, education, , family size, farm size, annual family income. cosmopolitaness, extension contact, organizational participation and knowledge about homestead farming. Involvement in homestead farming activities could be influenced by several socio-economic activities like awareness campaign, financial support etc. These activities might not be easy to measure but would exert influence over the dependent variable. However, for more clear understanding of the present research study a conceptual framework has been designed and presented in the Figure 2.1.

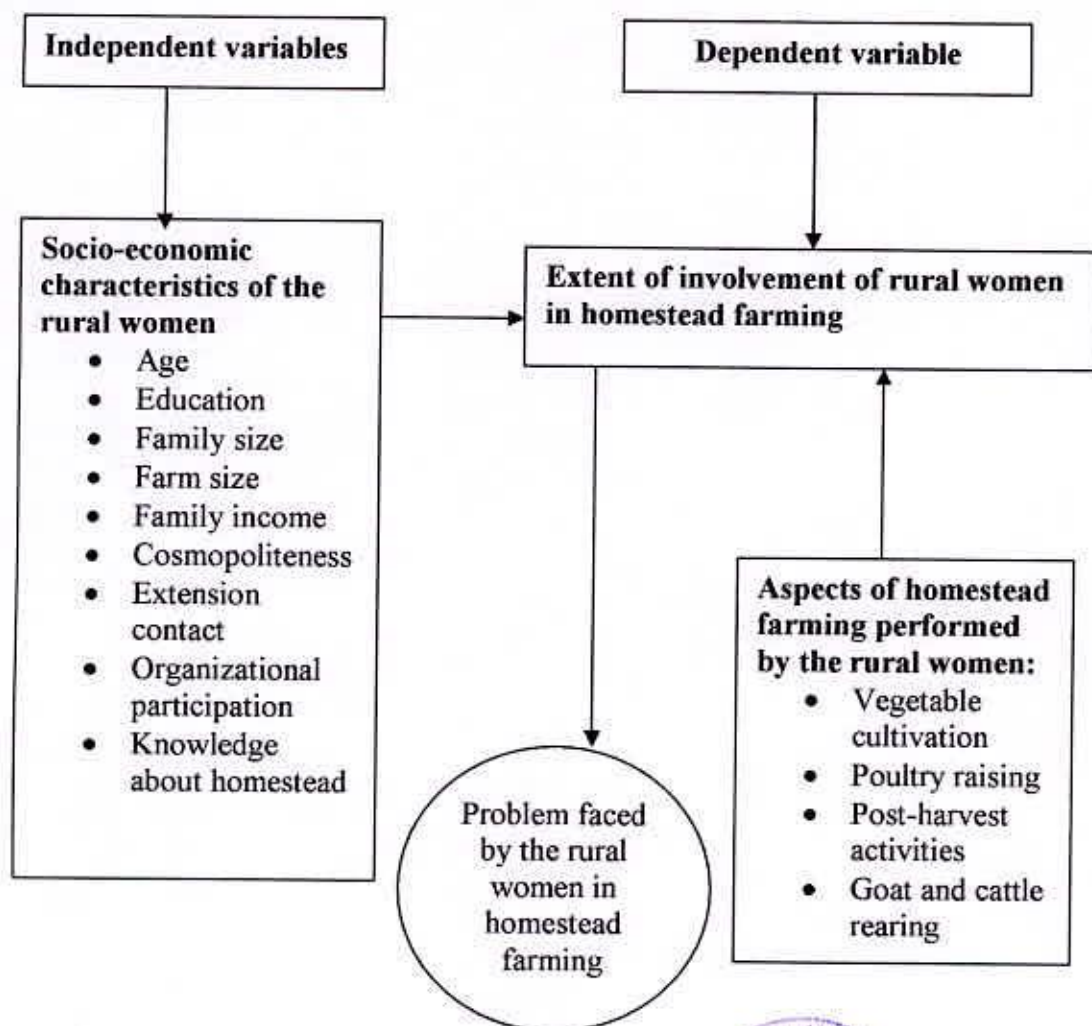



Fig. 2.1 The conceptual framework of the study



Chapter 3

Methodology



CHAPTER 3

METHODOLOGY

Methods and procedures are the key factors in conducting any scientific research. Appropriate methodology used in research helps in collecting valid and reliable data and also in analyzing the information purposively to arrive at correct conclusions. The methods and procedures followed in conducting the research have been described in this Chapter.

3.1 Locale of the Study

Bhabkhali union of Sadar upazila under Mymensingh district was purposively selected as locale of study. Among thirteen villages of Bhabkhali union, two villages named Shutiakhali and Chorkhai were randomly selected as locale of the study. The villages are located in the south-east corner of the upazila Head Office. In these areas, a number of NGOs (BRAC, ASA etc.) are working for the development of agricultural sector and also for the development of women as well. Thus, the researcher took an opportunity to select these villages as the locale of the study. A map of Mymensingh district and Sadar upazila showing locale of the study appears in the Figure 3.1 and 3.2 respectively.

3.2 Population and Sample of the Study

There were 705 and 363 farm families in Shutiakhali and Chorkhai villages respectively. It was considered that each family has at least one housewife but every housewife was not involved in homestead farming. The families which had the housewives involved in various homestead farming activities were selected as the respondent for this study. From each farm family only one farm women who involved in homestead farming was considered for the study. Thus a total of 1068 farm women were constituted the population of the study. From the population 10% of the respondents were randomly selected for the sample of the study. A reserve list of 10 housewives (1% of the population) was prepared for use in case of unavailability of the respondents for any reason. The distribution of the population and sample households and those in the reserve list has been shown in the Table 3.1.

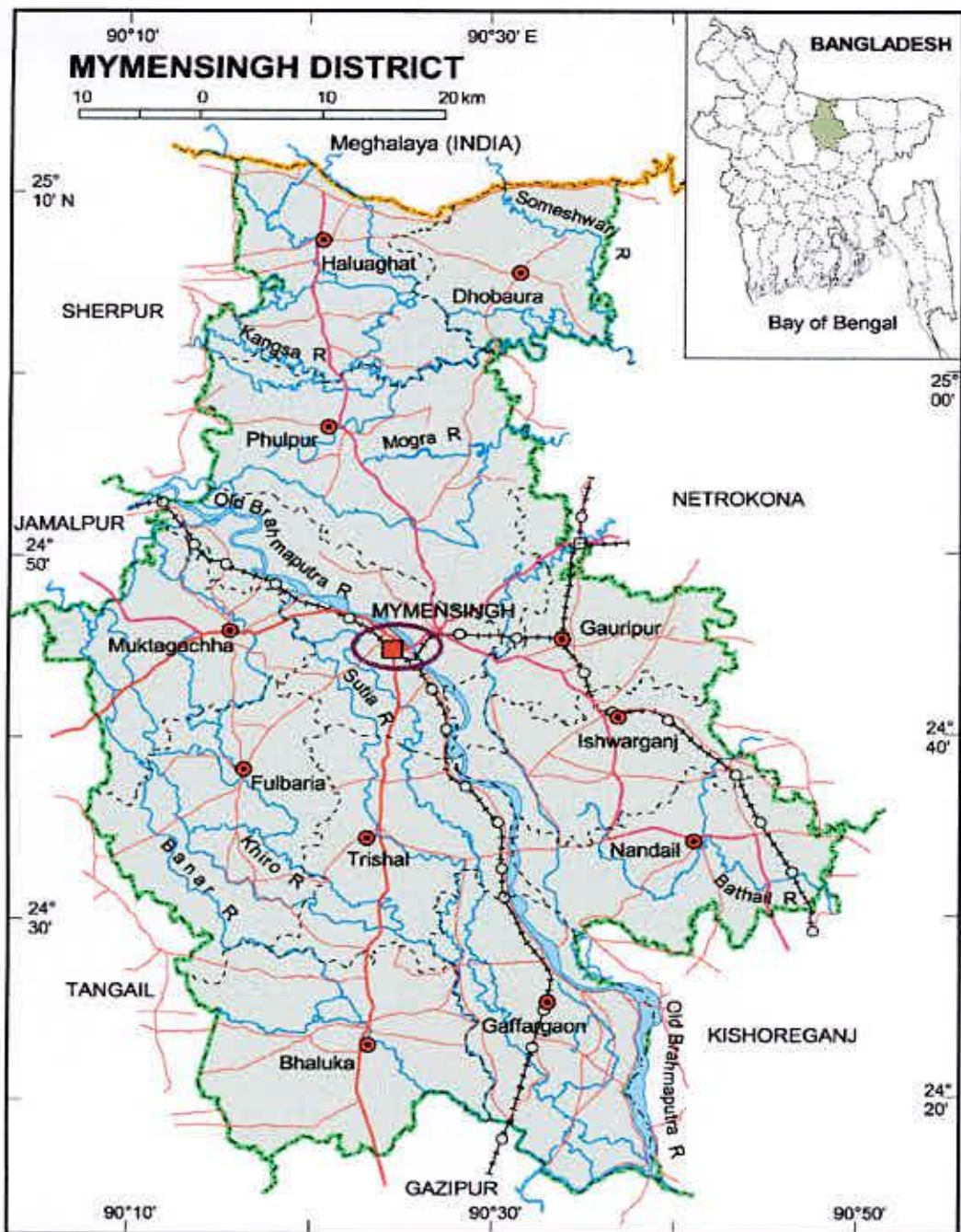


Fig.3.1 A map of Mymensingh district showing the study upazila



Fig.3.2. A map of Mymensingh sadar upazila showing the study villages



Table 3.1 Population and sample of the study

Upazila	Union	Villages	Number of farm families (population)	Number of women included as sample	Number of women in reserve list
Sadar	Bhabkhali	Shutiakhali	705	71	7
		Chorkhai	363	36	3
Total			1068	107	10

3.3 Variables of the Study

In a descriptive research, the selection and measurement of the variables are the important task. The hypothesis of a research contains at least two important elements viz., an independent variable and a dependent variable. Independent variable is that factor manipulated by experimenter in his/her attempt to determine its relationship to an observed phenomenon. On the other hand, a dependent variable is that factor which appears, disappears or varies as the experimenter introduces, removes or varies the independent variables.

3.3.1 Independent variables

Nine selected socio-economic characteristics of the rural women were considered as independent variables for the study. These are as follows:

1. Age
2. Education
3. Family size
4. Farm size
5. Annual family income
6. Cosmopolitaness
7. Extension media contact
8. Organizational participation
9. Knowledge about homestead farming

3.3.2 Dependent Variable

The dependent variable in this study was extent of involvement of rural women in homestead farming comprising the aspects: homestead vegetable cultivation, post-harvest activities, poultry raising and livestock rearing.

3.4 Measurement of Variables

In order to carry out the study in accordance with the objectives, it was necessary to measure the independent and dependent variables. The procedure for measuring the variables was described below:

3.4.1 Measurement of independent variables

3.4.1.1 Age

Age of rural women referred to the period of time from her birth to the time of interview. It was measured in terms of actual years on the basis of her response. A score of one (1) was assigned for each year of her age.

3.4.1.2 Education

Education of rural women was measured by the years of schooling. If a respondent did not know how to read and write, her education score was assigned as 0 (zero), a score of 0.5 was given to those respondent who did not know how to read and write but could sign name only and 1 score was assigned for each year of schooling.

3.4.1.3 Family size

Family size was operationally measured by computing the total number of members of the respondent women family who jointly lived and ate together. The total numbers of family members were considered as the family size score of a respondent. For example, if a respondent has 5 members in her family, her family size score was 5.

3.4.1.4 Farm size

Farmland is the most important capital of a farmer and the farm size has influence on many personal characteristics of a farmer. It refers to the area of land owned by a farmer or his wife on which farming activities are carried out. However, farm size was estimated in terms of full benefit to the respondent. Data obtained in response to questions under item No.4 in the interview schedule (Appendix-A) formed the basis for determining the farm size of the respondent. It was measured in areas (hectare) by using the following formula:

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

Where, A_1 = Own homestead area

A_2 = Own land under own cultivation

A_3 = Land taken from others on lease

A_4 = Own land given to others on share cropping

A_5 = Land taken from others on share cropping



3.4.1.5 Annual family income

The annual family income of women is an important indicator of how much she can invest in her farming business. Annual family income was the total income earned by the respondent and other members of her family from agricultural and other non-agricultural sources. Annual family income was measured in 'thousand' Taka. In calculating the annual family income of the respondents, income from different sources was added together to obtain total income of a respondent. The score 1(one) was assigned for each Tk. 1000 to compute the income score of the respondent.

3.4.1.6 Cosmopolitaness

Cosmopolitaness of a respondent referred to frequency of her visit to different places outside from her own village. The following scale was used for computing cosmopolitaness score of a respondent. Cosmopolitaness was, therefore, determined by adding the total responses against 6 selected visiting places. The score could range from 0 to 18, where '0' indicated 'no cosmopolitaness' and '18' indicated 'high cosmopolitaness'.

Extent of visit	Score assigned
Frequently	3
Occasionally	2
Rarely	1
Not at all	0

3.4.1.7 Extension media contact

Extension media contact is referred to the exposure or contact of the farmers with some selected information sources and personalities. The extension contact of a respondent was measured on the basis of extent of contact with the selected information sources within a given duration for getting required information. There are three levels of extension contact. In this study, score of this variable was computed for each respondent on the basis of her contact with 14 selected contact media and score was assigned as follows:

Extent of contact	Score assigned
Regularly	3
Occasionally	2
Rarely	1
Not at all	0

Extension contact was, therefore, determined by adding the total responses against 14 selected contact media. The score of extension contact of the respondents could range from 0 to 42 where '0' indicated no extension contact and '42' indicated high extension contact.

3.4.1.8 Organizational participation

It referred to the participation of the rural women in various social organizations based on the nature of involvement and duration of participation during the interview. One (1) score was assigned for each year of participation in any organizations and nature of involvement was measured by four point rating scale.

Nature of participation	Score assigned
Executive Officer	3
Executive committee member	2
Ordinary member	1
No participation	0

Thus the score of organizational participation of a respondent was measured by using the following formula:

$$\text{Organizational participation} = \sum (\text{Nature} \times \text{Duration})$$

3.4.1.9 Knowledge about homestead farming

It referred to the ability of a respondent to recall or recognize items of information related to homestead farming. It was measured by asking some questions to the each respondent individually on some main aspects of homestead farming and computing a homestead farming knowledge score. Correct responses will be given the highest scores of the respective questions. Each respondent was asked 12 questions and score assigned as 2 for each complete correct answer, 1 for partially correct answer and 0 (zero) for incorrect answer for each question. Thus the score could be 0-24 where '0' indicating 'no knowledge' and '24' indicating 'high knowledge'.

3.4.2 Measurement of Dependent Variable

As stated earlier, the dependent variable of this study was 'the extent of involvement of rural women in homestead farming regarding the aspects of homestead vegetable production, post-harvest activities, poultry raising and livestock rearing. Involvement referred to the Participation of rural women in homestead farming activities. The extent of involvement of each respondent was measured on the basis of extent of frequency of participation. The scores were made in the following way:

Frequency of participation	Score assigned
Regularly	3
Sometimes	2
Rarely	1
Not at all	0

In the present study, extent of involvement of rural women in homestead farming by the rural women was computed according to the summation of the scores that obtained from the each farming activity performance. The score could vary from 0 to 48, where '0' indicating 'no involvement' and '48' indicating 'highest involvement' in homestead farming activities.

3.5 Measurement of Extent of Problems Faced by the Rural Women in Involving Homestead Farming

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 problem are diversified as they are mostly controlled by nature. However, after discussion with the respondents 10 major problems of homestead agricultural activities were selected to measure the extent of problem. The respondents were asked to indicate their extent of problem faced in participating homestead farming activities by a four-point rating scale. Problems faced by the rural women were, therefore, determined by adding the total score against 10 selected problems.

To determine the rank order of the identified problems, Problem Facing Index (PFI) was measured by using the following formula:

$$PFI = (P_h \times 3) + (P_m \times 2) + (P_l \times 1) + (P_n \times 0)$$

Where

PFI = Problem Facing Index

P_h = No. of respondents faced high problem

P_m = No. of respondents faced medium problem

P_l = No. of respondents faced low problem

P_n = No. of respondents faced no problem

Thus the Problem Facing Index (PFI) could be ranged from 0-321, where '0' indicating 'no problem' and '321' indicating 'high problems' in homestead farming activities.

3.6 Hypothesis of the Study

Goode and Hatt (1952) defined hypothesis as "a proposition which can be put to a test to determine its validity. It may seem contrary to or in accord with common sense". A null hypothesis states that there is no relationship between the concerned variables. If null hypothesis is rejected on the basis of statistical test, it is concluded that there is relationship between the concerned variables. However, the following null hypothesis was formulated and tested to explore relationship of the selected socio-economic characteristics of rural women and their extent of involvement in homestead farming.

Ho: There is no relationship between the selected socio-economic characteristics (independent variables) of the rural women and their extent of involvement in homestead farming (dependent variable).

3.7 Instrument for Collection of Data

An interview schedule was developed in Bengali to collect necessary data from the rural women to determine their extent of participation in selected homestead farming activities, to describe their selected characteristics and other information to fulfill the objectives of the study. Simple and direct questions and also a number of scales were used to obtain the information in the data collecting instrument as per objectives. An English version of the interview schedule is enclosed at Appendix-A.

The questions were arranged systematically and presented clearly to get those understood by the respondents and help them furnish information in a consistent and systematic manner. Before final preparation of the interview schedule it was pre-tested. The pre-tested schedule facilitated the researcher to examine the suitability of different questions and statements of the schedule in general. After that, the schedule was finally prepared with necessary corrections, modifications and alterations as per experience of the pre-test. The corrected interview schedule was then used for collecting the data finally.

3.8 Collection of Data

The researcher herself collected data from the selected samples through personal interview. The interview schedule prepared earlier by the researcher was used to gather information. All possible efforts were made to explain the purpose of the study to the respondents in order to get valid and pertinent information from them. Interviews were conducted with respondents in their homes. While starting interview with any respondent, the researcher was willing and took possible care to establish rapport with them so that they did not feel hesitation to furnish proper responses to the questions and statements in the schedule. The questions were explained and clarified whenever any respondent felt difficulty in understanding properly. The researcher also discussed the matter with the husband of the respondents separately as and when required. Data were collected during 02 to 16 May, 2010.

3.9 Compilation of Data

After completion of field survey, the entire interview schedule was compiled. Local units were converted into standard unit and qualitative data were converted into quantitative data by means of suitable scoring whenever necessary. The responses of the individual respondent contained in the interview schedule were transferred to a master sheet for entering the data in the computer. As soon as the data entered into the computer, it was then analyzed in accordance with the objectives of the study.

3.10 Statistical Analysis

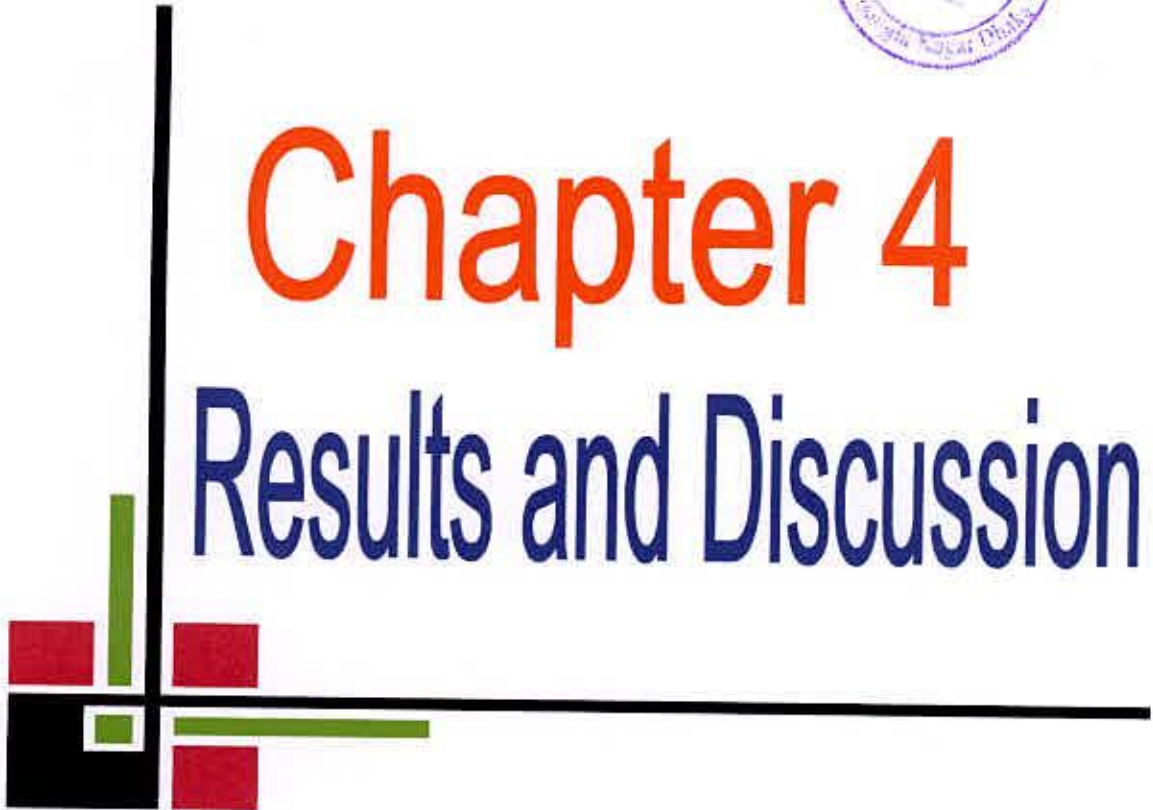
Descriptive statistical methods like number, range, percentage distribution, rank order, mean and standard deviation were used in describing the independent and dependent variables of the study. For clarity and understanding, tables were also used in presenting the data, for exploring the relationships between the extent of involvement of rural women in selected homestead farming activities and their selected socio-economic characteristics Pearson's Product Moment Coefficient of Correlation (r) was used.

The analysis of data was performed by using SPSS (Statistical Package for Social Science) computer program. Throughout the study, at least five percent (0.05) level of probability was used as a basis of rejecting a null hypothesis.



Chapter 4

Results and Discussion



CHAPTER 4

RESULTS AND DISCUSSIONS

The findings and their related interpretations of this study have been presented in different sections of this Chapter.

4.1 Involvement of Rural Women in Homestead Farming

In the present study, the term 'Involvement' referred to take part fully or partially in many types of homestead farming activities by the rural women. In fact rural women (here, housewives) involved in various agricultural and non-agricultural activities within the homestead. The following four activities have been selected to determine the extent of women's involvement in homestead farming:

- Homestead vegetable cultivation,
- Post-harvest activities,
- Poultry raising and
- Goat rearing

4.1.1 Overall involvement of rural women in homestead farming

Extent of involvement of rural women in homestead farming has been assigned to the summation of the scores that obtained could vary from 0 to 48. The computed value of the respondents ranged from 15 to 41 with an average of 28.71 and standard deviation 5.09. Based on their assigned score the respondents were classified into three categories.

Table 4.1 Distribution of the respondents according to their overall involvement in homestead farming

Categories	Respondents		Mean	S.D.
	Number	Percent		
Low involvement (15-24)	40	37	28.71	5.09
Moderate involvement (25-31)	46	43		
High involvement (32-41)	21	20		
Total	107	100		

Data presented in the Table 4.1 show that the highest percent (43) of respondents had medium involvement in homestead farming activities compared to 20 percent high involvement. Here, there were 37 respondents found of low involvement. Therefore, one-fifth of the respondents had high involvement in farming activities and 80 of the respondents that is 75 percent had low to moderate involvement in farming activities which indicates that there is huge scope to increase their involvement in homestead farming.

Women, particularly housewives perform vegetable cultivation, post-harvest activities, poultry rearing activities at varied extent and it has also been reported by many authors. In this study very few of the respondents (17 of the total respondents) were found to involve in all four homestead farming activities at a time. The reason was that they had no adequate land for different type of cultivation and as such no scope for participation in case of post-harvest activities, sometimes reluctant to take part in post-harvest activities and goat rearing.

4.1.2 Comparative involvement in four homestead farming activities

It was found that more or less every family had been trying to involve themselves in homestead farming to meet their family vegetable need, increase their income and improvement of their living standard. In order to rank involvement status in four homestead farming, score was computed for involvement in each of the farming activities in the Table 4.2.

Table 4.2 Rank order of the extent of involvement in different homestead farming activities

Homestead farming activities	Frequency of respondents in a particular activity	Involvement of the respondents(in score)	Rank order
Poultry raising	91	85.05	1
Vegetable cultivation	79	73.83	2
Goat and cattle rearing	65	60.74	3
Post-harvest activities	59	56.07	4

Table 4.2 show that the highest involvement (85.0467) of the rural women are in poultry raising activities, then homestead vegetable cultivation (73.83) and goat rearing activities (60.74) possess the second and third rank respectively. The lowest involvement of the rural women was in Post-harvest activities (56.07).

4.2 Selected socio-economic Characteristics of the Rural Women

There were various socio-economic characteristics of the respondents women which might have influenced their extent of involvement in homestead farming. It was not possible to consider all the characteristics of a woman and as such nine characteristics of them were selected as independent variables, which included age, education, family size, farm size, annual family income, cosmopolitaness, extension contact, organizational participation, knowledge about homestead farming.

4.2.1 Age

Age of the respondent women ranged from 18 to 51 years with a mean of 34.04 and standard deviation of 7.58. However, based on their age score the rural women (housewives) were classified into three categories as young, middle-aged and old housewife.

Table 4.3 Distribution of the respondents according to their age

Categories of age	Respondents		Mean	S.D.
	Number	Percent		
Young (upto 30)	46	43	34.05	7.58
Middle aged (31-50)	43	40		
Old (above 50)	18	17		
Total	107	100		

Data presented in the Table 4.3 shows that 43 percent of the respondents women were young-aged housewives while old housewives were the lowest (17percent) and middle-aged constituted 40 percent. Similar findings were reported by Aziz (2004), Nahar (2000) and Sohrab (2007). It is expected that middle-aged and young women (83 percent of the respondents) are more actively performing in homestead farming. The research work found that the Old-aged housewives are well experience and more

acquainted with the farming activities. Particularly that the younger housewives are not willing enough to perform in homestead farming and they also possess very low farming knowledge and capability to perform farming activities. The research work found that middle-aged and old women (57 percent) were more involved in homestead farming because they are more active, energetic and enthusiastic in performing homestead farming activities.

4.2.2 Education

The level of education of the respondents ranged from 0 to 9, the average being 2.70 with a standard deviation of 2.05. On the basis of scores obtained, the rural women were grouped according to national standard of classification in Table 4.4.

Table 4.4 Distribution of the respondents according to their education

Categories of education	Respondents		Mean	S.D.
	Number	Percent		
Illiterate (0)	5	4.7	2.70	2.053
Can sign only (0.5)	30	27.1		
Primary education (1 - 5)	61	57.9		
Secondary education (6-10)	11	10.3		
Total	107	100		

Data presented in Table 4.4 indicate that 4.7 percent were illiterate, 27.1 percent of the respondents could sign name only, 57.9 percent had primary level education and 10.3 percent at secondary level education. This findings also supported by Alam (2004) and Aziz (2004). More than half of the respondents (57.9 percent) of the study area secured primary education. It is a good sign that female literacy rate is increasing.

It is assumed that educated women are more progressive and innovative than those of illiterate with respect to both farming and non farming activities and manage household activities efficiently.

4.2.3 Family Size

The number of family members of the respondents ranged from 4 to 9 with an average of 4.31 and standard deviation of 1.25. Based on the family size, the respondents were classified into three categories.

Table 4.5 Distribution of the respondents according to their family size

Categories of family size	Respondents		Mean	S.D.
	Number	Percent		
Small (upto 4)	32	29.9	4.31	1.25
Medium (5 - 6)	69	64.5		
Large (above 6)	6	5.6		
Total	107	100		

Data presented in Table 4.5 show that the highest proportion (64.5 percent) of the respondents had medium sized family that of 69 of the total respondents while 29.9 percent had small family and 5.6 percent had large family. Similar findings were found by Islam (2003) and Nahar (2000) in their respective studies.

Women with small family size spent less time in farming activities compared to large family. Women with medium family size spent medium durational time in farming. Though women (housewives) of the large family are burden with activities other than agriculture, but they spare much time in farming. Housewives of the large family with small land holdings more involved in agricultural activities to provide food and cash for the survival of the family.

4.2.4 Farm Size

Farm size of the respondents ranged from 0.02- 2.02 hectares having an average of 0.88 hectares and standard deviation of 0.81. Respondents on the basis of farm size were classified into three categories recommended by DAE (2004).

Table 4.6 Distribution of the respondents according to their farm size

Categories of farm size	Respondents		Mean	S.D.
	Number	Percent		
Marginal farmer (0.02 -0.2)	13	12.1	0.88	0.81
Small farmer (0.21 -1.0)	60	56.1		
Medium farmer (1.01-3.0)	34	31.8		
Total	107	100		

Data presented in Table 4.6 show that the highest portion (56.1 percent) of the respondents had small farm size while 31.8 percent and 12.1percent of them had medium and marginal farm size respectively. None of the respondents had large farm size. Akther (2000) and Nahar (2000) found similar findings in their respective studies

The research work found that majority of the families possessing small amount of land. Farmers are becoming small to marginal and then landless for various reasons of which fragmentation of land due to inheritance is the most important one. Small and marginal farmers are usually reluctant to adopt new agricultural technologies through striving hard to increase their income. Housewives of the small and medium farms are more active and involved in different productive activities to support family expenses and nutrition (Nazneen, 2004).

4.2.5 Annual Family Income

Annual family income of the respondents was measured in 'thousand taka' per year and in the present study that ranged from 60 to 156 with an average of 107.62 and standard deviation of 22.48. On the basis of annual family income, the respondents were divided into three categories.

Table 4.7 Distribution of the respondents according to their family income

Categories of Family Income	Respondents		Mean	S.D.
	Number	Percent		
Low (<100)	60	56.1	107.62	22.48
Medium (100-150)	45	42.1		
High (> 150)	2	1.9		
Total	107	100		

Data furnished in Table 4.7 reveal that the highest proportion (56.1 percent) of the respondents had low annual family income while 42.1 percent and 1.9 percent of them had medium and high annual income respectively. Major portion of the rural farm families possessed small to marginal farms and thus income was low to medium. Aziz (2004), Islam (2003) and Nahar (2000) found similar findings in their respective studies. During data collection it was noticed that those families having low and medium annual income had been trying to improve their living standard through utilization of their homestead area and adopting new technologies in their field.

4.2.6 Cosmopolitaness

The cosmopolitaness score of the rural women ranged from 0 to 7 against the possible range of 0 to 18, having an average score with 3.94 and standard deviation of 1.08. Based on cosmopolitaness rural women were classified into four categories (Table 4.3), which reveal that the highest portion (47.7 percent) of the respondents had medium cosmopolitaness while 25.2 percent of rural women had low cosmopolite while 27.1 percent were non-cosmopolite.

Table 4.8 Distribution of the respondents according to their cosmopolitaness

Categories of cosmopolitaness	Respondents		Mean	S.D.
	Number	Percent		
Non-cosmopolite (0)	30	27.1	3.94	1.08
Low cosmopolite (<4)	26	25.2		
Medium cosmopolite (4- 7)	51	47.7		
Total	107	100		

It is a general picture of the rural areas of Bangladesh that the rural women are normally non-cosmopolite in nature. They get necessary information mainly from their neighbours, relatives, workmates etc. Cosmopolitaness of the rural women depends mostly on age, economic condition, size of the family etc. Family income of major portion of the housewives was medium and low which affected their cosmopolitaness. Age is another factor that determines cosmopolitaness as older women have many responsibilities than the younger and they have less opportunity to go out side. The respondents in the present study were no exception this point. Therefore, most of the respondents were medium cosmopolite category.

4.2.7 Extension Media Contact

The score obtained for extension media contact of rural women ranged from 4 to 17 against possible score ranged from 0-42 with an average of 12.47 and standard deviation 2.60. The respondent rural housewives were grouped into three categories on the basis of their score for extension contact as presented in Table 4.9.

Table 4.9 Distribution of the respondents according to their extension media contact

Categories of extension media contact	Respondents		Mean	S.D.
	Number	Percent		
Very low (<10)	33	30.8	12.47	2.600
Low (10- 15)	58	54.2		
Medium (>15)	16	15.0		
Total	107	100		

Data presented in Table 4.9 show that majority of the rural women (54.2 percent) had medium contact with extension media compared to 30.8 percent having low contact. Only 15 percent of the rural women was found having high extension contact. Similar findings were reported by Aziz (2004) and Nahar (2000). In the study area, the extension agents are less active to inform the rural farmer about agricultural information. Practically there is very little extension programme for women in specific. Besides, due to social norms and religious values, rural women are reluctant to come in contact with the male extension worker. The situation is changing through the interventions of GOs and NGOs but more attention is needed.

4.2.8 Organizational participation

The organizational participation score of the rural women ranged from 1 to 6 against the possible range of 0 to 21, having an average score with 3.63 and standard deviation of 0.91. Based on Organizational participation rural women were classified into four categories (Table 4.3), which reveal that the highest portion (51.4 percent) of the respondents had low organizational participation while 48.5 percent of rural women had medium organizational participation and zero percent were having high organizational participation.



Table 4.10 Distribution of the respondents according to their organizational Participation

Categories of Organizational participation	Respondents		Mean	S.D.
	Number	Percent		
Low (<4)	55	51.5	3.63	0.91
Medium (4-6)	52	48.5		
High (>6)	0	0		
Total	107	100		

Organizational participation of rural women depends on age, economic condition, size of the family etc. Family income of major portion of the housewives was medium and low which affected their organizational participation which was also reflected in the present study i.e. more than half of the rural women had low organizational participation

4.2.9 Knowledge on homestead farming

The score for knowledge on homestead farming could range from 0 to 24. The computed score of knowledge of the respondent women in the present study ranged from 6 to 17 with a mean of 13.8598 and standard deviation of 2.37697. The respondent women were grouped into three categories as low medium and high.

Table 4.11 Distribution of the respondents according to their knowledge on homestead farming

Categories of knowledge on homestead farming	Respondents		Mean	S.D.
	Number	Percent		
Low (≤ 10)	13	12.1	13.86	2.38
Medium (11- 15)	45	42.1		
High (> 15)	49	45.8		
Total	107	100		

Data presented in Table 4.11 show that the highest percent (45.8 percent) of the respondent women had high knowledge on homestead farming while the 42.1 percent respondents belonged to medium Knowledge category. And only 12.1 percent of the respondent possesses low level knowledge category. Similar findings were reported by Aziz (2004) and Nahar (2000).

Women gain Knowledge about homestead farming activities mostly from her husband and somewhat from the parents. Major portion of the respondents were young to middle-aged housewives. They have gained knowledge about agriculture in course of time and through their experience. It was observed that the young housewives also illiterate women had poor knowledge about homestead farming activities.

4.3 Relationship between the Selected Socio-economic Characteristics of the Rural Women and Their Extent of Involvement in Homestead Farming

Pearson's Product Moment Coefficient of Correlation (r) was computed in order to explore the relationship between the selected socio-economic characteristics of the rural women and their extent of involvement in homestead farming. The coefficient of correlation (r) was used to test the null hypothesis was formulated as H_0 : There is no relationship between the selected socio-economic characteristics of the rural women and their extent of involvement in homestead farming. The relationship between the dependent and independent variables has been presented in Table 4.5. However, the correlation matrix of dependent and independent variables for the respondents have been presented in Appendix - B.

Table 4.12 Correlation Co-efficient between the selected socio-economic characteristics of the rural women and their involvement in homestead farming

(N = 107)

Dependent variable	Independent variables	Computed 'r' value
Involvement in homestead farming	Age	0.339**
	Education	0.419**
	Family size	0.072 ^{NS}
	Farm size	0.376**
	Annual family income.	0.495**
	Cosmopolitaness	0.497**
	Organizational participation	0.042 ^{NS}
	Extension contact	0.225*
	Knowledge on homestead	0.247 **

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

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

NS- Non significant

4.3.1 Relationship between age and involvement in homestead farming

The correlation coefficient between age of the rural women and their extent of involvement in homestead farming was 0.339** with 105df as shown in Table 4.4. Based on the computed 'r' value the relationship between age and extent of their involvement in homestead farming was significant. Hence, the concerned null hypothesis could not be accepted.

Akteruzzaman (2006), Khatun (2004), Aziz (2004), Islam (2003), and Nahar (2000) found similar findings in their respective studies. Thus it could be said that age of the respondents play a significant role on their extent of involvement in homestead farming. It was observed that with the increase of age, women became more aware about their family income and their family maintenance. Hence their involvement in farming activities is increased. Even many of them were worried about their income. The research work found that the old-aged housewives are well experienced and more acquainted with the farming activities. Particularly that the younger housewives are not willing enough to perform in homestead farming and they also possess very low farming knowledge and capability to perform farming activities. The research work found that middle-aged and old women (57 percent of the respondents) are more active, energetic and enthusiastic in performing homestead farming activities.

4.3.2 Relationship between education and involvement in homestead farming

The correlation coefficient between education of the rural women and their extent of involvement in homestead farming was 0.419** with 105df as shown in Table 4.4. Based on the computed 'r' value the relationship between education of the rural women and extent of involvement in homestead farming was positively significant. Hence, the concerned null hypothesis was rejected. That means increased education of the rural women led to better involvement in homestead farming. Khan (2004), Akter (2000), Nahar (2000) and Akanda (1994) found similar findings in their respective studies where as Halim(2008), Nahar(1996) found dissimilarities.

Thus the present study, education of the rural women played significant role on their extent of involvement in homestead farming. To be involved in homestead farming activities the participants require some background knowledge about how to perform these farming activities in sustainable way. Hence, the findings confirm that involvement in homestead farming was increased with increase in education.

4.3.3 Relationship between family size and involvement in homestead farming

The correlation coefficient between family size of the respondents and their extent of involvement in homestead farming was 0.072^{NS} with 105df as shown in Table 4.12. Based on the computed 'r' value the relationship between family size and extent of involvement in homestead farming was non-significant but followed a positive trend. Hence, the concerned null hypothesis could not be rejected.

Hasan (2006), Aktaruzzaman (2006), Aziz (2004), and Islam (2003) found similar findings in their respective studies. Thus it could be said that family size of the respondents did not play significant role on their extent of involvement in homestead farming. Because, increased family size of the respondents had to participate in different income generating activities irrespective of their family size to meet the essential needs of their family members.



4.3.4 Relationship between farm size and involvement in homestead farming

The correlation coefficient between farm size of the respondents and their extent of involvement in homestead farming was 0.376** with 105df as shown in Table 4.4. Based on the computed 'r' value the relationship between farm size of the respondents and extent of involvement in homestead farming was significant. Hence, the concerned null hypothesis could be rejected

Aziz (2004), Khatun (2004) and Nahar (2000), Hossain (2007) found similar findings in their respective studies. Thus it could be said that farm size of the respondents had played significant role on their extent of involvement in homestead farming. Because, women having large farm size were normally involvement in homestead farming.

4.3.5 Relationship between annual family income and involvement in homestead Farming

The correlation coefficient between annual family income of the respondents and their extent of involvement in homestead farming was 0.495** with 105df as shown in Table 4.12. Based on the computed 'r' value the relationship between annual family income and extent of involvement in homestead farming was significant. Hence, the concerned null hypothesis could be rejected.

Aktaruzzaman (2006), Amin (2004), and Khan (2004) found similar findings in their respective studies. Thus it could be said that annual family income of the respondents played significant role on concluded their extent of involvement in homestead farming. This might be that women having higher family income are interested in involvement in homestead farming. They took part in diversified farming activities as an income source for earning more.

4.3.6 Relationship between cosmopolitaness and involvement in homestead Farming

The correlation coefficient between cosmopolitaness of the respondents and their extent of involvement in homestead farming was 0.497** with 105df as shown in Table 4.12. Based on the computed 'r' value the relationship between

cosmopolitanism and extent of involvement in homestead farming was positively significant. Hence, the concerned null hypothesis was rejected.

Akter (2000) and Nahar (2000) found similar findings in his respective study. Thus it could be concluded that cosmopolitanism of the rural women played significant role on their extent of involvement in homestead farming activities. The findings indicate that the extent of involvement in homestead farming of the rural women increase with increase of their cosmopolitanism. Without going outside of the locality, the rural people do not get information, training and input for conducting agricultural activities. Because, increased communication of the respondents had inspired function to participate in different income generating activities irrespective of their family size to meet the essential needs of their family members. And all the training are not exclusively facilitate for the farming approach only. The NGO workers and trainers also influenced them for different types of working approach.

4.3.7 Relationship between extension Contact and involvement in homestead farming

The correlation coefficient between extension contact of the rural women and their extent of involvement in homestead farming was 0.225* with 105df as shown in Table 4.4. Based on the computed 'r' value the relationship between access to extension media contact and extent of involvement in homestead farming was positively significant. Hence, the concerned null hypothesis was rejected. Therefore, it can be told that better contact to agricultural information sources of the rural women played significant role in their extent of participation in homestead farming. Aziz (2004), Islam (2003), Nahar (2000) and Nahar (1996) found similar findings in their respective studies.

The findings reveal that extension media contact had immense influence on the involvement of rural women in homestead farming activities. Of course that contact with extension agents and other extension motivation changes attitude of the 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.

4.3.8 Relationship between organizational participation and involvement in homestead farming

The correlation coefficient between Organizational participation of the respondents and their extent of involvement in homestead farming was 0.042^{NS} with 105df as shown in Table 4.12. Based on the computed 'r' values the relationship between and extent of involvement in homestead farming was non-significant but followed a positive trend. Hence, the concerned null hypothesis could not be rejected.

Hasan (2006), Aktaruzzaman (2006), Aziz (2004), and Islam (2003) found similar findings in their respective studies. Thus it could be said that respondents' organizational participation had played significant role on their extent of involvement in homestead farming.

4.3.9 Relationship between knowledge about homestead farming and involvement in homestead farming

The correlation coefficient between knowledge about homestead farming and extent of involvement in homestead farming was 0.247 ** a with 105df s shown in Table 4.12. Based on the computed 'r' value the relationship between knowledge about homestead farming of the rural women and extent of involvement in homestead farming was positively significant. Hence, the concerned null hypothesis was rejected. That means increased knowledge about homestead farming of the rural women led to better involvement in homestead farming. Aziz (2004), Ali (1995) and Akanda (1994) found similar relationships in their respective studies.

Thus in the present study, knowledge about homestead farming of the rural women played significant role on their extent of involvement in homestead farming.. To involvement in homestead farming activities the participants require some background knowledge about homestead agriculture for better performance. Hence, the findings confirm that involvement in homestead farming by the rural women increased with their increase in knowledge on homestead farming.

4.4 Problems Faced by the Rural Women in Involving Homestead Farming Activities

Among various problems, major 10 problems were selected to measure the extent of problems faced by the rural women in involving homestead farming activities. Rural women of the study area mentioned the problems faced in involving homestead farming have been presented in Table 4.13 with rank in descending order.

Table 4.13 Rank order of the problems faced by the rural women according to their obtained score

Problems	Obtained score	Rank order
Marketing problem	195	1
Disease of poultry	174	2
High price of agricultural inputs (fertilizer, pesticide, etc.)	166	3
Lack of knowledge about improved production technologies of vegetable	157	4
Disease of cattle	140	5
Knowledge about post harvest technology	136	6
Lack of quality seed	95	7
Lack of training facility	92	8
Lack of credit facilities	78	9
Lack of agricultural information	59	10

In most cases, the root based farmers did not get the proper value of their marketed agricultural products. Sometimes unavailability of transport vehicles caused raw materials disflavourished and perished. Ultimately farmers lose proper market price of their agricultural products. In village market agricultural products also sold in very cheap. So, marketing problem was the top most problem faced by the respondents in the study area.

Rural women are involved in rearing the poultry birds and it has been one of their sources of income in most cases. But due to lack of knowledge about poultry disease, most of the rural women can not provide proper treatment of their diseased poultry birds. Besides, they do not know how to rear poultry birds in scientific method. For this reason, disease of poultry is the second ranked problem.

In the study area, most of the respondents were marginal to small farmer, so lack of high price of agricultural inputs (Fertilizer, pesticide, etc.) was also a major problem observed in the locale of study and placed third in rank order.

Lack of knowledge about improved production technologies of vegetable ranked fourth in the study area. Disease of cattle is also a major problem due to Lack of vaccination facilities for goats and cattle ranked fifth problem in the study area, because the rural women deprived of both government and non-government support.

Extension workers are less active and also the rural women are not interested to contact with extension worker especially male extension worker. So lack of contact with extension workers was raising the lack of training facility. Improper knowledge on post harvest technology also was the problem concern with this matter. Due to poor extension media contact, they got inadequate information about agricultural homestead farming. Due to natural disaster, crops are damaged and they can not preserve good seeds for the next season. Lack of credit facilities was the minor problem because some NGOs (BRAC, ASA etc) are working actively in the study area.

Chapter 5

Summary of Findings, Conclusions and Recommendations



CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This Chapter presents summary of findings, conclusions and recommendations in the following sections

5.1 Summary of Findings

5.1.1 Involvement of Rural Women in Homestead Farming

The computed score of the respondents for overall involvement of rural women in homestead farming ranged from 15 to 41 against the possible range of 0 to 48, having an average of 28.71 and standard deviation of 5.09. The highest proportion (43.0 percent) of them had medium involvement compared to 37.38 percent having low involvement and the rest 19.6 percent had high involvement in the homestead farming activities.

According to overall assigned score, the highest number of the respondents was found to have involvement in poultry raising activities. So, it ranked first and then vegetable cultivation secured the second position. Good number of women also had involvement in goat and cattle rearing so it possessed the third rank. Involvement in post-harvest activities was the last position in reflect of involvement. The overall assigned score of poultry rearing, homestead vegetable cultivation goat and cattle rearing and post-harvest activities were 85.04, 73.83, 60.74, and 56.07, respectively.

5.1.2 Selected socio-economic characteristics of the rural women

Data obtained regarding characteristics of the rural women show that nearly half (43 percent) of the respondents were young housewives and 40 percent of them was middle-aged and only 16.8 percent was old aged. Out of 107 respondents, 57.9 percent had primary level education, 4.7 percent were illiterate and 27.1 percent could sign their name only. Majority of the respondents had medium size family (64.5 percent) and 5.6 percent had large and 29.9 percent were found to have small sized family. In case of farm size, majority of the respondents (56.1 percent) had small farm size while 12.1percent and 31.8 percent of them had marginal and medium farm size respectively.

More than half (56.1 percent) of the respondents had low annual family income and 42.1 percent of the families were of medium income category and 1.9 percent were found in high income category. In case of cosmopolitaness, 25.2 percent of the rural women had low cosmopolitaness whereas 30.8 percent of the rural women had low and majority (54.2 percent) had medium extension contact. In case of organizational participation 51.4 percent of the rural women had low organizational participation. About 42.1 percent compared to 45.8 percent high and 12.1 percent low knowledge on homestead farming of the respondents had medium knowledge on homestead farming.

5.1.3 Relationship between the selected characteristics of the rural women and their extent of involvement in the homestead farming

In order to determine the relationship between the selected characteristics of the rural women and their extent of involvement in the homestead farming activities, Pearson's Product Moment Correlation Coefficient (r) was calculated. Among nine characteristics of the rural women, respondents age, education, farm size, annual family income, cosmopolitaness, extension contact and knowledge about homestead farming showed significant and positive relationship with their extent of involvement in the homestead farming activities. While the rest of the characteristics viz. family size and organizational participation had insignificant relationship with their extent of involvement in homestead farming and showed a positive trend.

5.1.4 Problems faced by the rural women involving in the homestead farming

Among the ten selected problems 'marketing problem' was ranked first followed by 'disease of poultry' and 'high price of agricultural inputs', while 'lack of agricultural information' had the last position in order of ranking.

5.2 Conclusions

Findings of the present study and the logical interpretation of other relevant facts prompted the researcher to draw the following conclusions:

1. Most of the rural women had low to moderate involvement in homestead farming activities. The average computed value of the rural women involvement score was 28.71. Thus, it could be concluded that there is further scope to increase involvement in homestead farming activities. Among four homestead agricultural activities, they had lowest involvement in post-harvest activities. Thus, there is ample scope for increasing involvement in the poorly ranked activities.
2. Most of the rural women were educated up to primary level. Findings indicated that education had significant and positive relationship with their extent of involvement in the homestead farming activities. Therefore, it might be concluded that there is further scope to improve the level of education of the respondents to increase the extent of involvement in the homestead farming activities.
3. Findings revealed that majority of the respondents had marginal to small land holdings. Farm size had significant and positive relationship with their extent of involvement in the homestead farming activities. So, there is an urgent need for taking initiatives by the GOs and NGOs to create opportunities so that their farm size and production are boost up and thus income is also increased.
4. Knowledge about homestead farming, cosmopolitaness and extension contact had significant and positive relationship with their extent of involvement of the rural women in homestead agricultural activities. It implies that these personal and social characteristics of the rural women could have reflective influence in their involvement in homestead farming. These characteristics are supportive to a great extent in education, knowledge about improved homestead farming practice and their income.
5. Rural women faced a number of problems for involvement in performing homestead farming activities. Apart from few problems, majority of these

were created for lack of rural women's proper knowledge and experience and some other due to poor government policy. As those problems are more or less fell under jurisdiction of different GOs and NGOs, these organizations could play a significant role by helping rural women for effective involvement in homestead farming activities in the study area through more effective delivery of services.

5.3 Recommendations

5.3.1 Recommendations for Policy Implication

On the basis of findings and conclusions of the study, the following recommendations were made for policy implication:

1. Educational facilities should be increased for the rural women through adult learning program assisting by government as well as NGO's effort..
2. Various inputs for involving in farming activities such as improved seed, fertilizers , pesticides, vaccines and feeds for poultry, livestock etc. should be made available and accessible particularly to the poor people with low cost.
3. An appropriate extension programme is needed depending on the farm size to increase skill of rural women in different productive activities and to improve their life style.
4. The DAE (Department of Agricultural Extension) and other NGOs have to motivate rural women's mentality towards new technology and give them financial support for better performance in homestead farming activities.
5. Due to existing social norms and religious values, rural women are reluctant in going to contact male extension workers. So, more female extension workers should be recruited for carrying more agricultural information to the rural women in future.

6. More extension development programmes should be designed and implemented by DAE (Department of Agricultural Extension) considering homestead as production unit and rural women as the key operator.

5.3.2 Recommendations for Further Research

The researcher conducted a small piece of study which could not make available all information for proper understanding of involvement in homestead farming activities by the rural women. Therefore, the following recommendations were made for further research works:

1. The present study was carried out in a small area of a particular district. Similar studies should be conducted in other parts of the country to get a clear picture of the whole country which will be helpful for effective policy formulation.
2. The present study was undertaken to explore relationships of nine selected socio-economic characteristics of the rural women with their extent of involvement in homestead farming as dependent variable. Therefore, it could be recommended that further studies should be designed considering other agricultural and non-agricultural activities and including other characteristics of rural women that might affect their of involvement in homestead farming .
3. In the present study, only involvement in some of homestead farming activities was studied, but production potential of those activities was not considered. There might be a relationship between productivity of particular activity with the extent of involvement that should be considered in further studies.
4. For measuring of involvement in different agricultural activities like vegetable cultivation, post-harvest activities, poultry raising and goat and cattle rearing only three to five activities were considered for each agricultural activity. So, in future, more activities should be considered to gather more information for measuring of involvement in agricultural activities in a more comprehensive and holistic manner.



References

REFERENCES

- Abdullah, T. 1986. Homestead Agricultural Production in Bangladesh. *ADAB News*, 13(5):1-7.
- Ahmed, H. 1977. Use of Information Sources by the Farmers in the Adoption of Improved Farm Practices in Jute Cultivation. *M.S. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Ajayi, S. 1995. Gender Roles in Subsistence Crop Production in Kwara State, Nigeria. Department of Agricultural Extension and Rural Development, University of Ilorin, Nigeria.
- Akanda, W. 1994. Participation of Rural Women in Different Farm and Non-farm Activities in Two Selected Villages of Mymensingh District. *MS. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Aktaruzzaman, M. 2006. Functional Participation of Landless Women in Income Generating Activities (IGAs) under SAIP of DAE. *MS. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Akter, M.S. 2000. Participation of Women Clientele in Development Activities of RDRS Project. *M.S. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.

- Alam, M.S. 2004. Participation of Farmers in Selected Modern Agricultural Activities in Two Villages of Jamalpur District. *M.S. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Ali, S.H.J.1995. Attitude of Rural Women of Bangladesh Agricultural University Extension Center BAUEC towards Working Group. *MS. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Amin, M.R. 2004. Participation of Rural Women in Selected Aquaculture Activities. *M.S. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Anonymous, 1978. Summary Report of the Land Occupancy Survey of Bangladesh. Bangladesh Bureau of statistics, Ministry of Planning, Government of the People's Republic of Bangladesh, Dhaka.
- Aziz, A. 2004. Participation in Homestead Agriculture by the Tribal Women in Dinajpur District. *M.S. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Childe, L. 1971. *Origin of Agriculture*. In: Prehistoric Agriculture. Garden City, New York: National History Press.
- DAE. 1999. *Agricultural Extension Manual*. Department of Agricultural Extension, Ministry of Agriculture, Government of the People's Republic of Bangladesh, Dhaka.
- Dixon 1982. Involvement of women in Household Activities. <http://www.womeninagriculture.google.com>.

- Farouq, A.1980. *Time Use of Rural Women: A Six Village Survey in Bangladesh*. Bureau of Economic Research, Dhaka.
- Goode, C.V. 1945. *Dictionary of Education*. New York: Mc Gro Hill Company, Inc.
- Goode, W.J. and P. K. Hatt, 1952. *Methods of Social Research*. New York: McGraw Hill Book Company, Inc.
- Gopalappa, D.V. 1997. *Diversified Agriculture and the Rural Women*. Institute for Social and Economic Change, Bangalore, India.
- Halim. A.(1991). *Study on Sectoral Contribution at Income Generation from Homestead Area. An Evaluation Report on BAU-FSRDP Activities*. Farming Systems Research and Development Programme, Bangladesh Agricultural University, Mymensingh.
- Halim, A. and F.E. McCathy 1985. *Women Labour in Rural Bangladesh: A Socio-Economic Analysis*. Graduate Training Institute, Bangladesh Agricultural University, Mymensingh.
- Hasan, K. 2006. *Participation in Farming Activities by Conventional and Organic Farmers*. MS. (Ag. Ext. Ed.) Thesis, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- ILO (International Labour Organization). 1979. *Report on Women's actual economic activities*. <http://www.womeninagriculture.google.com>

- Islam, M.Z. 2003. Participation of Rural Women in Goat Rearing in Selected Area under Manikgonj District. *MS. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Islam, M.S., A.K.M.H. Bhuiyan and A.M.A. Karim, 1996. Women participation in agricultural income generating activities. *Journal of the Asiatic Society of Bangladesh science*.
- Kabir, K.A. Abed and M. Ch M 1977. Rural Women in Bangladesh: Exploding somemyths. Role of Women in Socio-economic Development in Bangladesh Proceedings of a Seminar, Bangladesh Economic Association, Dhaka.
- Karim, M.M. 1993. Assessment of Farmers' Agricultural Knowledge in Sugarcane Cultivation. *MS. (Ag. Ext. Ed) Thesis*, Dept. of Extension Education. IPSA, Salna, Gazipur.
- Karim, N.A. and M.M.B. Wee, 1996. Role of Women in Vegetable agribusiness. Vegetable Crops Agribusiness: Proceedings of a Workshop held at BARC, Farmgate, Dhaka, Bangladesh, during 2-4 May, Publication no. 97-457.
- Khan, M. A. S. 2004. Farmers' Participation in Farm and Community Level Activities in Shailokupa Upazila under Jhenaidah District. *MS. (Ag. Ext. Ed) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Khatun, F. 2004. Participation of Rural Women in Homestead Management Activities *MS. (Ag. Ext. Ed) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.

- Mahbub, A and Halim, A. 2008. "Women in Homestead in The South Asian Perspective" [http://blog. Green Facts: Facts on Health and Environment. MD Publications PVT LTD. "MD House", 11, Darya Ganj, NewDelhi-110002.](http://blog.GreenFacts.org) Cable: INDOLOGY. Fax-91-11-3275542, 91-11-6475450.
- Nahar, K. 2000. Participation of Rural Women in Homestead Agriculture in a Selected Area of Gazipur District. *MS. (Ag. Ext. Ed.) Thesis*, Dept of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Nahar, N. 2008. Relationship of Selected Characteristics of the Farm Women with Usefulness of Agricultural Radio Programme and Homestead Farming Knowledge. *MS. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Nazneen, T. 2004. Role of Rural Women in Utilization of Endogenous Farming Resources towards Sustainable Farm Management. *M S. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Ninaz, V.K. 1986. *Food Production for Home Consumption: Nature and Function of Garden in Household Economy*. International Potato Centre, Lima, Peru.
- Parveen, S. 1993. Attitude of the Rural Women towards Homestead Agricultural Production. *MS. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.
- Rosalina, T.V. 2002. *Rural ' Women: Crucial Partners in the Fight against Hunger and Poverty*. FAO, Rome, Italy.

- Sattar, E.1979. Demographic Feature of Bangladesh with a Reference to the Women and Children in Situation of Women in Bangladesh. Women for Women Research and Study Groups, Dhaka University Press, Dhaka.
- Sohrab, H. 2007. Participation of Rural Women Homestead Agriculture . *M.S. (Ag. Ext. Ed.) Thesis*, Dept.of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh. Bangladesh .
- Verma, T., V. Jain and S. Devi, 1988. A Study on Gain in Knowledge and Change in Attitude through Training on Improved Home Making Tasks. *Indian Journal Extension Education. Vol. XXV (1 &2): 75.*
- Yeasmin, F. 2002. Participation of Women in Rice Production Activities and Their Training Needs in Some Selected Villages of BAUEC under Sadar Upazila of Mymensingh District. *M.S. (Ag. Ext. Ed.) Thesis*, Dept. of Agricultural Extension Education, Bangladesh Agricultural University, Mymensingh, Bangladesh.



Appendices



Appendix-A
 (*English version of the Interview Schedule*)
 Department of Agricultural Extension & Information System
 Sher-e-Bangla Agricultural University, Dhaka

An interview schedule
on
“Involvement of Rural Women in Homestead Farming”

Sample No. :

Please answer the following questions.

1. Age: Please mention your age..... years.

2. Education :

Please mention your level of education.

- a. I cannot read or write.
- b. I can sign only
- c. I have studied up to class (.....).

3. Family size :

Please mention the total number of your family members.....

4. Farm size: Please indicate the area of land in your possession

Sl. No.	Type of Land use	Land area	
		Local Unit	Hectare
01.	Homestead area		
02.	Land under own cultivation		
03.	Land taken from others on lease		
04.	Land given to other on share cropping		
05.	Land taken from others on share cropping		

5. Annual Family income: Please mention your last year family income

Sl.No	Source of income	Total Tk
01.	Agriculture	
02.	Occupation	
03.	Business	
04.	Others (if any)	
	Total	



6. Cosmopolitanness : Please mention the places of visits out side of your village.

Sl. No	Places of visit	Extent of visit			
		Frequently	Occasionally	Rarely	Not at all
01.	Others village(times/month)	6 or more	4-5	1-3	0
02.	Upazila headquarters (times /month)	6 or more	4-5	1-3	0
03.	Others Upazila town (times/month)	6 or more	4-5	1-3	0
04.	Own district town (times /year)	6 or more	4-5	1-3	0
05.	Other district town(times/year)	5 or more	3-4	1-2	0
06.	Capital City (times /Year)	4 or more	2-3	1	0

7. Extension contact :Please indicate your extent of contact with the following media.

Sl. No	Contact media	Extent of contact			
		Regularly	Occasionally	Rarely	Not at all
a) Personal contact					
01.	Sub-Assistant Agriculture Officer (SAAO) (times/year)	6 or more	4-5	1-3	0
02.	Upazila Agriculture Officer (UAO) (times/year)	4 or more	2-3	1	0
03.	other Extension Officers (Livestock, Fisheries, Field worker) (times/year)	4 or more	2-3	1	0
04.	NGO worker (times/month)	5 or more	3-4	1-2	0
05.	Agricultural leader (times/month)	5 or more	3-4	1-2	0
b) Group contact					
06.	Group discussion (times/6 month)	5 or more	3-4	1-2	0
07.	Field day (times/year)	3 or more	2	1	0
08.	Result demonstration (times/year)	2 or more	1	1	0
09.	Method demonstration (times/year)	2 or more	1	1	0
10.	Participation in agricultural training course (times/life)	4 or more	2-3	1	0
c) Mass contact					
11.	Newspaper (times/week)	5 or more	3-4	1-2	0
12.	Radio (times/week)	5 or more	3-4	1-2	0
13.	Television (times/month)	5 or more	3-4	1-2	0
14.	Farm publication (eg. Leaflet, poster, folder etc.)	5 or more	3-4	1-2	0

8. Organizational participation: Please mention the nature and duration of your participation (past and/or present) with the following organization.

Sl. No	Name of the organization	Not involved	nature of participation (years)			
			Regularly	Occasionally	Rarely	Not at all
01.	Religious Committee					
02.	School Committee					
03.	Mohila samabay samity					
04.	Mass literacy samity					
05.	Local samity of NGO's (BRAC, ASHA)					
06.	Bazar Committee					
07.	Others (if any)					

9. Knowledge about homestead agriculture: Please answer the following questions.

Sl. No	Questions	Full marks	Marks obtained
1.	Name four winter vegetables.		
2.	In which part of the homestead area used for vegetable cultivation ?		
3.	Mention the optimum time for planting tomato & brinjal.		
4.	Mention two beneficial & two harmful insects in vegetable cultivation.		
6.	Mention two fertilizers used in vegetable cultivation.		
7.	Name two containers used for preserving rice seeds.		
8.	What do you mean by grading?		
9.	Name two improved poultry bird. Name two epidemic diseases of poultry.		
10.	Name two improved poultry feed.		
11.	Mention two improved breed of cattle.		
12.	Name two diseases of cattle		

10. Involvement of rural women in homestead farming: Please indicate your degree for involvement in different homestead farming activities.

Homestead Activities Farming	Degree of involvement			
	Frequently	Occasionally	Rarely	Not at all
A. Vegetable cultivation				
i. Land preparation				
ii. Sowing/transplanting				
iii. Weeding				
iv. Harvesting				
B. Post-harvest activities				
i. Threshing (Rice, other crops)				
ii. Winnowing (Rice, other crops)				
iii. Drying (Rice, other crops)				
iv. Grading (Potato, other crops)				
v. Storing (Rice, other crops)				
C. Poultry raising				
i. Collection of hen				
ii. Cleaning the poultry house				
iii. Feeding				
D. Goat or cattle rearing				
i. Cleaning the house/cattle				
ii. Nursing during labor				
iii. Feeding				
iv. Vaccination				

(a) Frequency of performance

0 = Not at all (Does not perform at all)

1 = Rarely (Performs less than half of the requirement)

2 = Sometimes (Performs more than half of the requirement)

3 = Regularly / Frequently (Performs completely as required)

11. Problems: Please mention the problems that you usually face in participation various homestead agricultural activities.

Sl. No	Problems	Extent of Problems			
		Not at all	Low	Medium	High
01.	Lack of good quality seeds				
02.	Lack of knowledge about improved production technology of vegetable cultivation.				
03.	High price of agricultural inputs (fertilizer, pesticide, etc.)				
04.	Marketing problems of vegetables				
05.	Improper knowledge on post harvest technology				
06.	Diseases of poultry				
07.	Diseases of cattle & goat.				
08.	Lack of necessary agricultural information				
09.	Lack of training facilities				
10.	Unavailability of sufficient credit/ Lack of credit facilities				

Thank you very much for your kind cooperation.

.....
Signature of the interviewer

Date

Appendix-B

Correlation matrix of dependent and independent variables (N= 107)

	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	Y
X ₁	1									
X ₂	.111	1								
X ₃	.025	-.056	1							
X ₄	.134	.051	.148	1						
X ₅	-.099	.110	.031	.079	1					
X ₆	.235*	-.050	.066	.225*	.191*	1				
X ₇	.241*	.367**	.013	.227*	-.054	.217*	1			
X ₈	-.033	.011	-.039	.095	-.041	-.011	.036	1		
X ₉	.032	.002	.091	.170	.208*	.195*	.045	-.033	1	
Y	.339**	.419**	.072 ^{NS}	.376**	.225*	.495**	.497**	.042 ^{NS}	.247**	1

** Correlation is significant at the 0.01 level with 105 df

* Correlation is significant at the 0.05 level with 105 df

NS – Non significant

X₁ = Age

X₂ = Education

X₃ = Family size

X₄ = Farm size

X₅ = Extension media contact

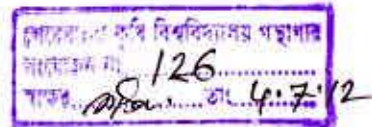
X₆ = Annual income

X₇ = Cosmopolitaness

X₈ = Organizational participation

X₉ = Knowledge about homestead farming

Y = Extent of involvement by the rural women



Sher-e-Bangla Agricultural University
Library

Accession No. 37566

Sign: *Amara* Date: 28/07/14