FARMERS PARTICIPATION IN FARM AND COMMUNITY LEVEL ACTIVITIES FOR THEIR SOCIOECONOMIC UPLIFTMENT

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MASTER OF SCIENCE (MS)
IN
AGRICULTURAL EXTENSION AND RURAL DEVELOPMENT

BANGABANDHU SHEIKH MUJIBUR RAHMAN AGRICULTURAL UNIVERSITY
SALNA, GAZIPUR

SUMMER, 2005

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A Thesis
Submitted
To
Bangabandhu Sheikh Mujibur Rahman Agricultural University in partial fulfillment of the requirement for the degree of Master of Science (MS)

Department of Agricultural Extension and Rural Development

Summer, 2005

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DEDICATED
TO
MY BELOVED PARENTS

ACKNOWLEDGEMENT

All praises and regards to Almighty Allah who enabled the author to complete this thesis leading to MS degree. The author is highly pleased to express his sincere appreciation, heartiest honor and thanks to his Major Professor and Chairman of the Advisory Committee, Dr. Md. Enamul Haque, Associate Professor and Head, Department of Agricultural Extension and Rural Development, Bangabandhu Skeikh Mujibur Rahman Agricultural University, Gazipur, for his dynamic, painstaking guidance, compassionate help and inspiration to all phases of the study.

The author feels proud to express his heartful honour, sincere appreciation, profound gratitude and immense indebtedness to the respected members of his Advisory Committee, Professor Md. Amir Hossain, Professor, GTI, Mymensingh and Dr. A. J. M. Sirajul Karim, Professor Department of Soil Science, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, for their advice, constructive criticism and valuable suggestions in conducting the research work and preparing this thesis manuscript.

The author sincerely expresses his cordial thanks to Mr. Samir, Additional Agricultural Officer, Mr. Abul Kalam, Block Supervisor and Mr. Ripon NGO representative of the study area for rendering co-operation in field work. Special thanks are also extended to the farmers who provided needed information during long interview with the author.

The author also expresses his grateful thanks to my friends and other well wishers who helped him sincerely during preparation of thesis.

Finally, The author offers his sincerest thanks and gratitude to his beloved parents, brother, sister, sister in law, Md. Ehsanul Haque, Aunt Mrs. Laila Malek for their blessings and inspiration during the courses of MS programme.

Summer, 2005. The Author

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ABSTRACT

The major purposes of the study were to determine participation of farmers in farm and community level activities and to explore the relationship between farmers characteristics with their participation.

The study was conducted in four selected villages of Kathalia union under Kathalia upazila of Jhalakathi district. The populations of the study were 798 farmers from which data were collected from a sample of 80 farmers selected by random sampling method. Using interview schedule during March 5th to March 25th 2005 collected data. Among seven farm and community level activities, farmers' participation was the highest for education (P1= 77.52) followed by health and sanitation (P1 =75.65). The lowest participation was observed in co-operation and savings (P1 =67.65). On the other hand P1 was high for housing (P1 =74.70), farm production (P1=71.94), among five levels of programme activities and low for income generating activities (P1=70.65), irrigation and drainage (P1=70.55), among five levels of programme activities. At individual level, 46.3 percent farmers had medium level of participation, while 26.3 percent had low and 27.5 percent had high participation in farm and community level activities.

The correlation analyses indicate that among 10 personal traits studied education, farm size, extension media contact, cosmopoliteness, agricultural knowledge and organizational participation, of farmers had significant and positive relationship with farmers farm and community level participation, while age had a significant but negative relationship. Family size, family income and time availability of farmers had no significant relationship with their farm and community level participation.

CHAPTER I

INTRODUCTION

1.1 General Introduction

Bangladesh is the most densely populated country in the world. The total population of the country is 123.15 million. Out of them about 80 percent are farmers. About one-third of Gross Domestic Product (GDP) comes from agriculture (Ahmed, 2000) and two-third of labor force (68.5 percent) are engaged in agriculture (BBS, 1999).

Bangladesh is an agro-based country. Her economy mostly depends on agriculture Total cultivable lands are decreasing day by day. There is no chance to increase cultivable land. Most of the village members are landless. No agricultural development is possible without farmer's active participation in agro-based development activities. Farmers can play a vital role if they increase their participation in agricultural production and community development related activities.

Despite farmer's massive poverty, there have been very few special types of extension programme undertaken in the past by the Department of Agricultural Extension (DAE), Department of Livestock Services (DLS) and Department of Fisheries (DOF) for upliftment of farmers and their agriculture. However, recently some Government Organizations and Non-Government Organizations especially, the World Vision, PROSHIKA, CARITAS are trying to motivate farmers in farm and community level activities. The World Vision imparts training to them on winter and summer vegetable cultivation, poultry rearing and other field crops. But this program is mostly intermittent and inadequate and not based on planning. However, there has been some tremendous concern as how the farmers are going with their farm and

community level participation and what problems they are facing now, to carry on those activities.

In Bangladesh, farmers typically do more work than other. The farmers are potential producers of agricultural products and take part in intensive farming and community based production. They may contribute to the national economy to increase the GDP coming from agriculture. Farm and community level activities play a major role in GDP and employment generation.

The nature and extent of farmers participation varies widely from region to region and in different societies. It is also susceptable to change due to variation of individual characteristics. Effective participation on any issue specially in farming activities requires some amount of knowledge about it. Farmers in rural areas usually possess some extraordinary qualification. It is very much essential to use their hidden talent in the field of participation on farming activities. An understanding of the participation of farmers in farm and community level activities and its relationship with their various characteristics will be greatly helpful for problem identifications, objectives formulation, planning execution and evaluation of programs aimed at helping the farmers to adopt farm and community level activities. The present study was therefore undertaken to determine farmer's participation in farm and community level activities.

1.2 Statement of the Problem

In view of the need for having an understanding of the participation of farmers in farm and community level activities for socio-economic development and planing of farmers development program, an attempt will be made to find out the answers to the following querries:

a. What is the existing participation of the farmers in farm and community level activities related to education, health and sanitation, housing, farm production, income generating activity, irrigation and drainage, cooperation and savings?

b. What are the farmer's characteristics that influence them in participating in their respective farm and community level?

c. To what extent there are relationships between farmers' characteristics with their participation and farm in community level activities?

The above queries obviously indicate the need for conducting a research study entitled "Farmer's Participation in Farm and Community Level Activities for Their Socioeconomic Upliftment in Kathalia Upazila under Jhalakathi District".

1.3. Justification of the Study

The present study was set out to explore the level of participation of the farmers dealing with farm and community level activities in Kathalia Union of Kathalia Upazila under Jhalakathi district. For any economic activity there are obviously various scope and limitations of participation. This study had a modest attempt to determine farm and community level participation of the farmers. The findings of the study may be helpful for the Government, policy makers and non-government organizations to design their farm and community level program which might be helpful for greater participation of the farmers of the country. This study may also work as a basis to take up further studies on the farmers.

1.4. Specific Objectives of the Study

In order to accomplish the purpose of the present study, the following specific objectives were formulated.

1. To determine and describe selected characteristics of the farmers. These include: age, education, agricultural knowledge, farm size, family annual income, family size, extension media contact, cosmopolitans, organizational participation and time availability.
2. To ascertain the extent of participation of farmers in selected farm and community level activities.
3. To explore relationship between the selected characteristics of the farmers and their participation in farm and community level activities.

1.5. Hypothesis of the Study

Hypothesis is a proposition or principle which is assumed in order to draw its logical or empirical consequences, and by this method to test its accord with facts which are known or may be determined (Roy and Mondol, 1999). A null hypothesis states that there are no relationships between the concerned variables. If null hypothesis is rejected on the basis of statistical test, it is concluded that there is a relationship between the concerned variables. However, the following null hypothesis was tested to explore relationship of the selected characteristics of farmers and their participation in farm and community level activities.

- There is no relationship between age and participation.
- There is no relationship between education and participation.
- There is no relationship between family size and participation.
- There is no relationship between farm size and participation.
- There is no relationship between family income and participation.

- There is no relationship between extension media contact and participation.
- There is no relationship between cosmopoliteness and participation.
- There is no relationship between agricultural knowledge and participation.
- There is no relationship between organizational participation and participation.
- There is no relationship between time availability and participation.

1.6. Assumptions

"An assumption is the supposition that an apparent fact or principle is true in the light of available evidence" (Goode and Hatt, 1952). During formulation of the present study, the researcher had the following assumptions in his mind.

1. The respondent farmers were capable for furnishing proper responses to the questions contained in the interview schedule.
2. The responses furnished the by the respondent farmers were valid and reliable.
3. Information furnished by the respondent farmers included in the sample were the representative opinion of the whole population of the study area.
4. The researcher who acted as interviewer was well adjusted to the social environment of the study area. Hence, the data collected by him from the respondents were free from bias.
5. The nature of participation activities gave a representative feature in the context of other areas of Bangladesh.

1.7. Scope and Limitation of the Study

The study was undertaken in order to have an understanding on the extent of participation of farmers in farm and community level activities and their relationships with the selected characteristics. However, in order to make the study meaningful and manageable from the point of view of the researcher it was necessary to impose certain restrictions as follows:

1. The study was confined to some selected areas i.e; Hetalbunia, Lebubunia, Jaikhali and Amorbunia villages of Kathalia Upazila under Jhalakathi district.
2. Characteristics of the farmers were many and varied. But only ten characteristics were selected for investigation in this study.
3. There are many dimensions and aspects that could be undertaken in the study related to farm and community level participation activities, but taking part its selected activities were taken for measuring extent of participation.
4. For information about the study, the researcher depended on data as furnished by the selected respondents in the sample.
5. Conceptually, extent of participation of the farmers was determined from the respondents' opinion collected through certain statements, which are required for accomplishing the particular activity.

1.8. Definition of Key Terms

Certain terms used throughout the study are defined below for clarity of understanding.

Participation: Referred to taking part by an individual in diferent activities both physically and mentally.

Farmers: The persons who were involve in farming activities are called farmers. They participated in different farm and community level activities like crops, livestock, fisheries, personal hygienic, social obligation etc.

Farm: A household or units of holding organized for production of one or more enterprises like crops, vegetables, livestock, fish, trees etc, for the purpose of satisfying the farmer's livelihood. A farm could or could not be of commercial venture.

Community level: The community concept is much more important in relation to the functional interrelationships among its member than to the types of organism of which it is composed in individual control of resources.

Age: Referred to the period of time in years from his birth to the time of interview.

Education: Referred to the grade up to which he had schooling in educational institutions.

Family size: Referred to the total number of family members including the respondent himself, his wife, children and other dependents.

Respondent: Referred to the rural farmers being involved in different activities and included in the sample.

Farm size: Referred to the land on which farmers carried out his farming, business and the area being estimated in terms of full benefit to the farmers.

Family income: Family income of the respondent referred to the total earnings by him and the members of his family both from agriculture and other sources (business, services etc.) during a year. It was expressed in taka.

Extension media contact: Referred to an individual's exposure to contact with different communication media and personalities being used for dissemination of new technologies among farmers.

Cosmopoliteness: Referred to the degree to which a farmer's orientation was external to his particular social system.

Agricultural knowledge: It was the extent of basic understanding of the respondent in different aspects of agricultural subject matters. It included the basic understanding of the use of different agricultural activities i.e. crops, livestock and fisheries.

Organizational participation: Refers to the taking part in a formal or informal organization by a farmer as ordinary member, executive committee member or officer over a period of five years prior to data collection.

Time availability: The concept of time availability as used in the study referred to planned and unplanned distribution of time measured in number of hours/ person/day to perform various activities by the respondents including both productive and non-productive works.

Income generating activities: Referred to those activities through which a farmer earns directly by working, selling, marketing of different commodities and products. It could be both full time and part time activities.

Health: Health of a farmer was defined as the nature and extent of health facilities used by his family.

Sanitation: Sanitation of a farmer was defined as the nature and extent of sanitation facilities used by his family.

CHAPATER 2

REVIEW OF LITERATURE

The purpose of this chapter was to review the research works, which were related to this study. The study was mainly concerned with the assessment of farm and community level participation of farmers and exploring relationship between 10 of their selected characteristics and participation. Pertinent literature reviewed in this connection are presented below in the following sections:

2.1 Concept of Farmers

Generally, the person who is involved into the farming activities is called a farmer. Conceptually it lumps together desperate socio-economic groups (Guggenheim et. al., 1989). Farmers are categorized mainly into four groups, I) marginal farmer's II) small farmer's III) medium farmers and IV) large farmers. Most of the farmers of Bangladesh are small. Usually, the farmers who have at best one hectare land is called small farmers (DAE, 1999).

2.2 Conceptual Issues about Participation

Participation occupies a central place in development thinking and practice. Governments, funding agencies, donors, and civil society actors including NGOs and multi-lateral agencies like the World Bank and the International Monetary Fund (IMF) have all arrived at a near consensus that development cannot be sustainable and long-lasting unless people's participation is made central to the development process. While there is a virtual unanimity about the need for people participation in development, there is a wide spectrum of views on the concept of participation and

the ways of achieving it. It is necessary to understand the framework and principles of participation in development.

The concept of participation has been subject to lengthy debates-e.g. its historical origin, its theoretical connotation and practical applicability (Tidemand and Knudsen, 1989). Only a few key points can be related here. The more experienced development worker and researcher will know that "participation' is so widely and so loosely used, like many other catchwords in development jargon, that the meaning of the concept has become rather blurred. Some of the common meanings attached to participation are given below.

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

- Participation is the voluntary contribution by people in projects, but without their taking part in decision-making.
- Participation is the sensitization of people to increase their receptivity and ability to respond to development projects.
- Participation is an active process, meaning that the person or group in question takes initiatives and asserts his autonomy to do so.
- Participation is the fostering of a dialogue between the local people and the project preparation, implementation, monitoring and evaluation staff in order to obtain information on the local context and on social impacts.
- Participation is the voluntary involvement of people in self-determined change.
- Participation is involvement in people's development of themselves, their lives, their environment.

The two major alternative uses of participation center around participation as an end in itself or as a means to development. Logically, the two interpretations are not placed at either end of a continuum. They represent 'transformational participation' and 'instrumental participation' and may appear in different combinations in a given project (Kruks, 1983).

A study of women's fuel wood project in Kenya reveled that there were two definitions of participation within the project, instrumental participation and transformational participation. Instrumental participation is when participation is viewed as a way of achieving certain specific targets-the local people participate in the outsiders' project. Transformational participation is when participation is viewed as an objective in and of itself, and as a means of achieving some higher objective such as self-help and/or sustainability.

In this case the drive to achieve the project's physical targets was most compelling because it could be measured, and 'rewards' for project success could be assured. The result was that transformational participation and the objectives of self-help and sustainability were set aside (Kruks, 1983).

A review of the literature on participation as well as the ways in which participation is operationalized in different development interventions reveals that participation is conceptualized and understood differently. The manner in which participation can be enlisted also varies. Various attempts have been made to develop a typology of participation (Amstein, 1969, Hart. 1992; Pretty, 1994). Seven types of participation as conceived by Pretty *et al.* (1995) are described below:

Passive Participation

- People participate by being told what is going to happen or has already happened. It is unilateral announcement by an administration or project

management without listening to people's responses. The information being shared belongs only to external professionals.

Participation in Information Giving

- People participate by answering questioning posed by extractive researchers using questionnaire surveys or similar approaches. People do not have the opportunity to influence proceedings, as the findings of the research are neither shared nor checked for accuracy.

Participation by Consultation

- People participate by being consulted, and external people listen to their views. These external professionals define both problems and solutions, and may modify these in the light of peoples responses. Such a consultative process does not concede any share in decision-making, and professionals are under no obligation to take on board peoples views.

Participation of Material Incentives

- People participate by providing, for example labor, in return for food, cash or other material incentives. Much on-farm research falls in this category, as farmers provide the fields but are not involved in the experimentation or the process of learning. It is very common to this called participation, yet people have no stake in continuing these activities, when the incentives are withdrawn.

Functional Participation

- People participate by forming groups to meet predetermined objectives related to the project, which can involve the development or promotion of externally initiated social organization. Such involvement does not tend to be at early stage of project cycles or planning, but rather after major decision have been made. These institutions tend to be dependent on external initiators and facilitators, but may become self-dependent.

Interactive Participation

- People participate in joint analysis, which leads to action plans and the formulation of new local institutions or the strengthening of existing ones. It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systemic and structured learning processes. These groups take control over local decisions, and so people have a stake in maintaining structures or practices.

Self -Mobilization

- People participate by taking initiatives independent of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Such self-initiated mobilization and collective action may or may not challenge existing inequitable distribution of wealth and power.

As dependent in participation may be viewed along a spectrum with passive participation at one end and self-mobilization at the other end. Passive participation, as the term suggests, is people are told what to do. One the other end is self-mobilization where the local people themselves are in total command.

As one moves from passive participation to self-mobilization, the control of the local people and outsiders over the processes varies. At one end of the spectrum, say in the case of passive participation, people's control is almost non-existent while at the other end, in case of sefl-mobilization, people have almost total control over the processes while the role of outsiders is at best minimal. It is also possible to have manipulative participation which is simply a pretence, and people have no role as in the case of nominated members to some official boards, who have little say in decision-making processes. If we look at the typology of participation, the impact of

different kinds of participation will be different. While participation by manipulation and passive participation can disempower community, both interactive participation and participation by self-mobilization can be highly empowering.

Participation is therefore being increasingly viewed as the process of empowering the local people. The focus is on transfer of power and change in the power structure. Thus, interactive participation and participation through self-mobilization are critical for participation because it is a process of empowering the people so that they gain more control over their own resources and lives.

In view of the foregoing discussion, it became evident that participation means involvement of people starting from analyzing the situation upto evaluating the outcome of an investigation. However, many research studies of Bangladesh Agricultural University have carried out their Master's Thesis research on participation. It may be worth while to review some of these thesis works with major ingredients as follows:

SL. No.	Author and Year	Statement of major objectives	How participation was measured?
1.	Saha. N. K 1997	Participation in agricultural, income generating and recreational activities.	Extent of using each of 18 Agricultural practices. 10 income earning and 10 recreational practices on a 03 point rating scale
2.	Faroque. G. M. 1997	Participation of female rural youth in selected homestead agricultural activities.	Extent of using each of 20 homestead agricultural and 08 household practices on a 03 point rating scale
3.	Naher. K. 2000	Participation of women in selected activities of homestead agriculture	Extent of using each of 10 vegetables 05 post-harvest. 10 poultry and 10 goat rearing practices on a 03 point rating scale.
4.	Akter. M. S. 2000	Participation of women in decision making role in the family, income generating activities, health and sanitation programme, population education and family planning activities.	Extent of using each of 17 income generating 19 health and sanitation and 14 education and family planning practices on a 03 point rating scale
5.	Kabir. M.H. 2001	Participation of rural women and their impact of SUS development activities.	Perceived change occurred due to 25 SUS intervention practices on a 05 point rating scale
6.	Alam A.B.M.T. 2001	Participation of group members in CARITAS social forestry project.	Extent of using each of 10 forestation practices on a 04 point rating scale
7.	Alam MS 2001	Farmer's participation in six major program of BAUEC activities.	Extent of using each of 07 crop development. 07 livestock and poultry, 09 fish development. 08 health and family planning 07 cottage industry and 04 adult education practices on a 04 point rating scale.
8.	Hossain. M.D.2002	Participation of Garo farmers in the selected modern agricultural activities	Extent of using each of 30 agricultural practices on a 04 point rating scale
9.	Yeasmin. F. 2002	Participation of women in different rice production and training needs activities	Extent of using each of 19 rice production and 22 training needs practice on a 04 point rating scale
10.	Akther. T 2003	Participation of women in SUS income generating activities.	Extent of using each of 02 tree plantation 02 poultry rearing, 01 seasonal vegetable cultivation, I goat rearing 02 sewing 05 tailoring 04 cottage industry 02 rice production and I small business practices on a 04 point rating scale.
11.	Hossain M. 2003	Participation of the school dropout teenage rural youth in selected agricultural production activities.	Extent of using each of 09 mindedness for nonfarm and 46 agricultural practices on a 04 point rating scale.

The above mentioned studies reveal that out of 11 studies 10 dealt with "use of different practices" and 01 dealt with "use and impact". The use of any practice or innovation falls merely under the implementation stage of a programme or project. Participation involves people from analyzing the situation through identification of problems and so on up to the evaluation of the project activities. The above mentioned

studies can be viewed mostly as a part of participation. Therefore, it is necessary to conduct research work on participation related to all stages of a programme.

2.3 Review of Relationships between Selected Characteristics of Farmers and their Participation in Farm and Community Level Activities

2.3.1 Age and participation

Seema (1986) revealed from her study that the nature of farm activities participated by young women varied with age. Women dominated participation in sowing, harvesting and storage in the age of 25-40. Participation in irrigation and plant protection measures was confined to young women (below 25 years).

Akter (1989) stated that there was positive correlation between age of the household women with their time spent in both agricultural and non-agricultural activities.

Anwar (1994) in his study found that the age of the rural youth had positive significant relationship with their participation in agricultural activities. But Shardar (1996) found in the study that age of rural youth was negatively related with their interest and participation in the cultivation of vegetables for income generation.

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

Islam *et al.* (1996) studied women's participation in some agricultural income generating activities like vegetable production, poultry, livestock and fish culture. The findings indicated that age of participating women had no significant relationship with their extent of participation.

2.3.2 Education and participation

Anwar (1994) found that the level of education of the rural youth of Mymensingh had significant correlation with their participation in agricultural activities. Identical findings were found in the study of Shardar (1996) in which education of rural youth had positive significant relationship with their interest in vegetables cultivation. Jamal's (1996) study also revealed that drop out rural youth had preference towards selected agricultural activities. Singh and Kunzroo (1985) and Thakare (1961) observed similar findings in their respective studies.

Akanda (1994) stated that education of rural women had significant positive relationship with their participation in the cultivation of fruit trees. However, there was a positive relationship between education and homestead vegetable cultivation and that of non-farm activities but was not significant statistically.

Khan (1993) found that the rural women's educational level had a positive relationship with their participation in community activities and income generating projects in Bangladesh.

Hossain (1991) in his study found a significant and positive relationship of education of the wheat growers with their adoption of improved farm practices.

2.3.3 Family size and participation

Halim and McCarthy (1985) reported that women performed different types of economic activities like post harvest, vegetable gardening, livestock care etc. and their rate of involvement depended on family structure.

Mustafi *et al.* (1987) in their study found that number of family members had no significant effect on adoption of modern varieties of rice in Bangladesh.

Akhter (1989) in her study found that family size of rural women had significant negative correlation with their attitudes towards homestead production.

She remarked that the household women with large family had low attitude towards homestead production because of heterogeneous opinions of the large family.

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

2.3.4 Farm size and participation

Westernguard (1981) stated from a study that in landed families the females were engaged in income generating activities within the family farm, both in post-harvest operations and in the maintenance of vegetables and animals.

Abdullah (1983) reported that homestead agricultural activities undertaken by different categories of households varied according to farm ownership pattern, size of ownership and size of homestead land. It revealed that the family living on others land usually was not interested in growing permanent fruit or fuel trees. However, vegetable cultivation, livestock, poultry rearing etc. were common in all families.

Ahsan et al (1986) stated that participation of women in agricultural activities depended on the farm size of the family. Women having small farm were found to spend more time in crop sector while women with large sized farms spent more time in homestead production. Besides this, landless women were found more associated with agricultural activities in order to generate direct income.

Islam and Ahmed (1987) observed that landless farm households were involved primarily in vegetables and spices cultivation while large and medium households more often planted fruit trees.

Bahtnagar and Saxena (1987) in their study found that there was a significant effect of the size of land holdings and time utilization in agricultural activities. They

reported that with the increase of farm size, the time spent in agricultural activities also increased.

Dixon (1988) mentioned from his research findings that women's work was positively associated with small size of land. Their participation falls with the emergence of commercialized agriculture.

Akhter (1990) found in her research that the household women in rural areas with large farm size spent more time in agricultural activities as they had the scope to spend more time in large farm.

Saugwan *et al.* (1990) conducted a study on participation of women in farm activities and found that involvement of women decreased in farm activities with increasing farm size.

Halim (1991) in his evaluation report on Farming System Research activities of homestead component mentioned that women of small farm family spent more time in agricultural activities as compared to medium and large farm family in Kazirshimla site (upland). Whereas in Naeogaon site (low-lying area), women of medium farm family spent more time in agricultural activities.

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

Akanda (1994) in his study mentioned farm size was one of the activities of rural family and it influenced all other variables. The rural women with bigger farm size had more participation in homestead vegetable cultivation, fruit tree plantation and non-farm household activities. The reasons were that these families had more opportunities, more education, more agricultural knowledge and better extension contact.

Anwar and Kashem (1995) reported that the farm size of parents of rural youth was the key factor in respect of participation of the rural youth in income generation activities.

Shardar (1996) in this study found that the family farm size of the rural youth was not related with the interest and participation in the selected winter vegetable cultivation for income generation.

Sharder(1996) in this study found that the family farm size of the rural youth was not related with the interest and participation in the selected winter vegetable cultivation for income generation.

Nahar (1996) in her study found that farm size had no significant relationship with use of agricultural radio programme.

Saugwan *et al.* (1990) conducted a study on participation of women in farm activities and found that involvement of women decreased in farm activities with increasing farm size.

2.3.5 Family income and participation

Sirohi (1985) conducted a study on involvement of rural young women in farming and found that rural women participated in threshing and plant protection measures and women of low-income group preferred storage, harvesting, sowing and irrigation in order of their preference.

Akhter (1989) found that household women having high income spent more time in personnel activities like recreation, socio-cultural involvement and such other activities. Thus they spent little time in either agricultural or non-agricultural activities.

Khan (1993), in his respective studies found that i) annual income of farmers had significant relationship with their adoption of balanced insecticides, ii) farmers

with higher annual income in Bangladesh adopted more improved farm practices in comparison to the medium and poor income farmers; and iii) annual income of the farmers was associated with the level of plant at protection measures in India.

Anwar (1994) and Pardeep et al. (1992) found significant negative relationship with the income of youth family and their problems in education and job opportunity. Thakare (1961) also found the similar findings in his respective study.

Anwar (1994) found that family income was not associated with the participation of rural youth in agricultural activities. Thakare (1961) and Middleton (1958) also found the same findings from their study. Akhter (1990) opined that on an average the income from homestead varied from 5 to 13.42 thousand Taka in a year.

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

Shardar (1996) in his study found that the family income of the youth parents was not significantly related with the interest and participation of improved winter vegetable cultivation.

Saha (1997) and Jamal (1996) found positive significant relationship between participation of the rural youth in agricultural activities, income earning activities, and their preference towards the selected agricultural and non-agricultural activities.

2.3.6 Extension media contact and participation

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

Karim (1993) concluded from a study that there was a significant difference in the agricultural knowledge of farmers in sugarcane cultivation based on their level of

extension contact. Higher the level of extension contact of the farmer, higher was the level of agricultural knowledge in sugarcane cultivation.

Parveen (1993) in her study recommended that knowledge gained from extension media had played a vital role in forming favorable attitudes towards the homestead agricultural production.

Nahar (1996) in her study found that there was a significant relationship between agricultural knowledge of farmwomen in homestead farming and their level of contact with information sources.

2.3.7 Cosmopoliteness and participation

Ahmed (1977) found no relationship between cosmopoliteness of the farmers and adoption of each of the recommended variety of jute, recommended dose of fertilizers and plant protection measures in jute cultivation.

Latif (1974) in his study found that there was a positive relationship between cosmopoliteness of the farmers and their communication exposure. Karim (1973) found a significant positive relationship between cosmopoliteness of the transplanted aman rice growers and their adoption of fertilizers.

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

Anwar (1994) found that the cosmopoliteness of rural youth in Mymensingh was positively related with job opportunity problem. Saha (1997) and Jamal (1996) had similar findings in their respective studies.

In connection with improved agricultural practices, Rogers (1962) found that the innovators and early adopters had much more cosmopoliteness than the late majority and laggards. Such findings were supported by Khan (1993), Hoque (1993),

Islam (1993) and Beal *et al.* (1967). Dasgupta (1963) and Rahman (1973) also had similar findings.

2.3.8 Agricultural knowledge and participation

Estep (1985) and Karim (1973) revealed that agricultural knowledge of the farmers in general had positive relationship with adoption in agricultural innovations,

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

Anwar's (1994) study revealed that the agricultural knowledge of rural youth was positively correlated with their interest and participation in agricultural activities.

Saha's (1997) study supported similar findings. He however, did not find any relationship between the agricultural knowledge and their problem confrontation in employment opportunity.

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

Jamal (1996) in his study found that the agricultural knowledge of the drop out rural youth had significant positive relationship with their preference of agricultural and non-agricultural activities.

2.3.9 Organizational participation and participation

Saha (1997) and Shardar (1996) in their respective studies in Mymensingh and Sherajganj found that the organizational participation of rural youth had significant positive relationship with their participation in agricultural and income earning

activities Khan (1993), Hossain (1991), Karim (1973) and Anwar (1972) found similar findings. However, Saha (1997) did not find any relationship between the organizational participation of the rural youth and their problem confrontation in employment opportunity.

Shardar (1996) conducted a study on "interest and participation of rural youth in improved winter vegetable cultivation" and found that the concerned variables were not related to each other. But Khan (1993), Hossain (1991), Karim (1993) and Anwar (1972) in their studies on youth and farmers found that organizational participation had positive correlation with the adoption of new agricultural technology.

2.3.10 Time availability and participation

There was no direct review available about time availability. However, some literature on time allocation indicated that women on average utilize more time on household activities and men spend more time in activities related to cash earning. (Halim, 1991)

2.4 Conceptual Framework of the Study

The foregoing review reveals that there is a great need for research work on participation. The concept of participation is broad and people's participation is a basic requirement for sustainable development. Agricultural extension in coming future needs to give more and more importance on sustainable development. Therefore, research work on people's participation demands more attention of researchers.

Farmer's participation mainly covers their participation at farm and community level, although there are innumerable avenues of participation in social cultural economical and political life. Farmers participation at farm and community

level consists of several components such as housing, education, health and sanitation, cooperation and savings, farm production, income generating activities, irrigation and drainage, and so on. Participation in each of these components of household and community level may occur in different steps of programme activities such as, (a) Collect facts, (b) Analyze situation, (c) Identify problems, (d) Decide on objective, (e) Develop plan of work (f) Execute plan, (g) Evaluation of progress, (h) Reconsideration (Sandhu, 1994). However, ordinary farmers may not be able to differentiate all these levels and may fail to response to the questions of the research. Therefore, participation in major five levels, such as at (a) problem identification, (b) formulating objectives, (c) planning, (d) implementation and at (e) evaluation stage would be more practical and realistic. Thus, farmer's participation in farm and community level activities should look into these steps of participation and components of farm and community level.

It has also been observed that different characteristics and traits of farmers have influence on their participation at farm and community level. However for the study, 10 personal traits of farmers have been identified which may have influence on their participation. Thus, a conceptual framework for the study was developed which is furnished in fig 2.1.

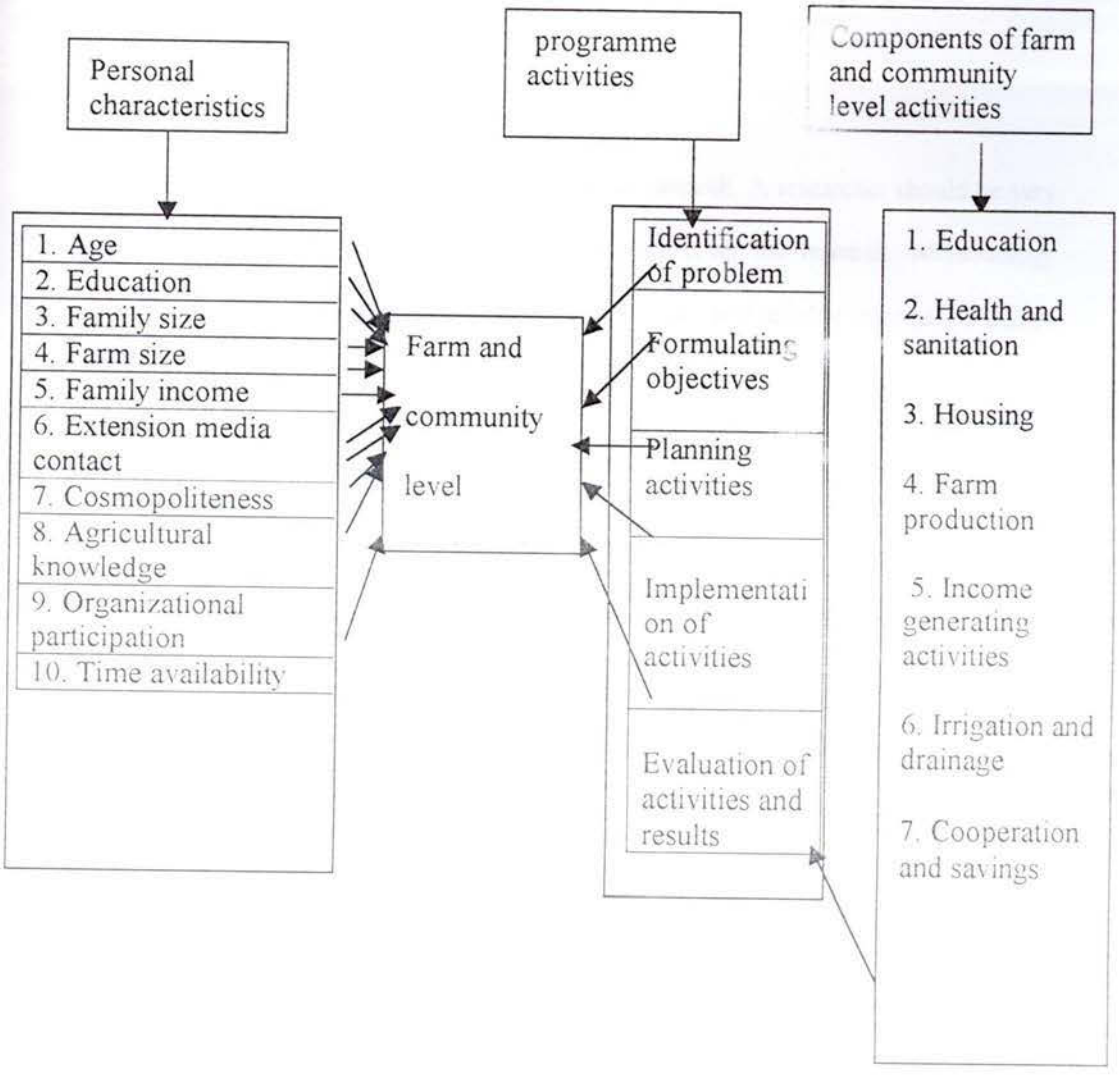

Fig. 2.1 A conceptual model of the research showing relationship between "farm and community level participation" and personal traits of farmers

CHAPTER 3

METHODOLOGY

Methodology plays an important role in a scientific research. A researcher should be very careful in formulating methods and procedures in conducting the research. Methodology should be such as would enable the researcher to collect valid and reliable information and to analyze that information to arrive at correct decisions. The methods and procedures followed in this study have been described in this chapter.

3.1 Locale of the Study

Four villages namely, Hetalbunia, Lebubunia, Jaikhali and Amorbunia in Kathalia Union of Kathalia Upazila under Jhalakathi district wer selected as the locale of the research. Kathalia Upazila is situated at a distance of about 32 km south from district head quarter and connected by good roads. Transport facilities are available for visiting Kathalia. The site is located at about 2 km east of Kathalia. Agriculture was the major occupation of farmers in the study area. Most of the farmers actively participate in different development activities to change their socio-economic status. For further clarity about the locale of the study, a map of Jhalakathi district showing Kathalia upazila showing the study area have been presented in Fig. 3.1.

3.2 Population and Sampling

There were 295, 227, 124 and 152 farm families in Hetalbunia, Lebubunia, Jaikhali and Amorbunia, respectively. An updated list needed for all the farm households of the selected four villages was prepared. Eighty farmers were selected using proportionate random sampling technique.

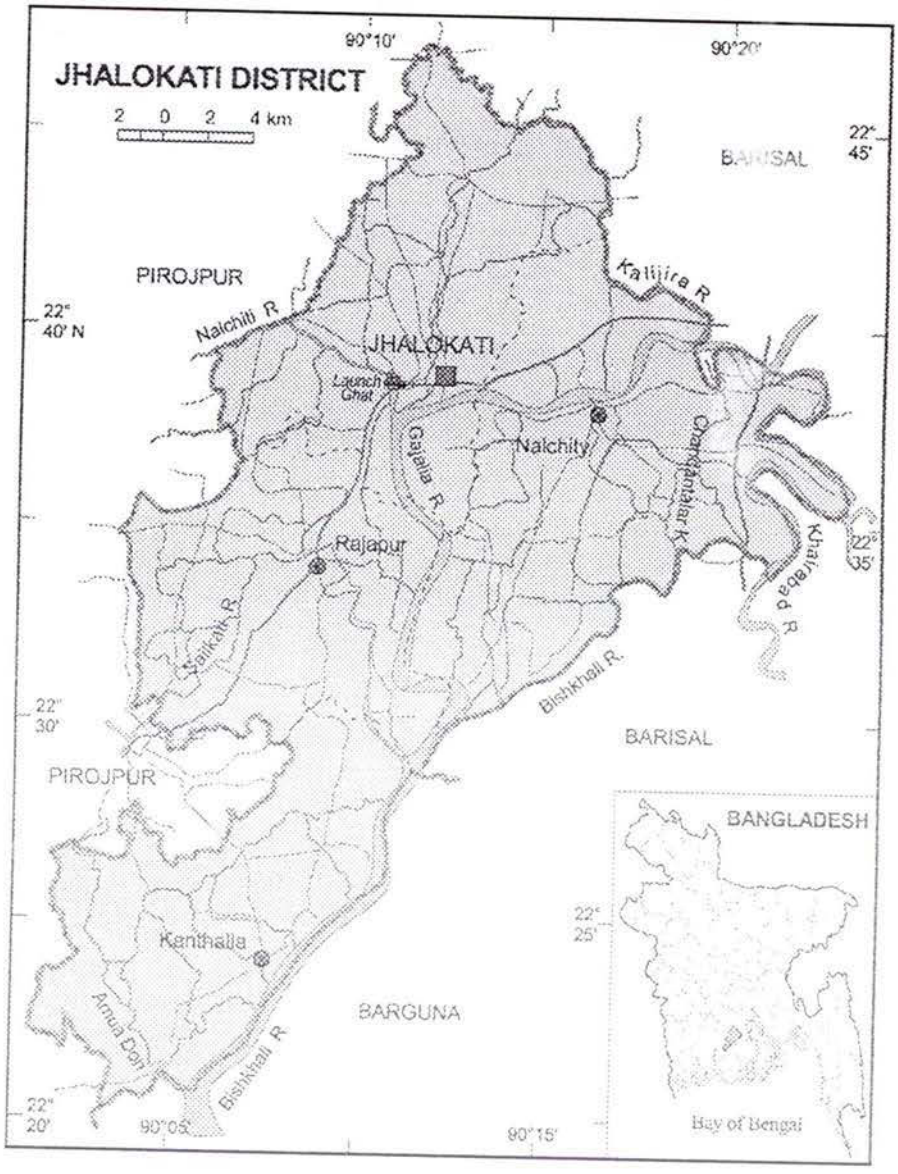

Fig.3.1: A Map of Jhalakathi District showing Kathalia upazila

A reserve list of farmers was also prepared so that they could be used for interview if the respondents included in the original sample were not available during collection of data. The reserve list contained 8 farmers in all. The distributions of the sampled farmers and those in the reserve list are shown in the Table 3.1.

3.3 Data Gathering Instrument

A carefully designed interview schedule was used in collecting data to determine the farm and community level participation. The interview schedule was pretested by administering the same on 80 farmers of Kathalia union. Necessary additions, alternations and adjustments were made in the schedule on the basis of the experience of the pretest.

3.4 Collection of data

Data were collected by the researcher himself through personal interview. Before going to the respondents for interview they were informed. While starting interview, the researcher took all possible care to establish rapport with the respondents so that they did not feel any hesitation. Whenever any respondent felt any difficulty in understanding any questions, the researcher took utmost care to explain and clarify them properly.

In some cases the researcher in his first attempt failed to meet the respondents at their residence. In that case the researcher attempted to contact them by repeating the visits. The researcher in collecting data faced no serious difficulty. Rather he obtained excellent cooperation from the respondent, Block Supervisors, U.A.O. local leaders, teachers and local people in various manners such as giving information.

informing respondents for interview, locating house of respondents etc. Collection of data took 20 days from 5th March to 25th March 2005.

3.5 Variables of the Study

In a scientific research the selection and measurement of variable constitute an important task. The hypothesis of a research, if constructed properly, contains at least two important elements namely, an independent variable and a dependent variable. An independent variable is that factor which is manipulated by the researcher in his attempt to ascertain its relationship to an observed phenomenon. A dependent variable is that factor which appears, disappears or varies as the researcher introduces, removes or varies the independent variables (Townsend, 1953). The dependent variable is often called 'criterion or predicted variable' whereas independent variable is called 'treatment, experimental or antecedent variable'.

The selection of independent variable requires a very careful deliberation and comprehensive search. The search of available literature, discussions with teachers, experts and research fellows in the relevant field and considering the time and resources available to the researcher were the primary basis for selecting the variables. The researcher selected ten characteristics of the farmers as independent variables. The selected characteristics included age, education, family size, farm size, family income, extension media contact, cosmopoliteness, agricultural knowledge, organizational participation and time availability. Farm and community level participation of the farmers were the dependent variable of the study.

Table 3.1 Distribution of farmers constituting the population, sampled and reserve list in 04 selected villages of Kathalia union

Union	Name of the villages	Number of farmers		Reserve list
		Population	Sample	
Kathalia	1. Hetalbunia	295	30	3
	2. Lebubunia	227	23	2
	3. Jaikhali	124	12	1
	4. Amorbunia	152	15	2
Total		798	80	8

3.6 Measurement of Dependent Variable

As mentioned earlier, farm and community level participation was the dependent variable in this study seven major components of farm and community level activities were identified. Farmers participation were assessed at each of five levels of programme activities such as (a) problem identification, (b) setting objectives, (d) planning, (d) excitation and (e) evaluation. Thus, participation was measured for seven components of farm and household activities, and for five levels of programme activities. Statements for each level of programme for specific activities were developed and each statement was rated against a 01-04 point ordinal scale. A score of 04 was given when farmer frequently with the statement, and thus 03, 02 and 01 were given respectively, when they occasionally, rarely, never. For each of the components, farm and community level participation of farmers was determined by summing the scores obtained by himself for the 4 concerned statements, while the composite participation of farm and community level of an

individual farmer was computed by adding together the scores obtained by his scores for all the 07 components.

Thus the possible composite farm and community level participation score of a respondent farmer could range from 28-140, where 140 indicated very high participation in farm and community level activities.

3.7 Measurement of Independent variables

Ten characteristics of the farmers were selected as independent variables of this study. Procedures followed in measuring these characteristics are described below.

3.7.1 Age

Age of a respondent farmer was measured by the period of time from his birth to the time of interview on the basis of his response. It was measured in terms of years.

3.7.2 Education

Education of farmers was measured by the grades passed by him from formal educational institutions at the time of interview. For example, a score of five was given to 5, respondent when he passed class V from the school and twelve when he passed 12 classes from the college. A respondent who could not even sign his name was given a score of zero (0).

3.7.3 Family size

Family size of a respondent was determined in terms of total number of members of each respondent's family. The family members included the respondent himself, his spouse, sons, daughters and other dependents. If a respondent had five members in his family, his family size score was given as 5.

3.7.4 Farm size

Farm size was measured in term of hectares using the following formula.

Farm size = $A_1 + A_2 + \frac{1}{2}(A_3 + A_4) + A_5 - A_6 + A_7 + A_8$

Where,

A_1 = homestead area

A_2 = Own land under own cultivation

A_3 = Own land given to others on borga system

A_4 = Land taken from others on borga system

A_5 = Own land given to others on lease

A_6 = Land taken from others on lease

A_7 = Own pond

A_8 = Own garden

3.7.5 Family income

This referred to the total earnings in Taka of all family members of a respondent from agriculture (field crops, vegetables, pulses crop, livestock and fisheries), non-agricultural (Business, service, labor) and other sources. The total earning in taka was converted into score. A score of one was given for each thousand taka.

3.7.6 Extension media contact

It was defined as one's extent of exposure to different information sources related to agricultural extension. In this study an extension contact score was computed for each respondent on the basis of his contact with 18 selected extension media, as shown in item no. 6 of the interview schedule. The extension media contact was determined against a four-point scale as frequently, occasionally, rarely and not at

all and score assigned to represent the same was 3.2,1 and 0, respectively for all 18 selected extension media as follows.

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

The extension media contact of a person was therefore determined by adding the total responses against 18 selected extension media. The scores could range from 0 to 54, where 0 indicated no contact and 54 indicated very high contact with extension media.

3.7.7 Cosmopoliteness

Cosmopoliteness refers to the degree to which a farmer was oriented external to his own social system. Cosmopoliteness score for each respondent was computed to determine the degree of his visits to 07 different types of places from his own village. The scores computed for cosmopoliteness of a respondent were as follows: frequently =3, occasionally =2, rarely =1 and not at all =0. Scores obtained for visits to each of the 07 categories of places were added together to get the cosmopoliteness score of a respondent. The score of the respondent could range from 0 to 21, Zero (0) indicated no cosmopoliteness and 21 indicated very high cosmopoliteness

3.7.8 Agricultural knowledge

Agricultural knowledge score of a respondent was computed on the basis of his responses to questions contained in item 8 of the interview schedule. The questions covered different aspects of agriculture namely, field crops, vegetable crops. fruit crops, livestock and fisheries. Points assigned for correct responses to

different question varied from 1 to 4 according to the nature of answers or responses. For correct responses to all the 10 questions, a respondent could get a total score of 40, but for wrong responses to all the 10 questions he could get 10. Thus, agricultural knowledge of the respondents could range from 10 to 40, 10 indicated low agricultural knowledge and 40 indicated very high agricultural knowledge.

3.7.9 Organizational participation

Organizational participation score of a respondent was computed on the basis of his participation in different organizations as shown in item 9 of the interview schedule. Scores were assigned for participation of a respondent in an organization in the following manner.

Nature of participation	Scores assigned
No participation	0
Ordinary member	1
Member of the executive committee	2
Executive officer (President, secretary etc.)	3

Organization participation score of a respondent was determined by adding his scores for participation in all the organizations. Thus, the organizational participation score could range from 0 to 30, 0 indicated no organizational participation and 30 indicated very high participation.

3.7.10 Time availability

The farmers were asked to indicate time availability for various activities of their life. The farmers were asked to give their opinion on some selected aspect (item 10 of interview schedule). A four-point rating scale was used to assign scores in the following way

Nature of time availability	Scores assigned
Low availability	1
Moderately availability	2
High availability	3
Very high availability	4

Thus, the possible time availability score of the respondents could range between 6-24, where 6 indicated low time availability score and 24 indicated very high time availability.

3.8 Categorization of the Respondents

For describing the independent and dependent variables, the respondents were classified into appropriate categories. In developing categories, the investigator was guided by the nature of data and general considerations prevailing in the social system. Procedures for categorization have been discussed while describing the variables in Chapter 4.

3.9 Data Processing and Statistical Tests

Qualitative data were converted into quantitative one whenever necessary. Data obtained from the respondents were first transferred to a master sheet, then compiled, tabulated and analyzed in accordance with the objectives of the study.

Statistical measures Such as number, percentage distribution, range, mean, standard deviation, coefficient of variation and rank order were used in describing the data. For clarity of understanding, tables were used in presenting data. For exploring the relationship between the selected characteristics of the farmers with their participation in farm and community level activities Pearson's Product Moment Co-efficient of Correlation (r) was used.

CHAPTER 4

RESULTS AND DISCUSSION

The purpose of this chapter was to describe the findings of the present study. The study investigated the participation of farmers at farm and community level and related matters. In accordance with the objectives of the study, presentation of the findings has been made in three sections in this chapter as follows:

Section 1: Selected characteristics of the farmers

Section 2: Farm and community level participation of farmers

Section 3: Relationship between the selected characteristics of the farmers and their participation to farm and community level

4.1 Selected Characteristics of the Farmers

4.1.1 Age: Age of the respondent farmers was found to vary from 18 to 71 years. The mean was 43.78 and standard deviation was 12.74 (Table 4.1). On the basis of the age of the respondents, they were classified into three categories. Data in the table revealed that the highest proportion of the respondents (53.8 percent) were middle aged, 20 percent were young and 26.3 percent were old which implies that old people now transfer their responsibility to younger family members.

4.1.2 Education: Analysis of data regarding education indicated that out of 80 respondents, 3.8 percent were illiterate, 32.5 percent had education at primary level, 53.8 percent had education at secondary level, and only 10 percent had education at above secondary level. The level of literacy ranged from no education to Bachelor degree level. The mean of education score was 7.125 and standard deviation was 3.30.

Table 4.1 A summary statement showing categories and salient features of the selected characteristic of the farmers (N=80)

Characteristics	Ranges		Categories	Respondents		Mean	CV
	Possible	Observed		No	%		
1. Age	-	18-71	Young (18-30)	16	20.0	43.78	29.09
			Middle aged (31-50)	43	53.8		
			Old (50 above)	21	26.3		
2. Education	-	0-14	Illiterate (0)	3	3.8	7.13	46.38
			Primary (1-5)	26	32.5		
			Secondary (6-10)	43	53.8		
			SSC & above (≥ 10)	8	10.0		
3. Family size	-	2-11	Small (up to 4)	21	26.3	5.8	32.85
			Medium (5-7)	46	57.5		
			High (above 7)	13	16.3		
4. Farm size	-	0.09-5.92	Marginal(upto0.19)	2	2.5	1.43	66.27
			Small (0.2-1.0)	20	25.0		
			Medium (1.01-3.03)	54	67.5		
			Large (above 3.03)	4	5.0		
5. Family income	-	20-196	Low (up to 40)	40	50.0	56.63	73.24
			Medium (41-70)	24	30.0		
			High (70 above)	16	20.0		
6. Extension media contact	0-54	1-42	Low (up to 15)	26	32.5	19.65	40.24
			Medium (16-25)	40	50.0		
			High (25 above)	14	17.5		
7. Cosmopoliteness	0-21	4-21	Low (up to7)	7	8.866	11.76	29.83
			Medium (8-13)	49	61.3		
			High (14-21)	24	30.0		
8. Agricultural knowledge	10-40	10-38	Low (10-20)	15	18.8	23.95	20.53
			Medium (21-30)	57	71.3		
			High (31-38)	8	10.0		
9. Organizational participation	0-30	0-6	No participation (0)	49	61.3	0.99	154.96
			Low (1-2)	16	20.0		
			Medium (3-4)	12	15.0		
			High (4 above)	3	3.8		
10. Time availability	0-24	8-20	Low (8-12)	10	12.5	15.28	17.92
			Medium (13-18)	60	75.0		
			High (19-20)	10	12.5		

Data presented in Table 4.1 indicate that most of the farmers (86.3 percent) of the study area had primary and secondary education. The respondents who were illiterate, (3.8 percent) were mostly the older people who did not have the opportunity to go to school during their childhood.

4.1.3 Family size: The number of family members of the respondents ranged from 2-11. The mean was 5.8 and standard deviation was 1.91. Based on the family size score, the respondents were classified into three categories. The categories and

distribution of the respondents with their number, percent, mean and CV were furnished in Table 4.1.

Computed data indicate the 57.3 percent of the farmers had medium family size, 16.3 percent of the farmers had large family size and 26.3 percent of the farmers had small family size. Among the respondents who had small family size. Most of them were young in age. National average family size in Bangladesh is of 5.6 . These findings indicate that farmers of the study area are similar to the national average size

4.1.4 Farm size: The farm size of the respondents ranged from 0.09-5.92 hectare with an average of 1.43 hectare (SD=.95 and CV=66.27%). The respondents were highly heterogeneous on the basis of farm size, and they were categorized into 4 groups as shown in the Table 4.1.

Farm size is the basis of agricultural production. The size of the farm plays an important role in productivity. In the study area, maximum farmers were resource poor farmers where most of the farms were double cropped.

4.1.5 Family income: Family income of the respondents ranged from 20 to 196 thousand taka with an average of 56.63 thousand and standard deviation was 41.47 (CV=73.24%). They were highly heterogeneous on the basis of their income. The respondents were categorized into 3 groups as shown in Table 4.1

Computed data indicate that about four-fifth (80 percent) of the respondents were either in low or medium annual income category, whereas high-income holding was only 20 percent. The average per capita income of the country is 363 US $ (BBS 2000). It indicates that the farmers of the study area had higher per capita income in comparison to national average.

4.1.6 Extension media contact: The extension media contact scores of the respondents could range from 0 to 54. However, the observed scores ranged from 1 to

42. The average was 19.65 with a standard deviation of 7.91 (CV=40.24%). On the basis of extension media contact scores the respondents were categorized into 3 groups as shown in Table 4.1.

Data indicated that 50 percent of the respondents had medium and17.5 percent of the respondent had high extension contact with their information sources and 17.5 percent of the respondents had low extension contact. This finding indicates that farmers in the study area are exposed to extension media contact either through public extension services or through private or non-government extension services at medium level.

4.1.7 Cosmopoliteness: The observed cosmopoliteness scores of the farmers ranged from 4 to 21 against the possible range of 0 to 21. The average cosmopoliteness scores of the farmer was 11.76 with a standard deviation of 3.51 (CV=29.83%). On the basis of the cosmopoliteness scores, the farmers were classified into three categories Table 4.1.

Data presented in the Table 4.1 show that the highest proportion (61.3 percent) of the respondents had medium cosmopoliteness. Cosmopoliteness renders up-to-date knowledge among individuals. Outside movement or travel to important places make an individual updated with latest information. But when the farmers live for below the poverty level, and in remove areas and have little ability to travel up to upazila headquarter and agricultural offices. Special type of extension programme would render help to involve these type of farmers with development activities.

4.1.8 Agricultural knowledge: Agricultural knowledge scores of the respondents could range from 10 to 40. However the observed score ranged from 10 to 38. The average was 23.95 with a standard deviation of 4.92 (CV=20.53%). On the basis of

agricultural knowledge scores the respondents were categorized into 3 groups as shown in the Table 4.1.

Data indicate that 71.3 percent of the respondents had medium knowledge and about 18.8 percent of them had low knowledge and 10.0 percent of them had high knowledge on agriculture.

4.1.9 Organizational participation: The organizational participation scores of the respondents ranged from 0-6 with an average of 0.99 and standard deviation 1.53 (CV=154.96%). On the basis of organizational participation scores the respondents were categorized into 4 groups as shown in Table 4.1.

Almost all (61.3 percent) of the respondents were no participation, 20 percent of the respondents were no low organizational participation category,15 percent of the respondents maintained medium organizational participation and only 3.8 percent of the respondents maintained high level of organizational participation. It indicates that respondents were disinterested or unable to involve themselves with different local organizations like mosque committee, Bazar committee, school committee etc. which could improve their knowledge and perception. More participation in organizational activities could create coordination capability and capacity to adopt farm development technologies.

4.1.10 Time availability: The time availability scores of the farmers ranged from 8 to 20 with an average of 15.28 and standard deviation is 2.74 (CV=17.92%). Based on their time availability scores the farmers were classified into 3 categories (Table 4.1). Data indicated that 75.5 percent of the respondents have medium available time and only 12.5 percent had low available time and same as high level. This fact indicates that farmers of the study area have enough time to participate in farm and community level activities.

4.2 Farm and community Level Participation of Farmers

4.2.1 Component wise participation

Farmer's participation in farm community level activities was the main focus of this research. The activities were grouped into seven categories. In addition participation in each activity were observed at five levels namely in problem identification, objectives formulation, planning activities, execution of plan and in evaluating progress of activities. Participation at each level was measured on a 04-point scale. The expected range of score of the participation for each category of activities could range from 05-20. Data presented in Table 4.2 reveal that farmers participation was the highest in case of education level activities, and in health and sanitation activities. Education and health related activities involved maximum number of family members, neighbours and relatives. On the other hand, participation was the lowest in "co-operation and savings" activities.

In order to have a more clear picture of farmer's participation in each of the above mentioned seven farm and community level activities, total participation score of each activity were computed and a participation index (P1) of each activity were calculated according to the following formula.

$$P1\ (C) = \frac{\text{Observed participation score of component } C_i}{\text{Possible participation score of component } C_i} \times 100$$

Where C i= Component 1,2,3,4,5,6,7 i.e. age, education, ---------,time availability.

Table 4.2 Farmer's participation in seven farm and community level activities

Components	Categories (scores)	Farmer (N=80)		Mean	Standard deviation
		No	%		
1. Education	Low (upto 13)	15	20	15.51	3.23
	Medium (14 to 18)	51	63.8		
	High (19 to 20)	13	16.3		
2.Health and sanitation	Low (upto 13)	21	26.3	15.13	3.33
	Medium (14 to 18)	47	58.8		
	High (19 to 20)	12	15.0		
3. Housing	Low (upto 13)	22	27.5	14.94	3.30
	Medium (14 to 18)	47	58.8		
	High (19 to 20)	11	13.8		
4. Farm production	Low (upto 13)	26	32.5	14.39	3.21
	Medium (14 to 18)	47	58.8		
	High (19 to 20)	7	8.8		
5.Income generating activity	Low (upto 13)	30	37.5	14.13	3.30
	Medium (14 to 18)	44	55.0		
	High (19 to 20)	6	7.5		
6. Irrigation and drainage	Low (upto 13)	30	37.5	14.11	3.69
	Medium (14 to 18)	41	51.3		
	High (19 to 20)	9	11.3		
7. Cooperation and savings	Low (upto 13)	33	41.3	13.65	4.04
	Medium (14 to 18)	40	50.0		
	High (19 to 20)	7	8.8		

Data in Table 4.3 show the participation index of each of the seven components of "farm and community level" activities. The PIs varied from 67.80 to 77.52. These indices were quite high, This indicates that farmers participate with their family members, relatives and fellow farmers to a great extent for their farm and community level activities.

Table 4.3 Participation index of farmers on each of the seven components of farm and community level activities

Farm and community level components	Observed Participation scores	Participation index	Rank order
Education	1241	77.52	1st
Health and sanitation	1210	75.65	2nd
Housing	1195	74.70	3rd
Farm production	1151	71.94	4th
Income generating activities	1130	70.65	5th
Irrigation and drainage	1129	70.55	6th
Cooperation and savings	1085	67.80	7th

4.2.2 Level wise participation

Farmer's participation varies at different level of programme activity. Participation was measured at five levels, namely at (a) problem identification (b) objective formulation. (c) planning activities, (d) execution of plan, and (e) evaluation of activities. Participation for each of this level could range between 07 to 28. Actual participation score at each of these levels has been presented in Table 4.4.

Table 4.4 Programme activities categorized according to level of participation (N=80)

Levels of participation	Observed Participation scores	Mean	Participation index	Rank order
Problem identification	1948	24.35	86.96	1st
Objectives formulating	1657	20.71	73.93	2nd
Planning activities	1580	19.75	70.54	3rd
Execution of plan	1524	19.05	68.04	4th
Evaluation of activities	1425	17.81	63.61	5th

4.2.3 Individual level participation of farmers in farm and community level activities

Individual farmers' participation was measured on seven categories of "farm and community level activities" and at five levels of programme activity. Thus, the possible score of individual farmers' participation could range between 35 to 140. However, the actual scores of individual farmer's participation ranged between 44 to 134 with a mean of 101.68 (SD =16.32, CV =16.05%). Based on the actual obtained scores, and on the basis of responses given, the farmers were classified into three categories as low participation (<96), medium participation (96-110) and high participation (<110). Data contained in Table 4.5 indicate that the highest proportion of the respondent farmers (46.3 percent) had medium participation in farm and community level activities. Only 26.30 percent of the population had low and high 13 percent level participation.

Table 4.5 Distribution of the respondent farmers according to their participation in farm and community level activities

Categories according to participation in farm and community level activities	Farmers		Mean	SD	CV
	Number	Percent			
Low participation (<96)	21	26.3	101.68	16.32	16.05
Medium participation (96-110)	37	46.3			
High participation(>110)	22	27.5			
Total	80	100			

4.2.4 Comparative participation to farmers farm and community level

It was found that the respondent farmer's were not the same in respect of extent of participation. In order to have a clear understanding on the comparative participation to farmer's farm and community level, a farm and community level component (FCC) score was computed for each component. The FCC's of the farmers in respect of each component was computed by using a rating scale in which scoring was made as follow: frequently-4, occationally-3, rarely-2, and never-1. The total numbers of the farmers were 80 and as such the possible FCC's of the farmer could theoretically vary from 400 to 1600. For meaningful comparison of seven components for participation to farm and community level, each FCCS was converted into farm and community level component index (FCCI) by using the following formula.

$$\text{Farm and community level component index FCCI} = \frac{\text{Observed FCC score}}{\text{Possible FCC Score}} \times 100$$

Possible FCCIs of the farmers could theoretically range form 35 to 140, where 35 indicate no participation and 140 indicate very high participation on farm and community level.

Data in Table 4.3 indicate that the farmer did not have equal participation to farm and community level. Rather, there existed variations among the components as indicated by the FCCIs from 67.80 to 77.52. However, the components in which the farmers had relatively high participation to farm and community level in descending order were education, health and sanitation, housing, farm production, income generating activities, irrigation and drainage and cooperation and savings.

4.3 Relationship between Farmer's Individual Characteristics and their Participation in Farm and community Level Activities

The purpose of this section is to examine the relationship between ten selected characteristics of the farmers and their participation in farm and community level activities. The ten characteristics of the farmers included: age, education, family size, farm size, family annual income, extension media contact, cosmopolitans, agricultural knowledge, organization participation and time availability. To explore the relationships between the selected individual characteristics of farmers' participation farm and community level activities, Pearson's Product Moment Correlation of Coefficient ('r') has been used. Five percent level of probability was used as the basis for rejection of a null hypothesis. The computed values of 'r' were compared with relevant tabulated values for 78 degrees of freedom at the designed level of probability in order to determine whether the relationships between the concerned variables were significant or not

The summary of the results of the correlation analysis has been presented in Table 4.6 showing the relationship between ten characteristics of farm and community level participation of farmers.

Table 4.6 Co-efficient of correlation showing relationship between farmer's participation in farm and community level activities and their selected characteristics

Dependent Variable	Farmers' characteristics	Correlation coefficient value (r) df=78
Farmers participation in farm and community level activities	1. Age	-0.250*
	2. Education	0.344**
	3. Family size	0.075NS
	4. Farm size	0.376**
	5. Family annual income	0.185NS
	6. Extension media contact	0.424**
	7. Cosmopolitans	0.380**
	8. Agricultural knowledge	0.500**
	9. Organizational participation	0.331**
	10. Time availability	-0.051NS

NS=Not significant
Tabulated value of 'r' at 0.05 level=0.216
*=Correlation is significant at 0.05 level of probability
Tabulated value of 'r' at 0.01 level=0.281
**=Correlation is significant at 0.01 level of probability.

4.3.1 Age and farm and community level participation

Relationship between age of farmers and their participation in farm and community level activities was determined by testing the following null hypothesis. "There is no relationship between age of the farmers and their participation in farm and community level activities".

The calculated value of the correlation co-efficient was found to be -0.250. The following observations were made regarding the relationship between the two variables under consideration.

a) The computed value of 'r' (r=-0.250) was found to be larger than the tabulated value (r=0.216) with 78 degree of freedom at 0.05 level of probability.

b) The relationship was significant.

c) The relationship showed a negative direction.

Based on the above, the researcher concluded that age of the farmer had a significant and negative relationship with their farm and community level participation. This means that the farmer having less age were likely to have more participation in farm and community level activities.

4.3.2 Education and farm and community level participation

Relationship between education of farmers and their participation in farm and community level activities was determined by testing the following null hypothesis. "There is no relationship between education of the farmers and their participation in farm and community level activities."

The calculated value of the concerned correlation co-efficient was found to be 0.334. The following observations were made regarding the relationship between the two variables under consideration.

a) The computed value of 'r' (r=0.334) was found to be larger than the tabulated value (r=0.281) with 78 degree of freedom at 0.01 level of probability.
b) The relationship was significant.
c) The relationship showed a positive direction.

Based on the above observations, the researcher concluded that education of the farmer had a positive and significant relationship with their farm and community level participation. This means that the farmer having more education were likely to have more participation in farm and community level activities.

4.3.3 Family size and farm and community level participation

Relationship between family size of farmers and their participation in farm and community level activities was determined by testing the following null hypothesis. "There is no relationship between family size of the farmers and their participation in farm and community level activities."

The calculated value of concerned correlation co-efficient was found to be 0.075. The following observations were made regarding the relationship under consideration.

a) The computed value of 'r' (r=0.075) was found to be lesser than the tabulated value(r=0.216) with 78 degree of freedom at 0.05 level of probability.

b) The relationship was not significant.

c) The relationship showed a positive direction.

Based on the above observations, the researcher concluded that family size of the farmers had no significant relationship with their farm and community level participation. This indicates that the family size of the farmers and their farm and community level participation are independent of each other.

4.3.4 Farm size and farm and community level participation

Relationship between farm size of farmers and their participation in farm and community level activities was determined by testing the following null hypothesis. "There is no relationship between farm size of the farmers and their participation in farm and community level activities."

The calculated value of the correlation co-efficient between the concerned variables was found to be 0.376. The following observations were made regarding the relationship between the two variables under consideration.

a) The computed value of 'r' (r=0.376) was found to be larger than the tabulated value (r=0.281) with 78 degree of freedom at 0.01 level of probability.

b) The relationship was significant.

c) The relationship showed a positive direction.

Hence, the researcher concluded that farm size of the farmer had significant relationship and positive direction with their farm and community level participation. This means that the farmer who have more farm size were likely to have more participation in farm and community level activities.

4.3.5 Family income and farm and community level participation

Relationship between family income of farmers and their participation in farm and community level activities was determined by testing the following null hypothesis. "There is no relationship between family income of the farmers and their participation in farm and community level activities."

The calculated value of the correlation co-efficient between the concerned variables was found to be 0.185. The following observations were made regarding the relationship between the two variables under consideration.

a) The computed value of 'r' (r=0.185) was found to be larger than the tabulated value (r=0.216) with 78 degree of freedom at 0.05 level of probability.

b) The relationship was not significant

c) The relationship showed a positive direction

Based on the above observations, the researcher concluded that family income of the farmers had no significant relationship with their farm and community level participation. Although, there was no significant relationship but a positive trend was observed. In the existing context, family income might play a vital role in the participation of development activities, but some other interlinking factors. Family income of the farmer did not influence the farmers for improving their farm and community level participation.

4.3.6 Extension media contact and farm and community level participation

Relationship between extension media contact of farmers and their participation in farm and community level activities was determined by testing the following null hypothesis." There is a positive significant relationship between extension media contact of the farmers and their participation in farm and community level activities."

The calculated value of the co-efficient correlation between the concerned variables was found to be 0.424. The following observations were made regarding the relationship between the two variables under consideration.

a) The computed value of 'r' (r=0.424) was found to be larger than the tabulated value (r=0.281) with 78 degree of freedom at 0.01 level of probability.

b) The relationship was significant.

c) The relationship showed a positive.

Based of the above observations, the researcher concluded that extension contact of the farmers had a significant and positive relationship with their farm and community level participation. More extension contact of the farmers facilitated more to increase their farm and community level participation.

4.3.7 Cosmopoliteness and farm and community level participation

Relationship between cosmopoliteness of farmers and their participation in farm and community level activities was determined by testing the following null hypothesis. "There is no relationship between cosmopoliteness of the farmers and their participation in farm and community level activities."

The calculated value of the correlation co-efficient between the concerned variables was found to be 0.380. The following observations were made regarding the relationship under consideration.

a) The computed value of 'r' (r=0.380) was found to be larger than the tabulated value (r=0.281) with 78 degree of freedom at 0.01 level of probability.

b) The relationship was significant.

c) The relationship showed a positive direction

Based on the above observations, the researcher concluded that cosmopoliteness of the farmers had a significant and positive relationship with their farm and community level participation. A farmer having more cosmopoliteness would have more opportunity to come in contact with others, share ideas and exchange views and opinions that may lead to increase their farm and community level participation.

4.3.8 Agricultural knowledge and farm and community level participation

Relationship between agricultural knowledge of the farmers and their participation in farm and community level activities was determined by testing the following null hypothesis. "There is no relationship between agricultural knowledge of the farmers and their participation in farm and community level activities".

The calculated value of the correlation co-efficient between the concerned variables was found to be 0.500 as shown in Table 4.6. The following observations were made regarding the relationship between the two variables under consideration.

a) The Computed value of 'r' (r=0.500) was found to be larger than the tabulated value (r=0.281) with 78 degree of freedom at 0.01 level of probability.

b) The relationship was significant

c) The relationship showed a positive direction.

Based on the above observations, the researcher concluded that agricultural knowledge of the farmers had a significant and positive relationship with their farm and community level participation. The findings indicated that the higher agriculture knowledge of the farmers, the higher was their farm and community level participation.

4.3.9 Organizational participation and farm and community level participation

Relationship between organizational participation of farmers and their participation in farm and community level activities was determined by testing the following null hypothesis. "There is no relationship between organizational participation of the farmers and their participation in farm and community level activities".

The calculated value of the correlation co-efficient was found to be 0.331. The following observations were made regarding the relationship under consideration.

a) The computed value of 'r' (r=0.331) was found to be larger that the tabulated value (r=0.281) with 78 degree of freedom at 0.01 level of probability.

b) The relationship was significant.

c) The relationship showed a positive direction.

Based on the above observations, the researcher concluded that organizational participation of the farmers had a positive and significant relationship with their farm and community level participation. This means that the farmers having more organizational participation were likely to have better farm and community level activities.

4.3.10 Time availability and farm and community level participation

Relationship between time availability of farmers and their participation in farm and community level activities was determined by testing the following null hypothesis. "There is no relationship between time availability of the farmers and their participation in farm and community level activities".

The calculated value of the correlation co-efficient was found to be –0.051. The following observations were made regarding the relationship under consideration.

a) The computed value of 'r' (r= -0.051) was found to be larger than the tabulated value

(r =0.216) with 78 degree of freedom at 0.05 level of probability.

b) The relationship was not significant

c) The relationship showed a negative direction.

Based on the above observations, the researcher concluded that time availability of the farmers had no significant relationship with their farm and community level participation.

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of the findings, conclusions and recommendations of the study.

5.1 Summary of the Findings

The major findings of the study were summarized below:

5.1.1 Farmers' farm and community level activities

The following seven components of farm and community level activities were identified where the farmers participated in varying study:

i Education

ii Health and sanitation

iii Housing

iv Farm production

v Income generating activities

vi Irrigation and drainage

vii Cooperation and savings

5.1.2 Farmer's participation in farm and community level of activities

Farmer's participation in farm and community level activities was the main focus of the study. The computed participation in farm and community level activities score of the respondents ranged from 44 to 134 against the possible range of 28 – 140 scores. The mean, standard deviation and CV were 101.68, 16.32 and 16.05

respectively. The highest proportion (46.3 percent) of the farmers possessed medium participation in farm and community level activities while 27.5 percent and 26.3 percent of the farmers had respectively high and low participation in farm and community level activities. It means that the majority (73.8 percent) farmers had medium to high participation in farm and community level activities. The seven farm and community level components were not equal in respect of farmers participation. The components in which the farmers had relatively high participation in farm and community level activities in descending order were education, health and sanitation, housing, farm production. The farmers had relatively less participation for the remaining four components i.e. income generating activities, irrigation and drainage and co-operation and savings.

5.1.3 Findings related to the selected characteristics

Findings in respect of the thirteen selected characteristics of the farmers are summarized below:

Age: Age of the farmers ranged from 18 to 71 years with the average of 47.38 years. The highest proportion (53.8 Percent) of the farmers were middle aged while 20 percent were young aged and only 26.3 percent were old.

Education: The level of education of the farmers ranged from 0 to 14 years of schooling having an average 7.13. 3.8 percent of the farmers had illiterate 32.5 percent of the farmers were educated from primary level, 53.8 percent were secondary level and 10.0 percent were above secondary level.

Family size: Family size of the farmers ranged from 2 to 11 numbers with the average of 5.8. The highest proportion (57.5 percent) of the farmers were medium numbers while 16.3 percent were high and only 26.3 percent were small size.

Farm size: Farm size of the farmers ranged from 0.09 to 5.92 ha with the average of 1.43. The highest proportion (67.5 percent) of the farmers were medium numbers while 5 percent were high, only 25 percent were small and2.5 percent were marginal.

Family income: Family income of the farmers ranged from 20 to 196 Taka with the average of 56.63. The highest proportion (50 percent) of the farmers were low family income while 20 percent were high and only 30 percent were medium.

Extension media contact: Extension media contact scores of the farmers possible ranged from 0 to 54, the observed score ranged from 1 to 42 with an average of 19.65 and standard deviation was 7.91. The majority 50 percent of the respondent had medium extension media contact.

Cosmopoliteness: Cosmopoliteness score of the farmers ranged from 0 to 21, the observed score ranged from 0 to 21 with an average of 11.76 and standard deviation was 3.51. The majority (61.3 percent) of the farmers had medium cosmopoliteness.

Agricultural knowledge: Against the possible scores ranging from 10 to 40, the observed score of the farmer ranged from 10 to 38 with an average of 23.95 and standard deviation was 4.92. The highest 71.3 percent farmer had medium agricultural knowledge.

Organizational participation: Against the possible scores of 0 to 30, the observed scores of the farmers ranged from 0 to 6 with an average of 0.99 and standard deviation was 1.53. The majority 61.3 percent farmer had no participation.

Time availability: Against the possible scores ranging from 0 to 24, the observed scores of the farmer ranged from 8 to 20 with an average of 15.28 and standard deviation was2.74. The majority 75.0 percent farmer had medium time availability.

5.1.4 Relationship of the selected characteristics of the farmers with their participation

The result of the hypothesis testing between the selected characteristics of the farmers and their farm and community level participation have been presented below:

Correlation analysis indicates that family size and family income of the farmers had positive but insignificant relationship with their participation in farm and community level activities. Time availability of the farmers had negative but insignificant relationship with their farm and community level participation. However, education, farm size, extension media contact, agricultural knowledge, cosmopoliteness and organizational participation of the farmers had positively related at 1 percent level of probability with their participation in farm and community level activities. But age of the farmers had negatively related at 5 percent level of probability with their participation in farm and community level activities.

5.2 Conclusions

Findings of the study and the logical interpretation of their meaning in the light of other relevant facts prompted the researcher to draw the following conclusion:

1. Findings of the study showed that majority (73%) of the farmer had low and medium level participation in farm and community level activities. So, it may be concluded that there is further scope to increase participation of the farmers to farm and community level activities.

2. Age of the farmers showed significant negative relationship with their participation in farm and community level activities. Therefore it may be concluded that old farmers had low participation.
3. Findings revealed that 96 percent farmers education in any form. Education had significant and positive relationship with their participation in farm and community level activities. Therefore, it may be concluded that to improve farmers participation it is necessary to increase their level of education.
4. Findings indicate that 67.5 percent of the farmers were medium farm size. Farm size was significant and positively related to the farm and community level participation. Thus, it may be concluded that participation in farm and community level activities of the respondents increased with the increasing of their farm size.
5. Findings reveal that 50 percent of the farmers had medium extension media contact. Extension media contact showed significant and positive relationship with their participation in farm and community level activities. This fact leads to the conclusion that increasing extension contact will give the farmers opportunity to farm and community level activities.
6. The cosmopoliteness of the farmers had a positive significant relationship with their participation in farm and community level activities. Majority (61.3 percent) of the farmers had medium cosmopoliteness. So, it may be concluded that cosmopoliteness of the farmers was helpful to enhance their farm and community level activities.
7. Agricultural knowledge of the farmers showed significant positive relationship with their participation in farm and community level activities.

Hence, the findings of the study lead to the conclusion that agricultural knowledge help farmers for their successful farm and community level participation.

8. Organizational participation of the farmers had significant and positively relationship. The majority (61.3 percent) of the respondents had no participation. Hence, it may be concluded that there is a need to take steps for higher participation through various kinds of agricultural organization in the study area in order to develop abilities and attitudes among the farmers for participating in farm and community level activities.

5.3 Recommendations

On the basis of the findings and conclusions of the study, the following recommendations are presented below:

1. As the farmers had low farm and community level participation, hence necessary arrange should be made to improve their farm and community level participation.
2. It is found that respondent's cosmopoliteness, education media contact, organizational participation and agricultural knowledge were positively related with their farm and community level participation. So to increase farm and community level participation, farmers need to sufficient training, demonstration, field trip and other facilities to improve their above mentioned qualities.
3. The present study was conducted in four-selected village of Kathalia Union of Kathalia upazila under Jhalakathi district. Similar studies may be conducted in other parts of the country.

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APPENDICES-A

Interview Schedule

Department of Agricultural Extension and Rural Development
Bangabandhu Skeikh Mujibur Rahman Agricultural University, Gazipur-1706.

An interview schedule for a research study on "Farmers' Participation in Farm and Community Level Activities for their socioeconomic upliftment

Serial No-

Name of the respondent-

Village-

Union-

"Please answer the following question"

1. **Age**

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

2. **Education**

   What is the extent of your education?

(a) Do not know how to read and write ----------

(b) I have passed class ----------

3. **Family size**

   Please indicate the numbers of your family member

a) Male	----------numbers
b) Female	----------numbers
Total	---------- numbers

4. Farm size

Please indicate area of your land according to use

Sl. No	Use	Area of land	
		Local unit	Hectare
1	Homestead area		
2	Own land under own cultivation		
3	Own land given on to other borga system		
4	Land taken from others on borga system		
5	Own land given to others on lease		
6	Land taken from other on lease		
7	Own pond		
8	Own garden		
9	Total		

5. Family income

How much crops, vegetables and other produced you got last year ?

Source of production	Quality of production (local unit)	Value per unit (Tk)	Total Price (Tk)
i Paddy			
ii Wheat			
iii Jute			
iv Potato			
v Onion			
vi pulse crops			
vii Vegetables			
viii Cow rearing			
ix Poultry farm			
x Fish cultivation			
xi. Business			
xii Services			
xiii Labors			
xiv Others			

6. Extension media contact

Please indicate your level of contact with the following extension media

Nature of media	Information media	Extent of media			
		Frequently	Occasionally	Rarely	Never
Local media	Another members of the family/week	≥ 5 times	3-4 times	1-2 times	0
	Neighbours/week	≥ 4 times	2-3 times	1 times	0
	Relatives/year	≥ 5 times	3-4 times	1-2 times	0
	Local leader/month	≥ 5 times	3-4 times	1-2 times	0
	Ideal farmer/month	≥ 5 times	3-4 times	1-2 times	0
Non local media	Block supervisor/year	≥ 8 times	3-7 times	1-2 times	0
	Upazila Agriculture Officer/year	≥ 3 times	2 times	1 times	0
	Agriculture Extension Officer/year	≥ 5 times	3-4 times	1-3 times	0
Group media	Group discussion/year	≥ 3 times	2 times	1 times	0
	Field day/year	≥ 3 times	2 times	1 times	0
	Results demonstration/year	≥ 1 times	1 times	1 times/3 years	0
	Farmers field school/life	≥ 4 times	2-3 times	1 times	0
Mass media	Daily news paper/week	≥ 5 times	3-4 times	1-2 times	0
	Listening to agricultural programs in radio/week		3-4 times	1-2 times	0
	Watching to agricultural programs in television/ month	≥ 5 times	3-4 times	1-2 times	0
	Poster/year	≥ 5 times	3-4 times	1-2 times	0
	Leaflet/year	≥ 5 times	3-4 times	1-2 times	0
	Visiting krishi mala/year	≥ 1 times	1 times/2 year	1 times/3 years	0

7. Cosmopoliteness

How often do you travel out side your village?

Give tick (√) in the appropriate places

Sl. No	Place of visit	Frequency of visit			
		Frequently	Occasionally	Rarely	Never
1)	Out side of your own village/months	≥ 7 times	3-6 times	1-2 times	0
2)	Own upazila sadar/months	≥ 5 times	3-4 times	1-2 times	0
3)	Visit to other upazila outside own upazila/year	≥ 3 times	2 times	1 time	0
4)	Own district sadar/year	≥ 5 times	2-4 times	1 time	0
5)	Other district sadar/year	≥ 5 times	2-4 times	1 time	0
6)	Regional Agricultural Research Institute/year	≥ 3 times	2 times	1 time	0
7)	Capital city/year	≥ 3 times	1 time	1 time	0

8. Agricultural knowledge

Please answer the following questions

Sl. No.	Questions	Full marks	Obtained grade
1)	Name two modern varieties of paddy		
2)	Mention the doses of urea of modern rice varieties		
3)	Name two vegetables which is available in year round		
4)	Name two harmful insect of vegetables		
5)	Name two profitable vegetables which grows quick and low cost of production		
6)	Name two vitamin-C enriched fruits		
7)	Mention two cattle food		
8)	Mention two modern poultry varieties		
9)	Name two major diseases of fish		
10)	Name three pesticides		

9. Organizational Participation

Please indicate the nature of your participation in past and present in the following organizations

Sl. No	Name of organizations	Not involved	Nature of participation		
			Ordinary member	Member of the executive committee	Executive officer (President Secretary)
1)	Madrasha committee				
2)	Moktob committee				
3)	Mosque committee				
4)	Temple committee				
5)	School committee				
6)	Bazar committee				
7)	College management committee				
8)	Krishok Somaby Somiti				
9)	Fish project committee				
10)	Youth club				

10. Time availability

Please indicates the degree of your agreement for the following statements, and put tick marks (√) in the appropriate column against each statement

Sl No	Statements	Extent of time availability			
		1	2	3	4
1)	I feel busy for the management of my family members				
2)	I can not attempt the most voluntary programs of villages				
3)	I spend so much time for praying				
4)	I can not take care any body without my child				
5)	I can not attend different social activities with my neighbours				
6)	I do not want to involve with any kinds of risk by working of Krishok Somobay Samity				

1= Low time availability 2= Moderately availability
3= High availability 4= Very high availability

11. **Farm and Community Level Participation**

Please mention farmers participation in farm and community level activities with regard to the following statements

11.1 Education

Sl No	Statements	Frequently	Occasionally	Rarely	Never
1)	I discussed with all my family members about problems identification for related to education				
2)	I discussed with all my family members to determine strategy for solving related to education				
3)	I try to get co-operation of all my family members to plan of work strategies to solve related to educated problem				
4)	I try to ensure co-operation of all my family members for implementing of educational activities				
5)	I discussed with all my family members for evaluation success or failure in educational activities				

11.2 Health and sanitation

Sl No	Statements	Frequently	Occasionally	Rarely	Never
1)	I discussed with all my family members about problems identification for related to health and sanitation				
2)	I discussed with all my family members to determine strategy for solving related to health and sanitation				
3)	I try to get co-operation of all my family members to plan of work strategies to solve related to educated problem				
4)	I try to ensure co-operation of all my family members for implementing of health and sanitation activities				
5)	I discussed with all my family members for evaluation success or failure in health and sanitation activities				

11.3 Housing

Sl No	Statements	Frequently	Occasionally	Rarely	Never
1)	I discussed with all my family members about problems identification for related to house built/repair/ rearrangement				
2)	I discussed with all my family members to determine strategy for solving related to house built/repair/rearrangement				
3)	I try to get co-operation of all my family members to plan of work strategies to plan of work strategies to solve related to house built/repair/ rearrangement				
4)	I try to ensure co-operation of all my family for implementing of house built/repair/rearrangement				
5)	I discussed with all my family members for evaluation success or failure in house built/repair/rearrangement				

11.4 Farm production

Sl No	Statements	Frequently	Occasionally	Rarely	Never
1)	I discussed with all my family members about problem identification for related to farm production.				
2)	I discussed with all my family members to determine strategy for solving related to farm production				
3)	I try to get co-operation of all my family members to plan of work strategies to plan of work strategies to solve related to farm production				
4)	I try to ensure co-operation of all my family members for implementing of farm production				
5)	I discussed with all my family members for evaluation success or failure in farm production.				

11.5 Income generating activities

Sl No	Statements	Frequently	Occasionally	Rarely	Never
1)	I discussed with all my family members about problems identification for related to income generating activities				
2)	I discussed with all my family members to determine strategy for solving related to income generating activities				
3)	I try to get co-operation of all my family members to plan of work strategies to solve related to income generating activities				
4)	I try to ensure co-operation of all my family members for implementing of income generating activities				
5)	I discussed with all my family members for evaluating success or failure in income generating activities				

12.6. Irrigation and drainage

Sl No	Statements	Frequently	Occasionally	Rarely	Never
1)	I discussed with all my family members about problems identification for related to irrigation/drainage				
2)	I discussed with all my neighbours to determine strategy for solving related to irrigation/drainage				
3)	I try to get co-operation of all my neighbours to plan of work strategies to irrigation/drainage generating activities.				
4)	I try to ensure co-operation of all my neighbours for implementing of irrigation/drainage				
5)	I discussed with all my neighbours for evaluating success or failure in irrigation/drainage				

12.7 Co-operations and savings

Sl No	Statements	Frequently	Occasionally	Rarely	Never
1)	I discussed with all my neighbours/villagers about problems identification for related to co-operations and savings				
2)	I discussed with all my neighbours/villagers to determine strategy for solving related to co-operations and savings				
3)	I try to get co-operation of all my neighbours/villagers to plan of work strategies to co-operations and savings				
4)	I try to ensure co-operation of all my neighbours/villagers for implementing of of co-operations and savings				
5)	I discussed with all my neighbours/villagers for evaluating success or failure in co-operations and savings				

Thank you for your co-operation in data collection.

Signature of interviewer
Date:

APPENDICES-B

(Correlation Matrix)

Correlation Matrix of Dependent and Independent Variables (N=80)

		AGE	EDU	FLS	FMS	FAI	EMC	COS	AGK	OPI	TAL	TP
AGE	Pearson Correlation	1.000										
EDU	Pearson Correlation	-.200	1.000									
FLS	Pearson Correlation	-.010	.028	1.000								
FMS	Pearson Correlation	.087	.223	.256	1.000							
FAM	Pearson Correlation	.118	.223	.290	.737	1.000						
EMC	Pearson Correlation	-.185	.332	-.008	.487	.397	1.000					
COS	Pearson Correlation	-.017	.387	-.212	.186	.035	.285	1.000				
AGK	Pearson Correlation	-.143	.375	.035	.394	.396	.503	.280	1.000			
OP	Pearson Correlation	.048	.438	-.001	.569	.565	.595	.304	.434	1.000		
TA	Pearson Correlation	-.022	.016	-.094	-.206	-.233	-.385	-.041	-.260	-.344	1.000	
TP	Pearson Correlation	-.250	.334	.075	.376	.185	.424	.380	.500	.331	-.051	1.000

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Legend

AGE=Age
EDU=Education
FLS=Family Size
FMS=Farm Size
FAM=Family Annual Income
EMC=Extension Media Contact
COS=Cosmo politeness
AGK=Agricultural Knowledge
OP=Organizational Participation
TA=Time Availability
TP=Total Participation