

USE OF DIFFERENT MEDIA BY THE FARMERS AS AGRICULTURAL INFORMATION SOURCES

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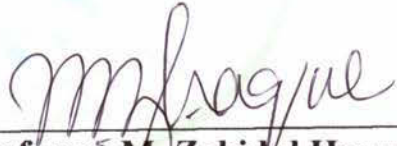
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CERTIFICATE

This is to certify that the thesis entitled, "*USE OF DIFFERENT MEDIA BY THE FARMERS AS AGRICULTURAL INFORMATION SOURCES*" submitted to the Faculty of Agriculture, Sher-e-Bangla Agricultural University, Dhaka, in partial fulfillment of the requirements for the degree of *MASTER OF SCIENCE IN AGRICULTURAL EXTENSION AND INFORMATION SYSTEM*, embodies the result of a piece of bona fide research work carried out by *Md.Ersadul Hoque*, Registration No. 00754, under my supervision and guidance. No part of this thesis has been submitted for any other degree or diploma.

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

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*Dedicated to
My
Beloved Parents*

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USE OF DIFFERENT MEDIA BY THE FARMERS AS AGRICULTURAL INFORMATION SOURCES¹

THESIS ABSTRACT

The main purpose of the study was to determine the extent of use of different media as agricultural information sources in Nilphamari district and to explore the relationships between the selected characteristics of the respondents and their use of different media as agricultural information sources. The study was conducted in five villages of Kamarpukur union of Saidpur upazila namely, Bangalipur, Lakkhanpur, Kamarpukur, Sonakhali and Botlagari. Data were collected from randomly selected 100 farmers by using a pre-tested interview schedule during the period from September 10 to October 10, 2007. Highest proportion (44 percent) of the farmers had low use of different media as agricultural information sources compared to 34 and 22 percent having medium use and high use of different media as agricultural information sources respectively. Among eight selected characteristic. Education, organizational participation, innovativeness, knowledge on agriculture had significant positive relationship with their use of different media as agricultural information sources. Besides, the farmers indicated 6 problems regarding the use of different media as agricultural information sources. Out of these, three problems in descending order of Problem Confrontation Index (PCI) were (i) "Unavailability of newspapers related to agriculture", (ii) "High price of batteries for Radio" and (iii) "Lack of cooperation from SAAO".



Chapter 1

Introduction

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Bangladesh is predominantly an agricultural country with an area of 1,47,570 square kilometer. The development of Agriculture is mostly dependent on the use of modern technologies by the farmers. Its economy is also based on agricultural activities. Agriculture represents directly and indirectly almost 16.38 percent of the country's Gross Domestic Product (GDP) and 63.2 of its employment opportunity (BBS, 2007). The total population of the country is 14.71 million with the annual growth rate of 1.8 and 64.8 percent of the population live in rural area. Population density is 953 persons per square kilometer (BBS, 2007). It is world's 7th most populous country. The per capital income is about \$520 and its people have a life expectancy of 65.1 years (BBS, 2007). The country is supplying to meet the basic need of her population from its net cultivable land which is estimated around 7.19 million hectares but still perhaps agricultural productivity of Bangladesh is one of the lowest in the world.

Agricultural production can be increased if appropriate technologies are used by the farmers. Diffusion of proper knowledge on modern agriculture among the rural people demands effective communication system which is largely ensured by the extension agents of DAE. In addition, immediacy and effectiveness are also valuable dimension for communication of technical message. This suggest that the flow of information should be as fast as possible and also should be understandable, well interpreted, accepted and linked by the farming community.

The Department of Agricultural Extension (DAE) is the largest extension organization in Bangladesh which is directly involved in motivating farmers for using modern agricultural technologies in order to improve productivity and to increase production.

Sub Assistant Agriculture Officers (SAAOs) are the field level charge agent of DAE and play a vital role in disseminating different innovation or practices among the farmers. As SAAOs are trying to bring about change in behaviour of farmers through motivation and communication, their own attitude towards a practice is a vital determinant for its diffusion. As different media are not yet popular among the farmers as a means of getting agricultural information, it is of almost important to investigate the issues regarding their attitude towards giving agricultural information to the farming community by using different media.

Different media including individual contact, group contact and mass contact etc. have a vital role to carry the message of improved agricultural practices from sources to the farmers. For disseminating agricultural knowledge to a large number of farmers quickly printed materials also provide accurate, motivating, credible and distortion free information.

Considering the above facts the researcher felt a thrust to conduct a study with a hope to measure extent of use of different media as agricultural information sources by the farmers.

1.2 Statement of the Problem

Different media are the important sources of extension teaching and communication. They play vital roles in presenting technological thoughts, ideas and information to the farmers. In view of the preceding discussion, the researcher undertook this problem entitled "Use of Different Media by the Farmers as Agricultural Information Sources". In

this study some important items of individual contact, group contact and mass contact were considered as different media. This study also tried to explore the relationship between some selected characteristics (independent variable) of the farmers such as age, education, farm size, annual income, organizational participation, cosmopolitaness, innovativeness, knowledge on agriculture and dependent variable i.e. use of different media by the farmers as agricultural information sources. The purpose of the study was to answer the following research questions:

- (i) At what extent different media are used by the farmers as agricultural information sources?
- (ii) Which characteristics of the farmers are related to their use of different communication media in receiving agricultural information?

1.3 Objectives of the Study

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

1. To determine and describe some of the selected characteristics of the farmers. The selected characteristics are:
 - i) Age
 - ii) Education
 - iii) Farm Size
 - iv) Annual income
 - v) Organizational participation
 - vi) Cosmopolitaness
 - vii) Innovativeness
 - viii) Knowledge on agriculture
- 2 To ascertain the use of different media by the farmers as agricultural information sources
3. To explore the relationships between the selected characteristics of the farmers and their use of different media as agricultural information sources.
- 4.To compare the problem confronted by the farmers in using different media as agricultural information sources.

1.4 Scopes and Limitations of the Study

The findings of the study will be applicable to Saidpur upazila of Nilphamari district in particular. However, the findings may also be applicable to other areas of Bangladesh where the physical, socio-economic and cultural conditions do not differ much with those of the study area. The purpose of the study was to have an understanding about the use of different media as agricultural information sources by the farmers. But considering the time and money the study was conducted with the following limitations:

1. The study was confined to Kamarpukur union of Saidpur upazila of Nilphamari district.
2. The farmers possessed many characteristics and their characteristics were varied to a great extent. Among those characteristics only 8 (eight) characteristics were selected for investigation in the study.
3. Population of the study was limited. Only one hundred farmers were selected randomly as sample of the study.
4. The investigator depended on the data furnished by the selected farmers during their interview.
5. Different communication media used by the farmers had various purposes such as farming, business, politics, religion etc. This study investigated the use of different media by the farmers as agricultural information sources only.
6. The facts and figures collected by the investigator applied to the situation prevailing during September to October, 2007.

1.5 Assumptions

An assumption is the supposition that an apparent fact or principle is true in the light of available evidence (Goode, 1945). During the course of study, the researcher had the following assumptions in mind:

1. The respondents included in the sample of the study were able to provide their opinions and were competent enough to satisfy the queries.
2. The responses furnished by the respondents were reliable and valid.
3. The different media included in the study were known to the farmers of the area concerned.
4. The environmental conditions of farmers were more or less similar throughout the study area.
5. Views and opinions furnished by the farmers included in the sample were the representative of the whole population of the study.

1.6 Statement of Hypothesis

Eight research hypotheses were put forward to test the relationship between each of the 8 (eight) selected characteristics of the farmers and their use of different media as agricultural information sources. The use of different media as agricultural information sources by the farmers is related to each of their: age, education, farm size, annual income, organizational participation, cosmopolitaness, innovativeness and knowledge on agriculture.

Goode and Hatt (1952) defined hypothesis as "a proposition which can be put to a test to determine its validity. It may seem contrary to or in accord with common sense". For statistical testing of the research hypothesis they were converted into null form. A null hypothesis states that there is

no relationship between the concerned variables. However, the following null hypotheses were formulated to explore relationships of the selected characteristics of farmers and their use of different media as agricultural information sources. The null hypotheses were as follows:

1. There is no relationship between age of the farmers and their use of different media as agricultural information sources.
2. There is no relationship between education of the farmers and their use of different media as agricultural information sources.
3. There is no relationship between farm size of the farmers and their use of different media as agricultural information sources.
4. There is no relationship between annual income of the farmers and their use of different media as agricultural information sources.
5. There is no relationship between organizational participation of the farmers and their use of different media as agricultural information sources.
6. There is no relationship between cosmopolitanism of the farmers and their use of different media as agricultural information sources.
7. There is no relationship between innovativeness of the farmers and their use of different media as agricultural information sources.
8. There is no relationship between knowledge on agriculture of the farmers and their use of different media as agricultural information sources.

1.7 Definition of Terms

For clarity of understanding certain the following terms used frequently throughout the study are defined and interpreted in alphabetical order:

Age

Age of the respondent was defined as the period of time from his birth to the time of interview.

Agricultural fair

Fair is generally organized by the Department of Agricultural Extension and other agricultural government organization to create awareness about improved technology among a large number of people within a short time and to stimulate general motivation for agricultural and rural development in the area.

Annual income: It defined as the total earnings of an individual and the members of his family both from agriculture and other sources (business, service and other sources).

Cosmopolitaness

It referred to the degree or the frequency of movement of the farmers to outside places from his working place.

Education

Education referred to the number of years of schooling completed by a respondent.

Farm size

It referred to the farm area on which a farmer used to do his farming either possessed by him or taken up by borga and lease from others during the year under investigation.

Folk campaigns

Folk campaigns refer to traditional form of entertainment and communication to convey information specially agricultural information to the farmers in an interesting and culturally acceptable way. Folk campaigns include songs, story telling, drama to stimulate and motivate farmers about agricultural technologies. The DAE, health and other organizations arrange village folk campaign for this purpose.

Group media

Group media refer to the frequency of exposure of the respondents to different group sources of information such as group discussion meeting, agricultural training session, method demonstration meeting and result demonstration meeting.

Individual media

Individual media refer to the frequency of exposure of respondents to different individual sources of information such as neighbours, friends, relatives, extension workers and local leaders etc.

Information sources

The term information sources refers to the media or channels through which various information are diffused among the farmers on different aspects including crops, livestock, fisheries, community forestry, educational and other related matters.

Innovativeness

Innovativeness is the degree to which an individual adopts an innovation relatively earlier than other members in a social system.

Mass media

The mass media are the mean of communication or instrument or apparatus through which messages are transmitted towards relatively large, heterogeneous and anonymous audience within a relatively shorter timed form the source to the audience. Mass media included in the study were radio, television, newspaper, poster and agricultural fair.

Newspaper

It referred to a bunch of loss printed papers, properly folded. These contain news, views, advertisements, educational messages and agricultural messages, published on daily or weekly basis, generally from the capital City.

Organizational participation

Is defined as an association of two or more persons which have at least one face to face meeting in a year. Participation in an organization refers to his taking part in the organization as ordinary member, executive member or executive officer.

Poster


Poster is a placard displayed in a public place with the purpose of creating awareness amongst the people.

Radio

Radio is a powerful and popular audio media which falls in mass media. It conveys message from one station to all who listen radio programme. It makes things excitingly alive and believable. Furthermore, it can motivate, stimulate, induce belief, create and change basic and attitudes and it reaches to a large number of people inexpensively.

Television

Television is an audio visual media for diffusing information and fall under mass media along with news, various educational programmes, and Mati-0- Manus-one important agricultural programme, are displayed through TV. It is a media that can support the effects of extension staff in spreading awareness, gi^ving warnings, facilitating farmers to farmer's communication etc.



Chapter 2
Review of Literature

CHAPTER 2

REVIEW OF LITERATURE

The purpose of this chapter is to review literature having relevance to the present study. The purpose of this study was to ascertain the use of different media by the farmers as agricultural information sources and their relationship with the selected characteristics of the farmers. Little work had been done in Bangladesh on these subjects. The researcher, therefore, made an exhaustive effort to review researches directly or indirectly related to the present study. The available reviews are presented in two sections.

Section I: Review on studies relating to different media.

Section II: Review on studies relating to relationships of selected characteristics of the farmers.

2.1 Use of communication Media in General

Nataraju and Channegowda (1985) found in a study that respondents used radio (54 percent) newspaper (46 percent) neighbours (23.3 percent) demonstrations (10.6 percent) and group meetings (6 percent) in receiving information on improved dairy management practices.

Mekabutra (1985) conducted a study in Thailand and reported that among the mass media that offered more knowledge in agriculture was radio, followed by television and newspaper respectively. Considering knowledge gained from mass media that were applicable to their work, farmers opined that television provided about 83.5 percent, radio 78 percent and newspaper 77 percent.

Samanta (1986) reported that mass communication channels involved different mass media such as radio, TV, magazine, newspaper, etc. which enable a source of one or a few individuals to reach a large audience rapidly. These media are effective in the developed countries, while in the developing world their effectiveness is limited due to many factors. The modern media of communication like radio, TV, magazines, newspapers, etc. are available mainly to urban people and elite's, and the coverage of rural program by mass media are also inadequate.

Chidanandappa and Veerabhadraiah (1988) examined different mass media sources used by extension personnel and reported that extension personnel made use of the package of practices like booklets, extension folders, radio, newspapers, and farm magazine to a large extent as media of information.

Van den Ban and Hawkins (1988) reported that in industrialized countries people spend more time with television and radio than printed word. Radio is most important mass medium for farmers of less industrialized countries. The urban middle class in less industrialized countries now also spend considerable time watching television but it is not yet a very important medium in rural areas of these countries.

Dinampo (1989) conducted a study in Philippines to determine communication need and preferences. He observed that farmers were found to prefer an interpersonal media (extension agents) rather than mass media. Among mass media, first preference was radio followed by printed materials and audio visual sources.

Reinser and Hays (1989) reported that the agricultural press is a vital link in transplanting information to US farmers.

Hoque (1990) in his paper concluded that mass media can perform a better role in technology diffusion than what those do today. Therefore, planned efforts to

introduce more of mass media strategies that are proven effective by experiments are highly recommended.

Batte et.al. (1990) conducted a study on cash grain farmers of Ohio. They found that radio broadcast and general farm magazine were the two marketing information sources and were most frequently cited as useful. Highly formalized and marketing specific sources such as marketing consultants, news letters and computerized information sources were cited relatively infrequent. Radio and television broadcast were frequently cited as most source of marketing information by older farmers and operators of small farmers'.

Chough (1991) in a study observed that press, radio and television were regarded as important vehicles of information which could help ensure the supply of inputs to those really who need them.

Wate and Rivera (1991) in their study examined the application of new technologies in agricultural information transfer process and explored future perspectives of new technologies as a force of change in developing countries. They found that print media, electronic media, radio, television, satellite computers and mobile audio-visual media were the important sources of spreading information.

Khan and Paracha (1994) conducted a study in two villages in Pakistan, one innovative and other non-innovative, among the farmers of a cotton producing district, and reported that the main channel of communication were mass media and interpersonal communication. The mass media centrally organized and included radio, television and newspaper.

Molinar *et al.* (1994) in their paper concluded that radio would remain the most significant medium in the Pacific for some time because of the geographical nature of the islands. Continued training, radio, video and print are vital if they are to meet the spatial dimension of the communication process.

DAE (1995) in order to achieve the objectives of the extension programme consider the following extension programs consider the following extension methods and strategies:

- ❖ Media campaign including printed media, radio and television
- ❖ Thana and district fair
- ❖ Traditional and folk media
- ❖ Group meeting
- ❖ Farmers training; motivational tour, farm walk, method demonstrations, field days, results demonstration, individual farm visit, etc. Printed media commonly used are bulletins, posters, leaflet, circular letters, newspapers and magazines.

Rahman (1995) in his paper reported that the rural press can serve the farmers and families in the villages by providing timely information regarding farming and harvest. The rural press by providing up-to-date market prices of agricultural products can help the local farmers.

Westoff and Rodriguer (1995) reported that in Kenya, about 15% women neither saw nor heard radio messages. The proportion rose to 25% among those who have heard radio message, to 40% among those who were exposed to both radio and print messages and to 50% among those to radio, print and television messages of family planning activity. It was opined that mass media can have an important effect on reproductive behaviour.

Khan (1996) conducted a study on the use of information sources by the poor farmers and conducted that 75% of the respondents had medium use of various information sources for receiving agricultural information.

Islam (1996) in his study found that the highest proportion of the respondents (44.55) belonged to medium media exposure category and 38.18% belonged to low exposure and 17.27% belonged to high exposure group. He also found that among 15 media, radio ranked in 6, television 7, fair 8, agricultural publication 1-5 was for individual media.

Egbule and Njoku (2001) in their study on mass media for adult education in Nigeria found that mass media have performed poorly in disseminating requisite agricultural information to farmers, although there is a positive correlation between mass media usage and farm yield.

Mazher (2003) in a study in Pakistan reported that Pamphlets, Magazines and newspapers were suitable for dissemination of sugarcane production technologies.

2.2.1 Age and Use of communication Media

Galindo (1994) found that the exposure to the communication media was closely related with the age of the farmers.

Sarker (1995) in his study concluded that age of the farmers had negative and insignificant effect on the use of communication media.

Islam (1995) found that the age of the farmers had negative and significant relation with the use of communication media.

Khan (1996) concluded that age of the farmers had a negative and insignificant effect on the use of information sources.

Anisuzzaman (2003) in his study conducted that age of the farmers had negative and significant relationship with the use of communication media.

Nuruzzaman (2003) conducted that age of the farmers had significant negative relationship with the use of mass media.

Islam (2005) in his study concluded that age of the farmers had a no significant relationship with their use of printed materials.

Roy (2006) in his study concluded that age of the farmers had a negative and non significant effect on the effectiveness of mass media.

2.2.2 Education and Use of Media

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

Kumari (1988) from the study on communication effectiveness of six media showed that there was significant positive relation between education of women and attitude towards the message.

Islam (1995) found that education of the farmers had positive and highly significant relationship with their use of communication media.

Sarker (1995) in his study concluded that education of the farmers had positive and significant relationship with their use of communication media.

Nuruzzaman (2003) in his study observed that education of the farmers had significant positive relationship with their use of mass media.

Islam (2005) in his study concluded that education of the respondents had significant positive relationship with their use of printed materials.

Mollah (2006) observed in his study that education of the farmers had significant positive relationship with the rice production technologies.

Roy (2006) in his study observed that education of the farmers had a highly significant and positive relationship with the effectiveness of mass media.

2.2.3 Farm Size and Use of communication Media

Bhuiyan (1988) found that the farm size of the farmers had positive and significant effect on the use of communication media.

Sarker (1995) in his study concluded that farm size of the respondents had a positive and significant relationship with their use of communication media.

Islam (1995) found that farm size of the farmers had a positive and significant relationship with their use of communication media.

Anisuzzaman (2003) found that the farm size of the respondents had no significant relationship with their use of communication media.

Nuruzzaman (2003) in his study conducted that farm size of the farmers had no significant relationship with the use of mass media.

Islam (2005) in his study concluded that farm size of the respondents had no significant relationship with their use of printed materials.

Khatun (2006) in her study concluded that farm size of the respondents had significant positive relationship with their homestead gardening.

Roy (2006) in his study concluded that farm size of the farmers had no significant relationship with the effectiveness of mass media.

2.2.4 Annual Income and Use of Media

Bhuiyan (1988) in his study observed that income of the farmers had no significant effect on the use of communication media.

Uddin (1993) reported that there was strong and highly significant relation between income of the sugarcane growers and their reception of information.

Nuruzzaman (2003) reported that the annual income of the farmers had no significant relationship with their use of mass media.

Anisuzzaman (2003) related that the annual income of the respondents had no significant relationship with their use of communication media.

Islam (2005) in his study concluded that annual income of the respondents had no significant relationship with their use of printed materials.

Roy (2006) in his study concluded that annual income of the farmers had no significant relationship with the effectiveness of mass media.

2.2.5 Organizational Participation and Use of Media

Bhuiyan (1988) in a study found that organizational participation of the farmers had no significant effect on the use of communication media.

Rahman (1991) found that organizational participation and credibility of Block of Block Supervisors showed insignificant relationship.

Islam (1995) in his study on wheat growers found that organizational participation of the farmers had positive significant relationship with their use of communication media.

Nuruzzaman (2003) found that organizational participation of the farmers had positive and significant relationship with their use of mass media.

Islam (2005) in his study concluded that organizational participation of the respondents had positive significant relationship with their use of printed materials.

Roy (2006) in his study concluded that organizational participation of the farmers had a positive and significant relationship with the effectiveness of mass media.

2.2.6 Cosmopolitanism and Use of Media

Latif (1974) found that the relationship between cosmopolitanism and communication exposure was positively significant.

Kadam and Sabale (1983) observed in a study that cosmopolitanism of the farmers were significantly associated with the extent of use of communication media.

Bhuiyan (1988) in a study observed that the relationship between cosmopolitanism and the use of communication and the use of communication media was not significant.

Islam (2005) in his study concluded that cosmopolitanism of the respondents had positive significant relationship with their use of printed materials.

2.2.7 Innovativeness and Use of Media

Uddin (1993) reported that there was a highly significant relationship between innovativeness of the sugarcane growers and their reception of information on planting method.

Islam (1995) found that innovativeness of the farmers had positive and highly significant relation with their use of communication media.

Khan (1996) concluded that there was no significant relationship between innovativeness and use of information by resource poor farmers.

Nuruzzaman (2003) found that innovativeness of the farmers had positive and significant relationship with their use of mass media.

Islam (2005) in his study concluded that innovativeness of the respondents had positive significant relationship with their use of printed materials.

2.2.8 Knowledge on Agriculture and Use of Media

Kashem and Jones (1988) found in their study that agricultural knowledge of the small farmers rendered significant positive correlation with their contact with information sources.

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

Parveen (1995) found that mass media exposure of the respondents had a positive significant relation with their agricultural knowledge.

Sarker (1995) found a highly significant and positive relationship between agricultural knowledge of the farmers and their use of communication media.

Islam (1995) in his study observed that agricultural knowledge of the farmers had positive and highly significant relationship with their use of communication media.

Khan (1996) found that there was a highly significant and strongly positive relationship between agricultural knowledge of the farmers and their use of information sources.

Anisuzzaman (2003) found that the agricultural knowledge of the respondent had positive significant relationship with their use of communication media.

Nuruzzaman (2003) in his study observed that agricultural knowledge of the farmers had positive and significant relationship with their use of mass media.

Islam (2005) in his study concluded that knowledge on agriculture of the respondents had positive significant relationship with their use of printed materials.

Hossain (2006) in his study observed that knowledge on agriculture of the farmers had positive significant relationship with their improved rice production technologies.

Roy (2006) in his study observed that knowledge on agriculture of the farmers had a positive and significant relationship with the effectiveness of mass media.

1.9 The Conceptual Framework of the Study

In scientific research, selection and measurement of variables constitute an important task. The hypothesis of a research while constructed properly contains at least two important elements i.e. "a dependent variable" and "an independent variable". A dependent variable is that factors which appears, disappears or varies as the research introduces, removes or varies the independent variable (Townsend, 1953). An independent variable is that factor which is manipulated by the researcher in his attempt to ascertain its relationship to an observed phenomenon. In view of prime findings of review of literature, the researcher constructed a self-explanatory conceptual model of the study which is presented in Figure 2.1.

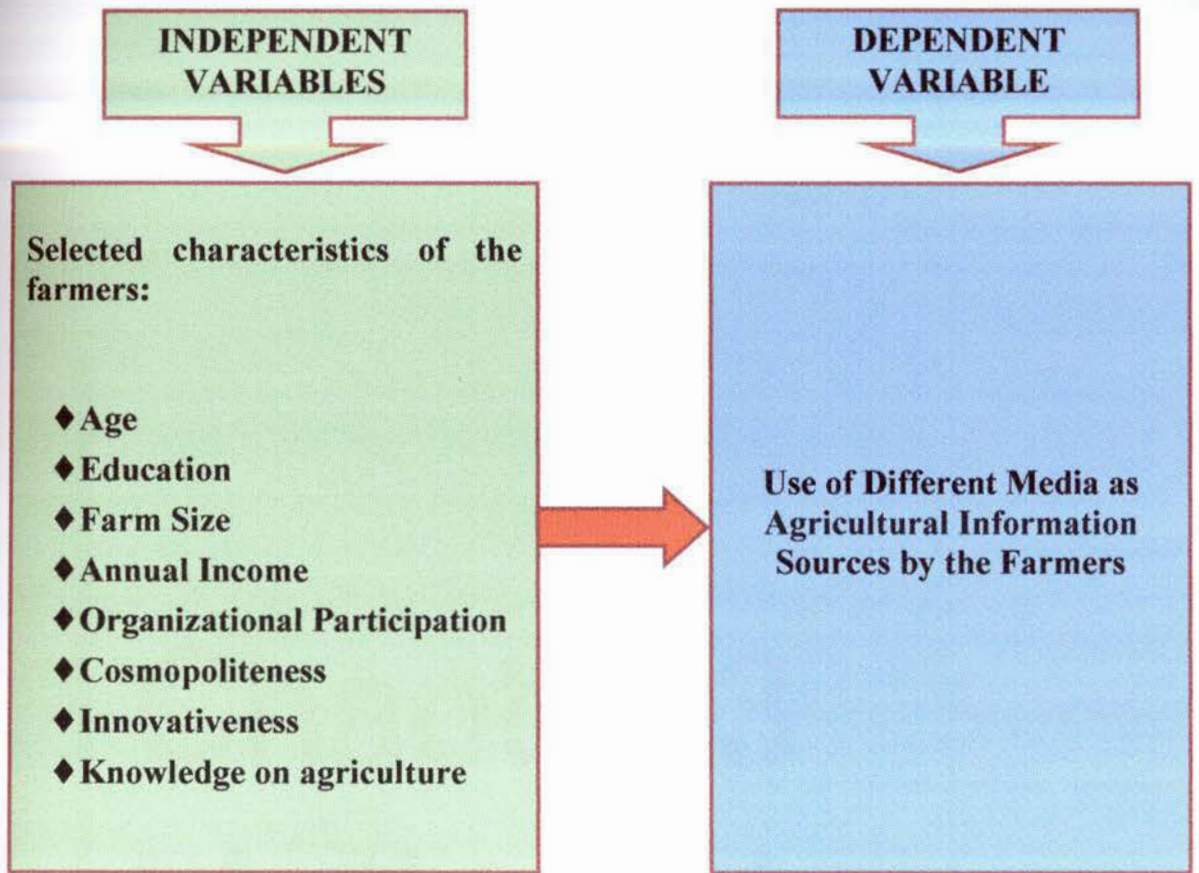


Figure 2.1 The conceptual framework of the study



Chapter 3

Methodology

CHAPTER 3

METHODOLOGY

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

3.1 Locale of the Study

Saidpur upazilla under Nilphamari district was selected as the study area. The study area consisted of 5 unions. Kamarpukur union was selected covering 5 villages namely, Bangalipur, Lakkhanpur, Kamarpukur, Sonakhali and Botlagari by following simple random sampling technique. These 5 villages constituted the locale of the study.

3.2 Population and Sample Size

An up to date list was prepared of all the farm families of the selected village with the help of Agricultural Extension Officer (AEO) of Saidpur upazila and Sub Assistant Agriculture Officer (SAAO) of Kamarpukur union. The total number of farm families in this village was 2012. Heads of the 2012 farm families constituted the population for this study. About five (5) percent of the farmers were selected from this village by using a random number table.

One hundred (100) farmers were selected which constituted the sample for this study. However, a reserve list of 10 farmers was also prepared. Farmers in the reserve list were used only when a respondent in the original list was not available.

Table 3.1 Distribution of Population and Samples with Reserve List

Name of Union	Name of Village	Total Population	Sample Population	Reserve Population
Kamarpukur	Bangalipur	430	21	2
	Lakkhanpur	328	17	2
	Kamarpukur	439	22	2
	Sonakhali	448	22	2
	Botlagari	367	18	2
Total =		2012	100	10

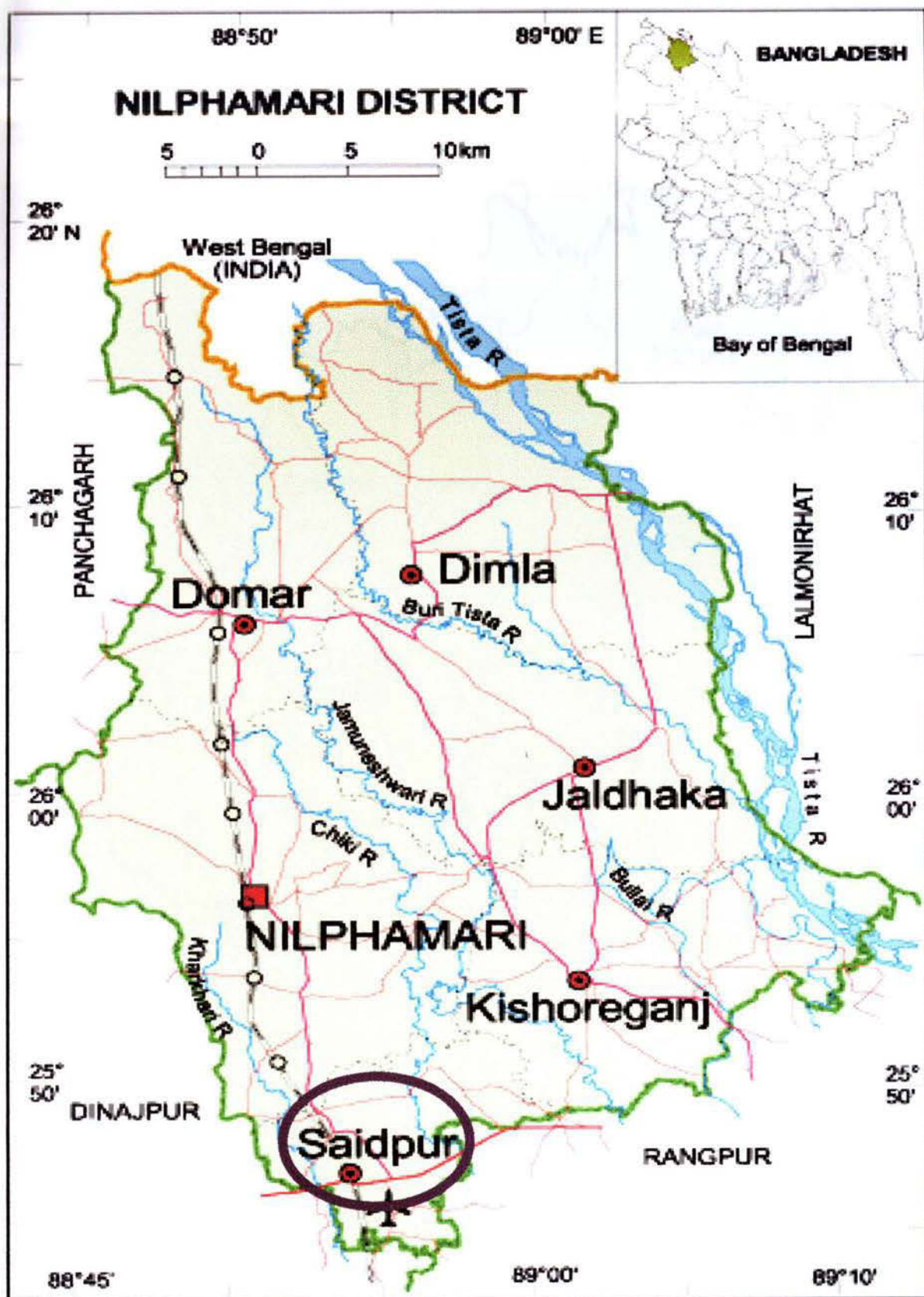


Figure 3.1 A map of Nilphamari district showing the locale of the study

Study Area

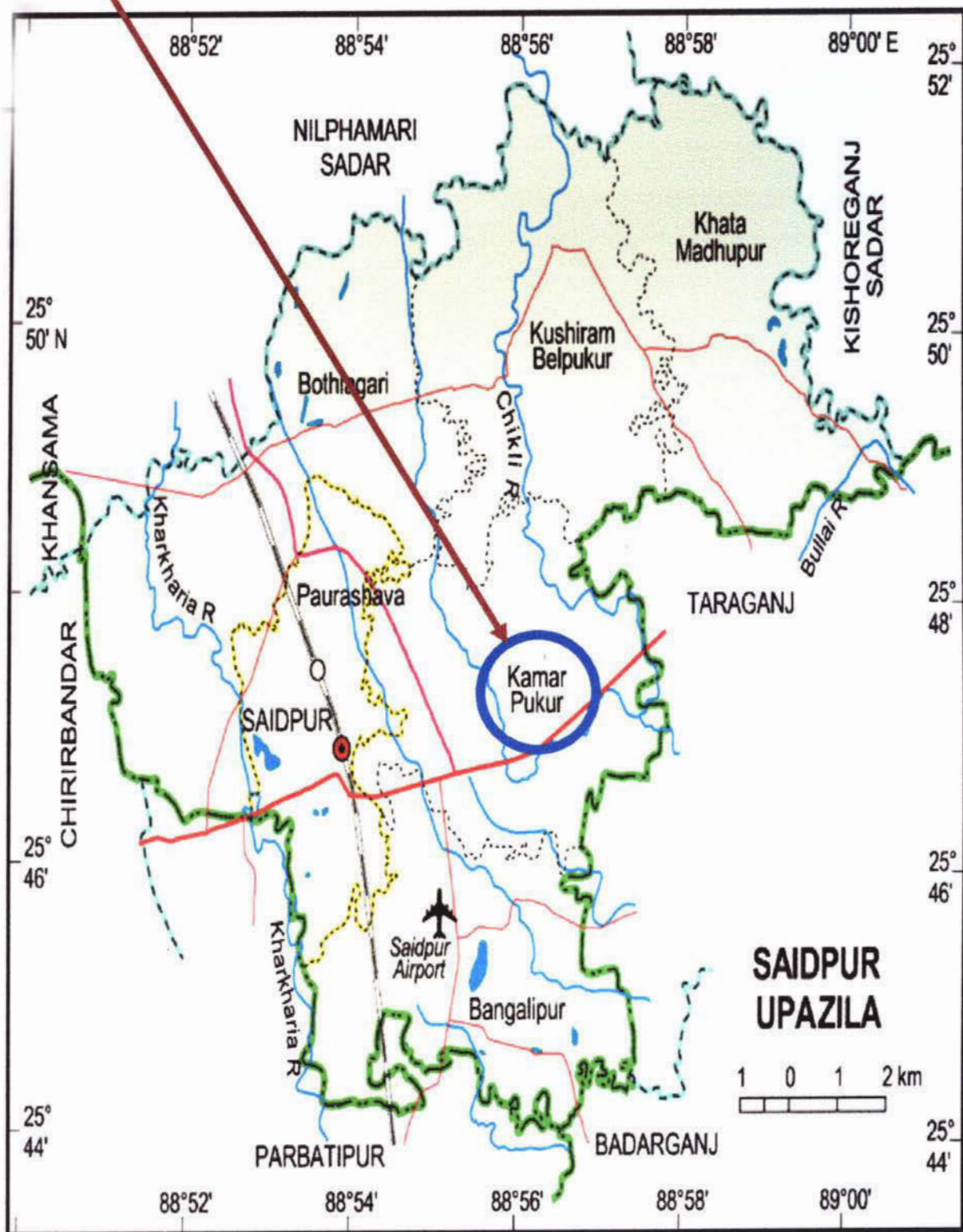


Figure 3.2 A map of Saidpur upazila showing the study area.

3.3 Selection of Variables

There are nine variables of this study. Eight of these are independent variables and one is dependent variable.

The independent variables of the study are:

- i. Age,
- ii. Education
- iii. Farm Size
- iv. Annual Income
- v. Organizational Participation
- vi. Cosmopolitaness
- vii. Innovativeness
- viii. Knowledge on Agriculture

The dependent variables of the study is “Use of Different Media by the Farmers as Agricultural Information Sources”

3.4 Measurement of Variables

3.4.1 Measurement of Independent Variables

In this study selected personal, economic, social and psychological characteristics of the farmers were considered as independent variables.

These characteristics are as follows:

3.4.1.1 Age

Age of the farmers refers to the period of time from her birth to the time of interview. It was measured in terms of actual years on the basis of his response to item No. 1 of the interview schedule.(Appendix A).

3.4.1.2 Education

The education of a respondent was measured by the number of years of schooling. A score of one (1) was assigned for each year of schooling completed. For example, if a respondent completed study up to class five, his education score was assigned as 5. The knowledge status of a respondent who could sign only was assigned a score of 0.5 while illiterate farmers were assigned a score of 0. Besides, if a respondent did not go to school but studied at home and if his knowledge status was equivalent to the student of class five, then he was assigned a score of 5.

3.4.1.3 Farm Size

Farm size of a respondent was measured by the land area possessed by him. Data obtained in response to questions under item No. 3 of the interview schedule formed the basis for determining the farm size of the respondent. Here, farm size was computed by using the following formula:

$$\text{Farm size} = A_1 + A_2 + \frac{1}{2} (A_3 + A_4) + A_5$$

Where,

A_1 = Homestead area (including pond & vegetable garden)

A_2 = Own land under cultivation

A_3 = Land given to others as barga

A_4 = Land taken from others as barga

A_5 = Land taken from others as lease

The respondent has given information for their farm size in local measurement. Finally, it was converted into hectare and was considered as the farm size score of a respondent.

3.4.1.4 Annual Income

The method of determining annual income of a respondent involved two aspects. The first aspect is agriculture and the second aspect is non-agriculture. In calculating the annual income of a respondent, income from different sources were added together to obtain total annual income

of a respondent. A score of 1 was assigned for Tk. 1000. For an amount less than Tk.1000, a fraction score was computed and added with the main score. Data obtained in response to item No. 4 of the interview schedule were used to calculate the income score of a respondent.

3.4.1.5 Organizational Participation

Organizational participation of a respondent was measured on the basis of three dimensions:

- (i) Nature of involvement,
- (ii) Duration of participation, and
- (iii) Number of organizations in which a respondent was involved.

Organizational participation score of a respondent was computed by using the following formula:

$$OP = P_{om} \times N_i \times Y_i + P_{em} \times N_i \times Y_i + P_{eo} \times N_i \times Y_i$$

Where,

OP = Organizational Participation Score

P_{om} = Ordinary member (weight = 1)

P_{em} = Executive member (weight = 2)

P_{eo} = Executive officer (weight = 3)

Y_i = Year of participation (i = 1, 2, 3.....n)

N_i = Number of organization (s) (i = 1, 2, 3.....n)

3.4.1.6 Cosmopoliteness

Cosmopoliteness of a respondent referred to frequency of visit to different places outside of his own village. The following scale was used for computing cosmopoliteness score of a respondent.

Place of visit	Scoring system
1. Visit to other villages	0 = not even once in a year (Never)

	1 = 1-5 times in a year (Rarely) 2 = 6-9 times in a year (Occasionally) 3 = 10 or more times in a year (Regularly)
2. Visit to own upazila town	0 = Not even once in a year (Never) 1 = 1-3 times in a year (Rarely) 2 = 4-7 times in a year (Occasionally) 3 = 8 or more times in a year (Regularly)
3. Visit to own district town	0 = Not even once in a year (Never) 1 = 1-2 times in a year (Rarely) 2 = 3-5 times in a year (Occasionally) 3 = 6 or more times in a year (Regularly)
4. Visit to other district town	0 = Not even once in a year (Never) 1 = 1-2 times in a year (Rarely) 2 = 3-4 times in a year (Occasionally) 3 = 5 or more times in a year (Regularly)
5. Visit to capital city	0 = Not even once in a year (Never) 1 = Once in a year (Rarely) 2 = 2-3 times in a year (Occasionally) 3 = 4 or more times in a year (Regularly)

Scores obtained for visit to each of the above five categories of places were added together to get the cosmopolitanism score of a respondent. The range of cosmopolitanism score could be from '0' to '15', where '0' indicated 'no cosmopolitanism' and '15' indicated 'very high cosmopolitanism'.

3.4.1.7 Innovativeness

The term innovativeness refers to the degree to which an individual is relatively earlier in adopting new ideas than the other members of his social system (Rogers, 1983). Innovativeness of a respondent was measured on the basis of adoption of 7 selected improved technologies by the respondents. Score was assigned on the basis of two dimensions (a) how many technologies were adopted and (b) how many years have taken to adopt these selected technologies after being informed for the first time.

The following formula was used for computing the innovativeness score of a respondent.

$$I = T_n \times Y_1 + T_n \times Y_2 + T_n \times Y_3 + T_n \times Y_4 + T_n \times Y_5$$

Where,

I = Innovativeness

T_n = No. of technologies used by farmers among selected 7 technologies

Y_1 = Adoption within 1 year of hearing (score-4)

Y_2 = Adoption within 1-2 years of hearing (score-3)

Y_3 = Adoption within 2-3 years of hearing (score-2)

Y_4 = Adoption after 3 years of hearing (score-1)

Y_5 = No use of technologies (score-0)

Data obtained in response to item No. 7 of the interview schedule were added together to obtain the overall innovativeness score for a respondent. So, the possible innovativeness score of a respondent could range from 0 to 28, where '0' indicated no innovativeness and '28' indicated high innovativeness.

3.4.1.8 Knowledge on Agriculture

Knowledge on agriculture of the farmers was measured in score by asking 10 selected questions related to various aspects of agriculture. A full score 1 (one) was assigned for each correct answer and 0 (zero) score was assigned for the wrong answer. Therefore, for correct responses to all the questions a respondent could get a total score of '10', while for wrong responses to all the questions a respondent could get '0'. However, the knowledge scores of the respondents were computed by adding his scores for all the 10 items. Thus, the knowledge score could range from '0' to '10', where '0' (zero) indicated 'no knowledge on agriculture' and '10' indicated 'high knowledge on agriculture'.

3.4.2 Measurement of Dependent Variable

3.4.2.1 Use of Different Media as Agricultural Information Sources

Use of different media is referred to the exposure or contact of the farmers with some selected information sources and personalities. Using different media is very important for receiving information from various sectors. The score for different media used by a respondent was measured on the basis of his extent of contact with the selected information sources within a given duration for getting required information. There are three levels of extension contact. These are as follows:

a) Personal contact

Personal contact of a respondent was determined by computing personal contact score on the basis of the extent of visit. The scale used for determining the exposure of a respondent is given below:

Source of contact	Scoring system
1. Upazilla Agriculture Officer (UAO)	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
2. Additional Agriculture Officer (AAO)	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
3. Agriculture Extension Officer	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
4. Sub Assistant Agriculture Officer (SAAO)	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
5. Field worker of NGO	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
6. Dealer of insecticides	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
7. Dealer of fertilizer	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5

The personal contact score of a respondent was determined by summing up all personal contact scores. This score of a respondent could range from 0-35 where '0' indicated 'no personal contact' and '35' indicated 'high personal contact' as shown in item No. 8 of the interview schedule.

b) Group contact

The group contact score of a respondent was determined by computing all the group contact scores as shown in item No. 8 of the interview schedule. Scores were assigned for group contact in the following manner:

Source of contact	Scoring system
1. Result Demonstration	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
2. Method Demonstration	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
3. Group Conference	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
4. Field Day	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5

The group contact score of a respondent could range from 0 to 20, where '0' indicated 'no group contact' and '20' indicated 'high group contact'.

c) Mass contact

Data obtained in response to item No. 8 of the interview schedule were used to obtain mass contact score of a respondent. Scores were assigned for mass contact in the following manner:

Source of contact	Scoring system
1. Radio	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
2. Television	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
3. Poster	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
4. Newspaper	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
5. Circular Letter	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5
6. Folk Campaign	Never = 0, Yearly = 1, Quarterly = 2, Monthly = 3, Weekly = 4, Daily = 5

According to above scale possible mass contact score of the respondent could range from 0 to 30, where '0' indicated 'no mass contact' and '30' indicated 'high mass contact'.

$$\text{Use of Different Media Score} = \text{Personal Contact Score} + \text{Group Contact Score} + \text{Mass Contact Score}$$

Thus use of different media score of a respondent could range from 0 to 85, where '0' indicated 'no use of different media' and '85' indicated 'high use of different media'.

3.5 Measurement of Problem Confrontation Index (PCI)

The farmers of the study area might have faced various types of problems in adopting use of different media as agricultural information sources. But the investigator gained an experience through personal contact regarding common problems confronted by the respondents at the time of data collection. Besides, the researcher gained knowledge through consultation with experts, pre-testing experience and reviewing previous research findings. Finally, he prepared a list of six possible problems in this regard. A scale was prepared to indicate the extent to which each of the six problems was applicable in the case of a respondent. The responses were obtained through a 5-point likert type scale addressing the extent of problem as 'very high problem', 'high problem', 'medium problem', 'Low problem' and 'no problem at all' and weights were assigned to these responses as '4', '3', '2', '1' and '0' respectively.

The Problem Confrontation Index (PCI) was computed by using the following formula:

$$\text{PCI} = (P_0 \times 0) + (P_1 \times 1) + (P_2 \times 2) + (P_3 \times 3) + (P_4 \times 4)$$

Where,

P_0 = Number of farmers who did not faced problem at all

P_1 = Number of farmers who faced low problem

P_2 = Number of farmers who faced medium problem

P_3 = Number of farmers who high problem

P_4 = Number of farmers who faced very high problem

To determine comparative importance of those six problems, Problem Confrontation Index (PCI) was computed for each of the six problems by summing up the weights assigned for responses of all the respondents against each problem. Problem Confrontation Index (PCI) of a specific problem could range from '0' to '400' for this study, where '0' indicated 'no problem confrontation' and '400' indicated the 'high problem confrontation'.

3.6 Statement of Hypothesis

As defined by Goode and Hatt (1952), "A hypothesis, which can be put to a test to determine its validity. It may see contrary to, or in accord with common sense. It may prove to be correct or incorrect. In any event, however, it leads to an empirical test". In studying the relationship between variables, research hypothesis are formulated which state the anticipated relationship between the variables. However, for statistical test it becomes necessary to formulate null hypothesis. A null hypothesis states that there is no relationship between the variables. If a null hypothesis is rejected on the basis of a statistical test, it is assumed that there is a relationship between the concerned variables.

The null hypothesis can be assumed for this study as – "there was no relationship between the farmers' selected characteristics and their use of different media as agricultural information sources". The characteristics were: age, education, farm size, annual income, organizational participation, cosmopolitaness, innovativeness and knowledge on agriculture.

3.7 Instrument for Data Collection

In order to collect relevant information from the respondents, an interview schedule was used. The schedule was carefully designed keeping the objectives of the study in view. The schedule contained both open, closed and multiple choice questions. Most easy, simple direct questions and different scales were used to obtain the information. Direct questions were also used to obtain information, like age, education, farm size and annual income etc. Scales were used to measure the organizational participation, cosmopolitanness and innovativeness of the respondents. Ten closed form questions were designed to obtain information for knowledge on agriculture of the farmers regarding the use of modern agricultural technologies. The questions were arranged systematically and presented clearly so that the respondents could understand to furnish information in a consistent and systematic manner. The schedule was prepared in Bengali and was pre-tested. The pre-test facilitated the researcher to examine the suitability of different questions and statements of the schedule in general. After that, the schedule was finally prepared with necessary correlations, modifications and alterations as per experience of the pre-test. The interview schedule is enclosed at Appendix-A.

3.8 Collection of Data

Data for this study were collected through personal interview by the researcher himself during September 10 to October 10, 2007. The interview schedule prepared earlier by the researcher was used to gather information. All possible efforts were made to explain the purpose of the study to the respondents in order to get valid and pertinent information from them.

Interviews were conducted with the respondents at their homes. While starting interview with any respondent, the researcher took all possible

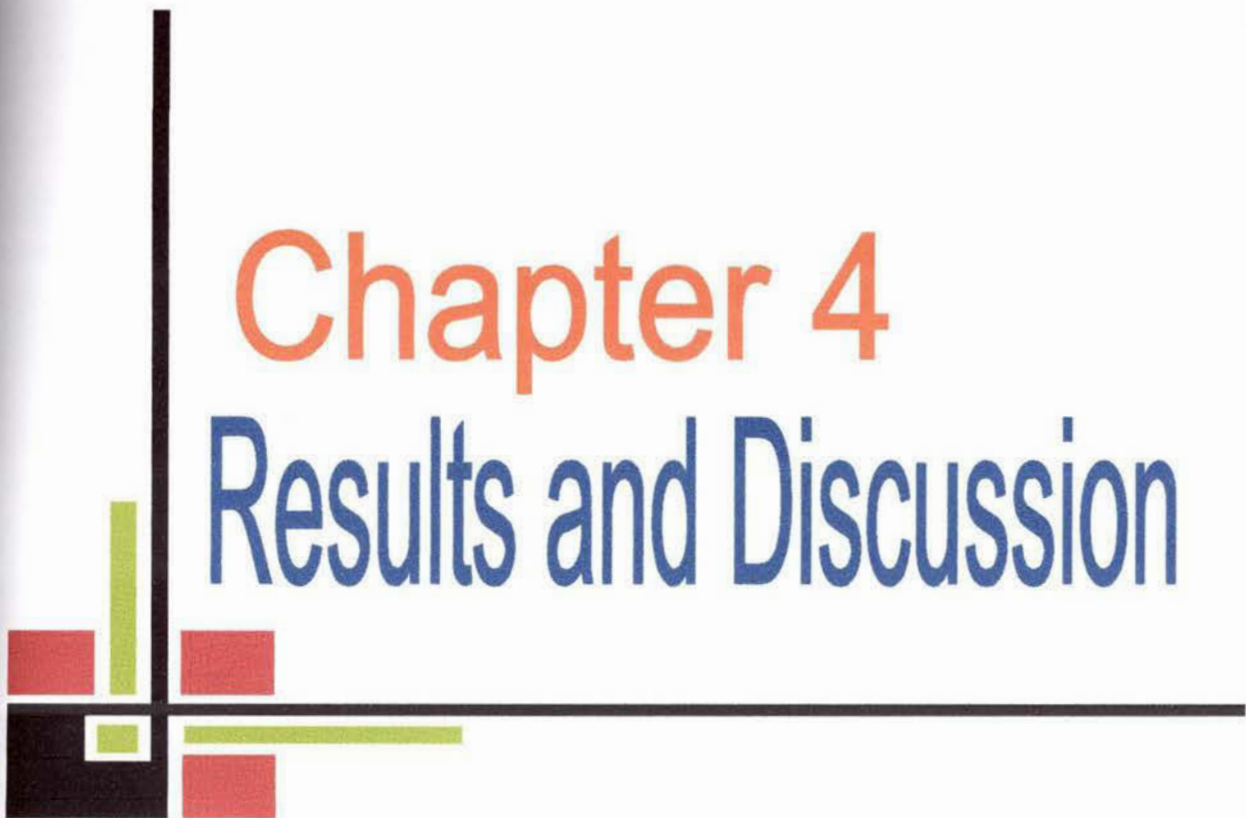
care to establish rapport with them so that they did not feel uneasy or hesitation to furnish proper responses to the questions and statements in the schedule. The questions were explained and clarified whenever any respondent felt difficulty in understanding properly. None of the farmers was interviewed from the reserve list during final collection of data.

3.9 Compilation of Data

After completion of field survey all the data of the interview schedule were compiled. Local units were converted into standard unit. Appropriate scoring technique was followed to convert the qualitative data into quantitative forms. The responses of the individual respondent contained in the interview schedules were transferred to a master sheet for entering the data in the computer. As soon as the data entered into the computer, it was then analyzed in accordance with the objectives of the study.

3.10 Statistical Analysis

Statistical measure such as number, percentage, minimum-maximum, rank, order, mean and standard deviation were used in describing the independent and dependent variables of the study. For clarity of understanding tables were used to present the data. For exploring the relationships between the selected characteristics of the respondents and their participation in agricultural income generating activities Pearson's Product Moment Correlation Co-efficient (r) was computed. Data were analyzed by software named SPSS.



Chapter 4

Results and Discussion

CHAPTER 4

RESULTS AND DISCUSSION

This Chapter is divided into three sections. First section deals with the selected characteristics of the farmers. Second section deals with the use of different media by the farmers as agricultural information sources. The last section deals with the relationship between farmers' selected characteristics and their use of different media as agricultural information sources.

4.1 Selected Characteristics of the Farmers

A summary of the analyzed results for the selected personal, economic, social and psychological characteristics of the farmers (independent variables) for this study is shown in Table 4.1.

Table 4.1 Farmers' Personal Characteristics Profile at a glance

Sl. No.	Characteristics	Measuring Unit	Possible range	Observed range	Mean	Standard deviation
1.	Age	Actual years	Unknown	24-59	41.25	9.40
2.	Education	Year of schooling	Unknown	0-13	7.89	3.48
3.	Farm size	Hectare	Unknown	0.10-5.43	1.29	1.13
4.	Annual income	In Tk..1000	Unknown	8.00-910.00	132.48	107.63
5.	Organizational Participation	Score	Unknown	9-60	26.30	10.11
6.	Cosmopolitaness	Score	0-15	4-12	6.28	1.86
7.	Innovativeness	Score	0-28	10-21	15.14	2.72
8.	Knowledge on agriculture	Score	0-10	1-8	3.44	1.84

4.1.1 Age

The observed age scores of the farmers ranged from 24 to 59 having an average of 41.25 with a standard deviation 9.40. On the basis of the age scores of the farmers, they were classified into three categories: “young” (up to 35 years), “middle aged” (36-46 years) and “old” (above 46 years). The distribution of the farmers according to their age is shown in Table 4.2.

Table 4.2: Distribution of the farmers according to age

Categories	Farmers		Mean	Standard Deviation
	Number	Percent		
Young (up to 35 years)	33	33	41.25	9.40
Middle aged (36-46 years)	33	33		
Old (above 46 years)	34	34		
Total	100	100		

The above finding revealed that through the highest proportion (34 percent) of the farmers was old but more or less they were equally distributed rest two categories such young and middle aged respectively. The findings allow indicate that all aged farmers are probably interested to expise themselves ti different agricultural information sources

4.1.2 Education

The observed education scores of the farmers ranged from 0 to 13 having an average of 7.89 and the standard deviation was 3.48. On the basis of their education scores, the farmers were classified into five categories, namely “illiterate” (0), “can sign only” (0.5), “primary education” (1-5), “secondary

education” (6-10) and “above secondary education” (above 10). The distribution of the farmers according to their education is shown in Table 4.3.

Table 4.3: Distribution of the farmers according to education

Categories	Farmers		Mean	Standard Deviation
	Number	Percent		
Illiterate (0)	2	2	7.89	3.48
Can sign only (0.5)	10	10		
Primary education (1-5)	10	10		
Secondary education (6-10)	56	56		
Above secondary education (above 10)	22	22		
Total	100	100		

It was found that number of illiterate farmers was only 2 and 10 farmers can sign only. On the other hand, majority (56 percent) of the farmers had secondary level of education compared to one tenth (10) and above one fifth (22) percent having primary and above secondary education respectively. From the above finding it can be concluded that majority (78 percent) of the respondents had secondary to above secondary education. This might be due to the reason that the study area was a semi-urban nature. Most of the people of that area were high ambitious and preferred service to agricultural practices.

4.1.3 Farm Size

The observed farm size scores of the farmers ranged from 0.10 hectare to 5.43 hectares. The average farm size was 1.29 hectares and the standard deviation was 1.13. The farmers were classified into the following four categories based on their farm size scores: “marginal farm size” (up to 0.5), “small farm size”

(0.51-1.00), and “medium farm size” (1.01 -3.00) and “large farm size” (above 3.00). The distribution of the farmers according to their farm size is shown in Table 4.4.

Table 4.4: Distribution of farmers according to farm size

Categories	Farmers		Mean	Standard Deviation
	Number	Percent		
Marginal farm size (up to 0.5 ha)	28	28	1.29	1.13
Small farm size (0.51-1.00 ha)	27	27		
Medium farm size (1.01-3.00 ha)	36	36		
Large farm size (above 3.00 ha)	9	9		
Total	100	100		

It was found that 36 percent of the farmers possessed medium farm size compared to 28, 27 and 9 percent of them having marginal, small and large farm size respectively. The average farm size of the farmers was 1.29 hectares which is higher than the national average which is equivalent to 0.8 hectare (BBS, 2007).

4.1.4 Annual Income

The observed annual family income of the farmers ranged from 8.00-910.00 having an average of 132.48 with a standard deviation of 107.63. Based on their annual income scores, the farmers were classified into three categories: “low annual income” (up to 100 thousand Taka), “medium annual income” (100-200 thousand Taka) and “high annual income” (above 200 thousand Taka). The distribution of the farmers according to their annual income is shown in Table 4.5.

Table 4.5: Distribution of farmers according to annual income

Categories	Farmers		Mean	Standard Deviation
	Number	Percent		
Low annual income (up to 100 thousand Taka)	48	48	132.48	107.63
Medium annual income (100-200 thousand Taka)	39	39		
High annual income (above 200 thousand Taka)	13	13		
Total	100	100		

Finding reveals that the highest portion (48 percent) of the farmers had low annual income while 39 and 13 percent of them had medium and high annual income respectively. That means 87 percent of the farmers had low to medium annual income. The average income of the farmers of the study area is higher than the per capita income of the country which is equivalent to US Dollar 520 (BBS, 2007).

4.1.5 Organizational Participation

The observed organizational participation scores of the farmers ranged from 9 to 60 with an average of 26.30 and a standard deviation of 10.11. On the basis of their organizational participation scores, the farmers were classified into three categories: “low organizational participation” (up to 5), “medium organizational participation (6-10) and “high organizational participation” (above 11). The distribution of the farmers according to their organizational participation is shown in Table 4.6.

Table 4.6: Distribution of farmers according to organizational participation

Categories	Farmers		Mean	Standard Deviation
	Number	Percent		
Low organizational participation (up to 26)	63	63	26.30	10.11
Medium organizational participation (27-43)	33	33		
High organizational participation (above 43)	4	4		
Total	100	100		

Finding shows that the majority (63 percent) of the farmers had low organizational participation compared to one third (33) and very few (4) percent having medium and high organizational participation respectively. It was observed that there were serious conflicts among the committee members of the different organization. Hence, those organizations could not perform well. As a result, people of that area were not interested enough to be involved with those organizations as they were not benefited earlier.

4.1.6 Cosmopolitaness

The observed cosmopolitaness scores of the farmers ranged from 4-12 against the possible range of 0 to 15 having an average of 6.28 with a standard deviation of 1.86. Based on the cosmopolitaness scores, the farmers were classified into three categories: “low cosmopolitaness” (up to 7), “medium cosmopolitaness” (8-10) and “high cosmopolitaness (above 10)”. The distribution of the farmers according to their cosmopolitaness scores is shown in Table 4.7.

Table 4.7: Distribution of farmers according to cosmopolitaness

Categories	Farmers		Mean	Standard Deviation
	Number	Percent		
Low cosmopolitaness (up to 6)	64	64	6.28	1.86
Medium cosmopolitaness (above 7-9)	27	27		
High cosmopolitaness (above 9)	9	9		
Total	100	100		

The finding shows that the majority proportion (64 percent) of the farmers had low cosmopolitaness as compared to 27 and 9 percent having medium cosmopolitaness and high cosmopolitaness respectively. Thus, it can be concluded that most of the farmers were either not interested to go outside of their own social systems.

4.1.7 Innovativeness

The observed innovativeness scores of the farmers ranged from 10 to 21 having an average of 15.14 and a standard deviation of 2.72 against the possible range of 0-28. On the basis of their innovativeness scores, the farmers were classified into three categories: “low innovativeness” (up to 13), “medium innovativeness” (14-17) and “high innovativeness” (above 17). The distribution of the farmers according to their innovativeness scores is shown in Table 4.8.

Table 4.8: Distribution of farmers according to innovativeness

Categories	Farmers		Mean	Standard Deviation
	Number	Percent		
Low innovativeness (up to 13)	26	26	15.14	2.72
Medium innovativeness (14-17)	48	48		
High innovativeness (above 17)	26	26		
Total	100	100		

Finding reveals that 48 percent of the farmers had medium innovativeness compared to 26 and 26 percent having low innovativeness and high innovativeness respectively.

4.1.8 Knowledge on Agriculture

The knowledge on agriculture scores of the farmers ranged from 1 to 8 against the possible score of 0 to 10 having an average of 3.44 and a standard deviation of 1.84. Based on the knowledge on agriculture scores, the farmers were classified into the following three categories: “poor knowledge” (up to 3), “medium knowledge” (4 to 6) and “high knowledge” (above 6). The distribution of the farmers according to their knowledge on agriculture scores is shown in Table 4.9.

Table 4.9: Distribution of farmers according to knowledge on agriculture

Categories	Farmers		Mean	Standard Deviation
	Number	Percent		
Poor knowledge (up to 3)	63	63	3.44	1.84
Medium knowledge (4-6)	28	28		
High knowledge (above 6)	9	9		
Total	100	100		

Finding indicates that majority (63 percent) of the farmers had poor knowledge on agriculture compared to 28 and 9 percent having medium and high knowledge on agriculture respectively. The above data reveal that more than three fifths of the respondents had insufficient knowledge on agriculture which can affect their agricultural production system to a great extent.

4.2 Use of Different Media as Agricultural Information Sources

An interval scale was used to measure the use of different media as agricultural information sources. The findings of the study for the dependent variable are described below:

The observed score for use of different media as agricultural information sources ranged from 38 to 65 having an average of 50.84 with a standard deviation 8.29 against the possible range of 0 to 85. On the basis of their use of different media scores, the farmers were classified into three categories: “low use” (up to 47), “medium use” (48-57) and “high participation” (above 57). The highest proportion (44 percent) of the farmers fell in the “low use” category while 34 percent of them fell in the “medium use” category and only 22 percent fell in the “high use” category.

The distribution of the farmers according to their use of different media as agricultural information sources is shown in Figure 4.1.

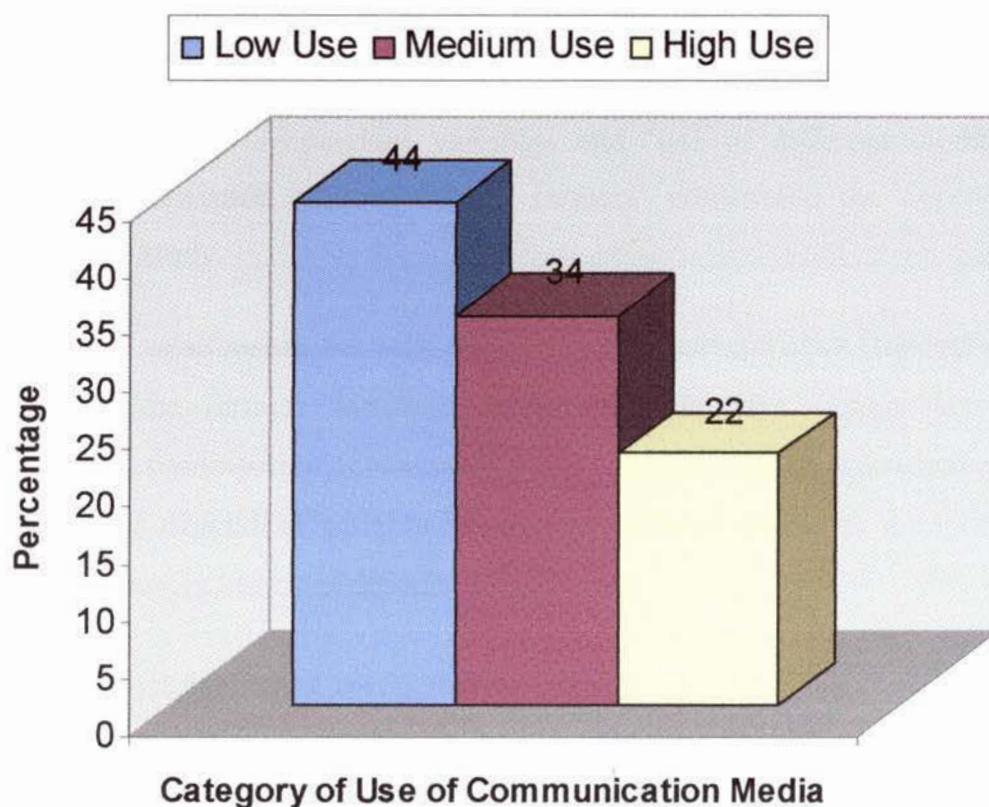


Figure 4.1: Bar Graph Showing Use of Different Media

The findings indicate that a large proportion (44 percent) of the farmers had low use of communication media compared to 34 and 22 percent having medium use and high use of different media respectively. This scenario is unfortunate and should be overcome immediately by taking necessary steps by GOs and NGOs.

4.3 Relationship between the Characteristics of the Farmers and their use of different media as agricultural information sources

Coefficient of correlation was computed in order to explore the relationship between the selected characteristics of the farmers and their use of different media as agricultural information sources. The 'selected characteristics of the farmers' constituted independent variables and 'use of different media as agricultural information sources by the farmers' constituted the dependent variable of the study.

In this section relationship between eight selected characteristics (independent variables) of the farmers viz. age, education, farm size, annual income, organizational participation, cosmopolitaness, innovativeness, knowledge on agriculture and dependent variable i.e. use of different media as agricultural information sources has been described.

Person's Product Moment Co-efficient of Correlation (r) has been used to test the hypothesis concerning the relationship between two variables. Five percent and one percent level of probability were used as the basis for rejection of a hypothesis. The table value of ' r ' was calculated at $(100-2) = 98$ degrees of freedom. The summary of the results of the co-efficient of correlation indicating the relationships between the selected characteristics of the respondents and their use of different media as agricultural information sources is shown in Table 4.10.

Table 4.10: Correlation coefficient among the variables of the study

Dependent Variable	Independent Variables	Computed Value of 'r'	Table Value of 'r' at 98 Degrees of Freedom	
			5%	1%
Use of Different Media as Agricultural Information Sources by the Farmers	Age	-.005 ^{NS}	0.196	0.256
	Education	.208*		
	Farm Size	.107 ^{NS}		
	Annual Income	.066 ^{NS}		
	Organizational Participation	.267**		
	Cosmopolitaness	.043 ^{NS}		
	Innovativeness	.213*		
	Knowledge on agriculture	.323**		

^{NS} = Not significant

* = Significant at 0.05 level of probability

** = Significant at 0.01 level of probability

4.3.1 Relationship between age of the farmers and dependent variable

The relationship between age of the farmers and their use of different media as agricultural information sources was examined by testing the following null hypothesis:

“There is no relationship between age of the farmers and their use of different media as agricultural information sources”

Computed value of the co-efficient of correlation between age of the farmers and their use of different media as agricultural information sources was found to be $-.005^{NS}$ as shown in Table 4.10. The following observations were recorded regarding the relationship between the two variables on the basis of the co-efficient of correlation:

- The relationship showed a negative trend.
- A negligible relationship was found to exist between the two variables.
- The computed value of ‘r’ ($-.005$) was smaller than the table value (± 0.196) with 98 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was accepted.
- The co-efficient of correlation between the concerned variables was not significant at 0.05 level of probability.

The findings demonstrate that age of the farmers had no significant relationship with their use of different media as agricultural information sources. Therefore, it can be concluded that other factors of the farmers like annual income, organizational participation, innovativeness, cosmopolitaness etc. might have influenced them in using different media as agricultural information sources. It means that the higher is the education the higher is the use of communication media.

4.3.2 Relationship between education of the farmers and dependent variable

The relationship between education of the farmers and their use of different media as agricultural information sources was examined by testing the following null hypothesis:

“There is no relationship between education of the farmers and their use of different media as agricultural information sources”

The co-efficient of correlation between education of the farmers and their use of agricultural information sources was found to be .208* as shown in Table 4.10. The following observations were recorded regarding the relationship between the two variables on the basis of the co-efficient of correlation:

- The relationship showed a positive trend.
- A high relationship was found to exist between the two variables.
- The computed value of ‘r’ (0.208) was greater than the table value (± 0.196) with 98 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables was significant at 0.05 level of probability.

The findings demonstrate that there was a significant positive relationship between education of the farmers and their use of different media as agricultural information sources. It means that the higher is the education the higher is the use of communication media.

4.3.3 Relationship between farm size of the farmers and dependent variable

The relationship between farm size of the farmers and their use of different media as agricultural information sources was examined by testing the following null hypothesis:

“There is no relationship between farm size of the farmers and their use of different media as agricultural information sources”

Computed value of the co-efficient of correlation between farm size of the farmers and their use of different media as agricultural information sources was found to be $.107^{NS}$ as shown in Table 4.10. The following observations were recorded regarding the relationship between the two variables on the basis of the co-efficient of correlation:

- The relationship showed a positive trend.
- A negligible relationship was found to exist between the two variables.
- The computed value of ‘r’ (0.107) was greater than the table value (± 0.196) with 98 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was accepted.
- The co-efficient of correlation between the concerned variables was not significant at 0.05 level of probability.

The findings demonstrate that farm size of the farmers had no significant relationship with their use of media as agricultural information sources.

4.3.4 Relationship between annual income of the farmers and dependent variable

The relationship between annual income of the farmers and their use of different media as agricultural information sources was examined by testing the following null hypothesis:

“There is no relationship between annual income of the farmers and their use of different media as agricultural information sources”

Computed value of the co-efficient of correlation between annual income of the farmers and their use of different media as agricultural information sources was found to be .066^{NS} as shown in Table 4.10. The following observations were recorded regarding the relationship between the two variables on the basis of the co-efficient of correlation:

- The relationship showed a positive trend.
- A negligible relationship was found to exist between the two variables.
- The computed value of ‘r’ (0.066) was smaller than the table value (± 0.196) with 98 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was accepted.
- The co-efficient of correlation between the concerned variables was not significant at 0.05 level of probability.

The findings demonstrate that the annual income of the farmers had no significant relationship with their use of different media as agricultural information sources.

4.3.5 Relationship between organizational participation of the farmers and dependent variable

The relationship between organizational participation of the farmers and their use of different media as agricultural information sources was examined by testing the following null hypothesis:

“There is no relationship between organizational participation of the farmers and their use of different media as agricultural information sources”

Computed value of the co-efficient of correlation between organizational participation of the farmers and their use of different media as agricultural information sources was found to be .267** which is shown in Table 4.10. The following observations were recorded regarding the relationship between the two variables on the basis of the co-efficient of correlation:

- The relationship showed a positive trend.
- A high relationship was found to exist between the two variables.
- The computed value of ‘r’ (0.267) was greater than the table value (± 0.256) with 98 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables was significant at 0.01 level of probability.

The findings demonstrate that the organizational participation of the farmers had a significant positive relationship with their use of different media as agricultural information sources. It means the higher organization participation is the higher use of communication media by the responded.

4.3.6 Relationship between cosmopolitanism of the farmers and dependent variable

The relationship between cosmopolitanism of the farmers and their use of different media as agricultural information sources was examined by testing the following null hypothesis:

“There is no relationship between cosmopolitanism of the farmers and their use of different media as agricultural information sources”

Computed value of the co-efficient of correlation between cosmopolitanism of the farmers and their participation in agricultural IGA was found to be .043^{NS} which is shown in Table 4.10. The following observations were recorded regarding the relationship between the two variables on the basis of the co-efficient of correlation:

- The relationship showed a positive trend.
- A negligible relationship was found to exist between the two variables.
- The computed value of ‘r’ (0.043) was smaller than the table value (± 0.196) with 98 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was accepted.
- The co-efficient of correlation between the concerned variables was not significant at 0.05 level of probability.

The findings demonstrate that the cosmopolitanism of the farmers had no significant relationship with their use of different media as agricultural information sources.

4.3.7 Relationship between innovativeness of the farmers and dependent variable

The relationship between innovativeness of the farmers and their use of different media as agricultural information sources was examined by testing the following null hypothesis:

“There is no relationship between innovativeness of the farmers and their use of different media as agricultural information sources”

Computed value of the co-efficient of correlation between innovativeness of the farmers and their use of different media as agricultural information sources was found to be .213* as shown in Table 4.10. The following observations were recorded regarding the relationship between the two variables on the basis of the co-efficient of correlation:

- The relationship showed a positive trend.
- A high relationship was found to exist between the two variables.
- The computed value of 'r' (0.213) was greater than the table value (± 0.196) with 98 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables was significant at 0.05 level of probability.

The findings reveal that the innovativeness of the farmers had a significant positive relationship with their use of different media as agricultural information sources. It means that the higher is the innovativeness, the higher is the use of communication media by the farmers.

4.3.8 Relationship between knowledge on agriculture of the farmers and dependent variable

The relationship between knowledge on agriculture of the farmers and their use of different media as agricultural information sources was examined by testing the following null hypothesis:

“There is no relationship between knowledge on agriculture and their use of different media as agricultural information sources”

Computed value of the co-efficient of correlation between the knowledge on agriculture and their use of different media as agricultural information sources was found to be 0.323** as shown in Table 4.10. The following observations were recorded regarding the relationship between the two variables on the basis of the co-efficient of correlation:

- The relationship showed a positive trend.
- A high relationship was found to exist between the two variables.
- The computed value of ‘r’ (0.323) was greater than the table value (± 0.256) with 98 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables was significant at 0.01 level of probability.

The findings demonstrate that the knowledge on agriculture of the farmers had a significant positive relationship with their use of different media as agricultural information sources. It means that the higher is the knowledge on agriculture, the higher is the use of communication media by the farmers.

4.4 Problem Confrontation Index (PCI) in Using Different Media as Agricultural Information Sources

The Problem Confrontation Index (PCI) was calculated to find out major problems confronted by the farmers in using different media as agricultural information sources. The degree of severity of the problems confronted by the respondents is shown in Table 4.11.

Table 4.11: Problem Confrontation Index (PCI) for selected 6 problems with rank order

Sl. no.	Problems	Opinion on severity of problem					PCI	Rank Order
		Very high	High	Moderate	Little	Not at all		
1.	Unavailability of newspapers related to agriculture	60	24	12	4	0	340	1
2.	High price of batteries for Radio	62	16	12	10	0	330	2
3.	Lack of cooperation from SAAO	18	50	24	8	0	278	3
4.	High price of newspapers related to agriculture	16	26	46	8	4	242	4
5.	Unplanned time-table of broadcasting programs in Radio & TV	6	24	22	44	4	184	5
6.	Unavailability of TV	4	14	34	30	18	156	6

From Table 4.11 it was observed that –

- (1) On the basis of Problem Confrontation Index (PCI), ‘unavailability of newspapers related to agriculture’ ranked first with a PCI of 340. It was found that the communication facility of the study area was not so good. As a result unavailability of newspaper became a serious problem for the farmers of the study area having highest PCI score. Therefore, to solve this problem it may be suggested that concern

authority should follow take necessary steps to develop communication facility for making the newspaper available to the farmers in the study area.

- (2) 'High price of batteries of Radio' ranked 2nd with a PCI of 330. As majority (48 percent) of the farmers of the study area had low annual income, high price of batteries highest discourage them to use Radio. Therefore, it may be suggested that alternative way should be made for using Radio such as electricity.
- (3) 'Lack of cooperation from SAAO' ranked 3rd with a PCI of 278. It was found in the study area that farmers did not get SAAOs' help when they need. Therefore, it may be suggested that number of SAAOs should be increased.or the number of farm facilities under should be decreased for efficient discharge of extension service.
- (4) 'High price of newspapers related to agriculture' ranked 4th with a PCI of 242. Most of the farmers of the study were very poor. They lived from hand to mouth. For this reason, they could not invest enough money to buy newspaper. Therefore, government should make newspapers available to the farmers. By stability farm Club/farmers in his village easily village based farmer organization.
- (5) 'Unplanned time-table of broadcasting programs in Radio & TV' ranked 5th with a PCI of 184. Most of the farmers of the study area remain involve in their farming activity and they go to the market in evening when different programs are broadcasted in Radio & TV. Therefore, it may be suggested that proper planning should be done before broadcasting programs related to agriculture. Considering opportunity or time preference broadcast.
- (6) 'Unavailability of TV' ranked 6th with a PCI of 156. Most of the farmers of the study area were unable to buy TV as it they live from hand to mouth. Therefore, it may be suggested that government should increase TV watching facility to the farmers by providing TV to the rural club.



Chapter 6

Reference

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

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

5.1 Summary of the Findings

The summary of the major findings are presented in the following subsections:

5.1.1 Selected Characteristics of Farmers

Age

Age scores of the farmers ranged from 24 to 59 with an average of 41.25 and the standard deviation was 9.40. The highest proportion (34 percent) of the farmers was old compared to similar proportion other two categories, i.e. 33 percent young and 33 percent middle aged.

Education

The education scores of the farmers ranged from 0 to 13 with an average of 7.89 and the standard deviation was 3.48. It was found that number of illiterate farmers was only 2 and 10 farmers can sign only. On the other hand, majority (56 percent) of the farmers had secondary level of education compared to 10 and 22 percent having primary and above secondary education respectively.

Farm Size

Farm size scores of the farmers ranged from 0.10 to 5.43 with an average of 1.29 and the standard deviation was 1.13. It was found that 36 percent of the farmers possessed medium farm size compared to 28, 27 and 9 percent of them having marginal, small and large farm size respectively.

Annual Income

Annual income scores of the farmers ranged from 8.00 to 910.00 with an average of 132.48 and the standard deviation was 107.63. Finding reveals that the highest portion (48 percent) of the farmers had low annual income while 39 and 13 percent of them had medium and high annual income respectively.

Organizational Participation

The organizational participation scores of the farmers ranged from 9 to 60 with an average of 26.30 and the standard deviation was 10.11. Finding shows that the majority (63 percent) of the farmers had low organizational participation compared to 33 and 4 percent having medium and high organizational participation respectively.

Cosmopolitaness

Cosmopolitaness scores of the farmers ranged from 4 to 12 against the possible range of 0 to 15 with an average of 6.28 and the standard deviation was 1.86. The finding shows that the highest proportion (64 percent) of the farmers had low cosmopolitaness as compared to 27 and 9 percent having medium cosmopolitaness and high cosmopolitaness respectively.

Innovativeness

The innovativeness scores of the farmers ranged from 10 to 21 against the possible range of 0 to 28 with an average of 15.14 and the standard deviation was 2.72. Finding reveals that 48 percent of the farmers had medium innovativeness

compared to 26 and 26 percent having low innovativeness and high innovativeness respectively.

Knowledge on agriculture

The scores for knowledge on agriculture of the farmers ranged from 1 to 8 against the possible range of 0 to 10 with an average of 3.44 and the standard deviation 1.84. Finding indicates that the highest proportion (63 percent) of the farmers had poor knowledge on agriculture compared to 28 and 9 percent having medium and high knowledge on agriculture respectively.

5.1.2 Use of Different Media as Agricultural Information Sources

Measuring the use of different media as agricultural information sources was the main focus of this study. It was quantified by computing scores. These scores of the respondents could range from '0' to '85', where '0' indicates lowest use of different media as agricultural information sources and '80' indicates highest use of different media as agricultural information sources. Computed scores of the respondents ranged from 38 to 65 with an average of 50.84 and the standard deviation was 8.29. The findings of the study indicated that the highest proportion (44 percent) of the farmers of the study area had low use of different media as agricultural information sources compared to 34 and 22 percent having medium use and high use of different media respectively.

5.1.3 Relationship between the selected characteristics of the farmers with their use of different media as agricultural information sources

Eight null hypotheses were formulated to explore the relationship between the selected characteristics of the farmers and their use of different media as agricultural information sources. For testing each of the hypotheses the co-efficient of correlation (r) test was used.

Correlation analysis indicates that age, farm size, annual income and cosmopolitanism of the farmers had no significant relationship with their use of different media as agricultural information sources. Hence, the null hypotheses concerning these four variables were accepted by the researcher. On the other hand, education, organizational participation, innovativeness and knowledge on agriculture of the farmers had significant positive relationship with their use of different media as agricultural information sources. Hence, the null hypotheses concerning these four variables were rejected by the researcher.

5.1.4 Problem Confrontation Index (PCI) in Using Different Media as Agricultural Information Sources

The farmers expressed some problems as barriers for their use of different media as agricultural information sources. An attempt was made to identify the problem of the farmers using different media as agricultural information sources. As many as 10 problems were mentioned by the farmers of the study area. The problems were ranked in a decreasing order of Problem Confrontation Index (PCI) which ranged from 156 to 340 against the possible range of 0 to 400.

The problems are presented below descending order based on Problem Confrontation Index (PCI):

1. Unavailability of newspapers related to agriculture
2. High price of batteries for Radio
3. Lack of cooperation from SAAO
4. High price of newspapers related to agriculture
5. Unplanned time-table of broadcasting programs in Radio & TV
6. Unavailability of TV.

5.2 Conclusions

Based on the findings of this study the following conclusions might be drawn:]

1. Use of different media by the farmers is very important for adoption of an innovation. Finding of the study revealed that majority (44 percent) of the farmers had low use of different media. Therefore it may be concluded that the unavailability of different media is crucial for the farmers of the study area and they might have faced various problems such as unavailability of newspapers related to agriculture, lack of cooperation from SAAOs etc. to get agricultural information.
2. Any 8 selected characteristic of the farmers in the study are education organizational, participation, innovativeness, knowledge on agricultural showed positive significant relationship with their use of communication media.
3. The farmers faced 6 problems different extend any 6 identified problems; the unavailability of news paper was very highly sever problem while the least problem was unavailability of TV was addressed by the respondent.

5.3 Recommendation

5.3.1 Recommendations for policy implication

1. For encouraging adoption of improved farm practices by the farmers there is an urgent need for a sound system of communication media, such as Radio, TV, printed materials etc. for providing adequate innovative information to the farmers.
2. The Department of Agricultural Extension (DAE) needs to pay more attention to ensure the use of different media by the farmers, because media specially electronic and print media seemed to have great impact in the diffusion of agricultural innovation.
3. Agricultural newspaper, TV and Radio programs related to agriculture, leaflets, bulletins, booklets etc. should be well circulated among the farmers. Block level extension agents may take responsibility to aware the farmers about the benefits of different media since a great percentage of the respondents were conscious about it.
4. Arrangements should be made by the development agencies and extension providers to credit facilities to the farmers particularly to the young and middle-aged farmers for using different media. This will help to change attitude, behavior and out look of the future farmers. It will also minimize the cost of extension services in future as the educated farmers are able to adjust in the new situation.

5.3.2 Recommendations for future study

1. Research was limited in only five village of Kamarpukur union of Saidpur upazila under Nilphamary district. So, similar research may be conducted in other places considering socio-cultural aspects, geographical and agro ecological variables to get representative picture of the country.
2. Research was limited with eight characteristics of the farmers, but there are so many characteristics which can influence the use of different media by the farmers as agricultural information sources. So, considering other characteristics; similar research may be conducted.
3. Owing to the characteristics pattern of rural Bangladesh and its farming population more researches should be conducted to investigate the comparative use of different media as agricultural information sources in the diffusion of innovations among the client system.



Chapter 6

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APPENDIX-A

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English Version of the Interview Schedule

on

“USE OF DIFFERENT MEDIA BY THE FARMERS AS AGRICULTURAL INFORMATION SOURCES”

Sl. No.

Respondents' Name

Village: Union.....

Thana District.....

(Please answer the following questions. Your information will be kept confidential.)

1. Age

What is your age? years.

2. Education

Please state your educational information.

a) Don't know reading and writing

b) Can sign only

c) Have passed class

3. Farm size

Please furnish area of your land according to use

Sl. no.	Nature of the land	Area of land (local unit)	Area of land (hectare)
1.	Homestead (including ponds and vegetables garden)		
2.	Own cultivated land		
3.	Land given to others as borga		
4.	Land taken from others as borga		
5.	Land taken from others as lease		
6.	Others		

4. Annual income

Please state your annual income form different sources (last year).

(A) Agriculture:

Sl. no.	Sources of income	Amount Tk.
i.	Crops:	
	a) Rice	
	b) Wheat	
	c) Jute	
	d) Vegetables	
ii	Livestock	
iii	Fishes	
iv	Poultry	
v	Others	
Total =		

(B) Non-Agriculture

Sl. no.	Sources of income	Amount Tk.
i.	Service:	
	Own - Other members -	
ii.	Business	
iii	Labouring	
iv	Others	
Total =		

Grand Total = A + B..... Tk.

5. Organizational participation

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

Sl. no.	Name of organization	No participation (0)	Participated as (Position held)			Duration
			General member (1)	Executive committee member (2)	President/Secretary (3)	
1.	Farmers co-operative family					
2.	Ideal farmers					
3.	Union Parisad					
4.	Youth club					
5.	School committee					
6.	Mosque committee					
7.	Mandir committee					
8.	Madrasha committee					
9.	Bazar committee					
10.	BRDB Samity					
11.	Seed-fertilizer pesticide dealer					
Total =						

6. Cosmopoliteness

Please mention your frequency of visits to the following places:

Sl. no.	Place of visit	Frequency of visit (yearly)			
		Regularly (3)	Frequently (2)	Occasional (1)	Not at all (0)
1.	Visit to other villages	10 or more times	6-9 times	1-5 times	0 time
2.	Visit to own Thana	8 or more times	4-7 times	1-3 times	0 time
3.	Visit to own district	6 or more times	3-5 times	1-2 times	0 time
4.	Visit to other Thana/district	5 or more times	3-4 times	1-2 times	0 time
5.	Visit to capital city	4 or more times	2-3 times	1time	0 time
Total =					

7. Innovativeness

If you use the following technologies, please indicate duration of its use.

Sl. no.	Name of technology	Never used (0)	Extent of use			
			Used within a year (4)	Used 1 to 2 year (3)	Used 2 to 3 years (2)	Used after 3 years (1)
1.	BRRRI Dhan-29					
2.	Fish culture in rice field					
3.	Use of zinc fertilizer					
4.	Use of granular Urea					
5.	Sulphar (Gypsum)					
6.	Artificial breeding of cattle					
7.	Use of compost					
Total =						

8. Knowledge on Agriculture

Please answer the following questions:

Question (Multiple Choice)	Assumed Number	Obtained Number
1. Which is high yielding variety of wheat? a) Chandina/BR3 b) Katakara c) Dharial	1	
2. Which is an insect of rice? a) Yellow step borer caterpillar b) Honey bee c) Jute hairy caterpillar	1	
3. Which is improved variety of wheat? a) Chamok b) Ratan c) Satabdi	1	
4. Which is a winter vegetable? a) Sponge gourd b) Cauliflower c) Snake gourd	1	
5. In which fruits Vitamin-C is available? a) Guava & Lemon b) Palm & Coconut c) Banana & Papaya	1	
6. From which crop green manures can be produced? a) Dhaincha b) Rice c) Bermuda grass	1	
7. Which one is agriculture-related programme in BTV? a) Mati-O-Manush b) Sonali Fashol c) Chasabad	1	
8. Which one is agriculture-related programme in Bangladesh Betar? a) Mati-O-Manush b) Shamol Bangla c) Sonali Fashol	1	
9. Which one is organic fertilizer? a) Compost b) Urea c) TSP	1	
10. Which one is a disease of rice? a) Blast b) Late Blight c) Red rot of sugarcane	1	

9. Use of Different Media as Agricultural Information Sources

Please mention your communication behaviour with the following media:

Sl. no.	Communication media	Nature of communication					
		Daily	Weekly	Monthly	Quarterly	Yearly	Never
A. Individual media							
1.	Thana Agriculture Officer						
2.	Additional Agriculture Officer						
3.	Agriculture Extension Officer						
4.	Sub-Assistant Agricultural Officer						
5.	NGO workers						
6.	Pesticide dealers						
7.	Fertilizer dealers						

B. Group media							
1.	Result demonstration						
2.	Method demonstration						
3.	Group meeting						
4.	Field day						

C. Mass media							
1.	Radio						
2.	Television						
3.	Poster						
4.	Newspaper						
5.	Circular letter						
6.	Folk campaign						

10. Problems confronted by the farmers in using different media

Sl. no.	Problems	Opinion on severity of problem					Total
		Very high (4)	High (3)	Moderate (2)	Little (1)	Not at all (0)	
1.	Lack of cooperation from SAAO						
2.	Unavailability of newspapers related to agriculture						
3.	High price of newspapers related to agriculture						
4.	Unplanned timetable of broadcasting programs in Radio & TV						
5.	Unavailability of TV						
6.	High price of batteries for Radio						

Thanking you for your nice co-operation.

.....
Signature of Interviewer
Date:

Appendix-B

TITLE: USE OF DIFFERENT MEDIA AS AGRICULTURAL INFORMATION SOURCES BY THE FARMERS OF SAIDPUR THANA UNDER NILPHAMARY DISTRICT

CORRELATION MATRIX AMONG THE VARIABLES OF THE STUDY (N=100)

VARIABLE	X1	X2	X3	X4	X5	X6	X7	X8	X9
X1	1								
X2	-.119 ^{NS}	1							
X3	-.032 ^{NS}	.141 ^{NS}	1						
X4	-.025 ^{NS}	.268**	.414**	1					
X5	.061 ^{NS}	.120 ^{NS}	.186 ^{NS}	.111 ^{NS}	1				
X6	-.147 ^{NS}	.147 ^{NS}	.257**	.398**	.050 ^{NS}	1			
X7	.114 ^{NS}	.148 ^{NS}	.137 ^{NS}	.059 ^{NS}	.127 ^{NS}	.048 ^{NS}	1		
X8	.019 ^{NS}	-.110 ^{NS}	.039 ^{NS}	-.077 ^{NS}	.122 ^{NS}	-.039 ^{NS}	.062 ^{NS}	1	
X9	-.005 ^{NS}	.208*	.107 ^{NS}	.066 ^{NS}	.267**	.043 ^{NS}	.213*	.323**	1

^{NS} = Not Significant

* = Significant at the 0.05 level (2-tailed)

** = Significant at the 0.01 level (2-tailed)

X1 = AGE

X2 = EDUCATION

X3 = FARM SIZE

X4 = ANNUAL INCOME

X5 = ORGANIZATIONAL PARTICIPATION

X6 = COSMOPOLITENESS

X7 = INNOVATIVENESS

X8 = KNOWLEDGE ON AGRICULTURE

X9 = USE OF DIFFERENT MEDIA AS

AGRICULTURAL INFORMATION

SOURCES