OPINION LEADERSHIP AMONG THE FARMERS IN THE VILLAGE PURBACHANDRAPUR OF DAGON BHUIYAN UPAZILA UNDER FENI DISTRICT

MOHAMMED ABBAS UDDIN

DEPARTMENT OF
AGRICULTURAL EXTENSION & INFORMATION SYSTEM
SHER-E-BANGLA AGRICULTURAL UNIVERSITY
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BY

MOHAMMED ABBAS UDDIN

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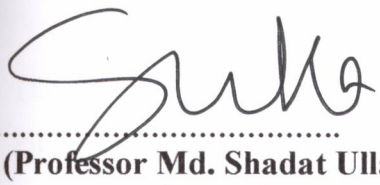

.....
(Professor Md. Shadat Ulla)
Supervisor

.....
(Professor Mohammad Hossain Bhuiyan)
Co-supervisor

.....
(Professor Md. Shadat Ulla)
Chairman
Examination Committee

CERTIFICATE

This to certify that the thesis entitled, *"OPINION LEADERSHIP AMONG THE FARMERS"* submitted to the Faculty of Agriculture, Sher-e-Bangla Agricultural University, Dhaka-1207, in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE (MS) in AGRICULTURAL EXTENSION & INFORMATION SYSTEM embodies the result of a piece of *bona fide* research work carried out by MOHAMMED ABBAS UDDIN, Roll No. 00589, Registration No. 00589 under my supervision and guidance. No part of the thesis has been submitted for any other degree or diploma.

I further certify that such help or source of information, as has been availed of during the course of this investigation has been duly acknowledged by him.

Dated.....

Dhaka, Bangladesh

.....

(Professor Md. Shadat Ulla)

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The Author

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ABSTRACT

The purpose of the study was to determine the extent of opinion leadership among the farmers and to explore the relationships between selected characteristics of the farmers with their opinion leadership. Purbachandrapur village under Dagon Bhuiyan Upazila of Feni District was the locale of the study. Data were collected from 90 farmers by using interview schedule during 16 October to 5 November, 2007.

The findings revealed that about 56% of the farmers had no opinion leadership and 18% of the farmers had low opinion leadership compared to 9% having no opinion leadership while 17% had medium opinion leadership. The proportion of the farmers having no opinion leadership was the lowest (63%) in family affairs and the highest (74%) in politics. Proportion of the farmers having high opinion leadership in agriculture (10%) and it was the lowest in politics (2%). Computed 'r' value depicts that selected characteristics of the farmers namely, age, education, organizational participation, cosmopoliteness, agricultural knowledge and innovativeness had significant positive relationship with their opinion leadership. On the other hand, farm size, annual income and extension media contact had no significant relationships with opinion leadership.

CHAPTER I

INTRODUCTION

1.1 Background of the Study

The economy of Bangladesh is predominantly agrarian, with the agriculture sector accounting for about 21 percent of Gross Domestic Product (GDP) (BBS, 2005). In the past decade, the agriculture sector contributed about three percent annum to the annual economic growth rate. Over 80 percent of the population of Bangladesh, or roughly 15 million households, live in rural areas, and the agriculture sector employ around 62 percent of the labor force. The crop sector alone accounts for 57 percent of employment in Bangladesh. The agriculture sector comprises crops, forests, fisheries and livestock. Of the agricultural GDP, the crop sub-sector contributes 71 percent, forests 10 percent, fisheries 10 percent, and livestock 9 percent (BBS, 2005).

Agriculture sector is the single largest contributor to income and employment generation and accepted the challenge to achieve self sufficiency in food production. It shoulders the responsibility to reduce rural poverty through sustainable agriculture development. The Government has the responsibility to ensure that the necessary conditions exist to enable the country to meet these challenges, and for this purpose, a sound agricultural policy is essential. It is therefore, necessary to reorganize and develop the agricultural production system into a more dynamic and commercially profitable sector. In this context, the primary goal of the National Agriculture Policy is to modernize and diversify the crop sector. The following opportunities and constraints prevailing in the agriculture sector have been taken in to consideration with a view to forming and implementing an effective agriculture policy:

Agricultural research all over the world has developed useful technologies which, if used by the farmers in cultivation, will enormously increase agricultural production. However Morill (1968), reports that the farmers who are the backbone

of the nation, are mostly illiterate and traditional, they are often skeptical towards new ideas and practices in agriculture, they often become frustrated with new practices in agriculture due to lack of proper understanding of the relevant factors. Therefore, the prerequisite for agricultural development is the communication of the benefit and know-hows of improved agricultural practices among the farmers so that they move forward to use them in production of crops.

Dennis and Andersion (1998) reports regardless of their source and sociometric status, farmers will adopt new technologies and modify their resource use when they believe that a proposed change is relevant to their circumstances and can help them to achieve their objectives. An extension service can play an important role in increasing the rate of adoption of measures that can enhance producer's productivity and welfare.

The rate of adoption of a technology by a farming population will depend on the following:

- The characteristics of individuals' production circumstances (land, labor, capital resources climatic and other production uncertainties and access to input and markets).
- The characteristics of technology itself, namely,
    - The extent to which it contributes to cost production, risk reduction and production increase
    - Its benefit
    - The skills needed to adopt it
    - The level of infrastructure and resources needed to adopt it.
- The sociocultural characteristics of individual farmer (education and attitudes) and of the farming community (values and attitude toward change) which can influence the perception of the relevance of technology.

- The speed to which the population is made aware of the technology and its application to local production system.

Consequently, extension has the potential role to increase the rate of adoption by being directly involved in increasing awareness, in facilitating skill acquisition and helping farmers to understand a technology and its relevance to their circumstances.

The task of educating the farmers about the improved agricultural practices, popularly known as agricultural extension, has been entrusted to the DAE. For carrying on the extension educational programme, DAE has one Sub Assistant Agricultural Officer for a block and he has to look after on an average 900 farm families. It is difficult for an extension worker alone to discharge their duties effectively among such a large number of farmers. Now the question arises how this problem may solved. Obviously the answer is to involve the opinion leaders with the extension personnel's.

Rural development depends not only on technology generation but also on dissemination of technology as per the needs of the target groups in a particular farming system (Mettric, 1993). For effective dissemination of generated technology, the combined effort of extension personnel along with the opinion leaders is vital.

There are some people in the rural areas with experience and leadership qualities. Farmers go to them for opinion and advice. Activities of the farmers are, to a great extent, influence by the opinion leaders from whom they seek information and advice. Agricultural extension work in the rural areas will be greatly facilitated if the extension agents can utilize the opinion leaders. Moreover, extension

programmes will receive greater acceptance and participation of the people if their leaders are involved in those programmes.

In order to effectively utilize the opinion leaders, it is necessary to have a clear understanding about the nature of opinion leadership among the farmers in the rural area. Extension workers need to know the extent of opinion leadership exhibited by the farmers. For a clear insight, one also needs to ascertain if the characteristics of the farmers are associated with their opinion leadership. Since opinion leaders play a crucial role in the transformation of information, it is important to study their communication behavior (Rogers, 1983). Little research has been conducted regarding the opinion leadership in the rural areas of Bangladesh. The present investigation was designed to get the answers of the following questions:

1. To what extent farmers act as an opinion leader?
2. What are the characteristics of the opinion leaders?
3. Is there any relationship between the characteristics of the farmers and their opinion leadership?

1.2 Statement of the Problem

In view of need for the understanding the nature of opinion leadership for effective extension work, the researcher under took this investigation entitled “Opinion Leadership among the Farmers in Purbachandrapur Village under Dagon Bhuiyan Upazila of Feni District”. The purpose of this study was to have an understanding of the present condition of opinion leadership among the farmers in rural area. For a clearer insight, it was also considered necessary to ascertain the relationships of the selected personal, economic, social and psychological characteristics of the farmers with opinion leadership.

1.3 Specific objectives

The following specific objectives were formulated for giving direction to the study:

1. To determine and describe the extent of opinion leadership among the farmers.
2. To determine and describe the selected characteristics of the farmers. These characteristics were:
   (a) Age
   (b) Education
   (c) Farm size
   (d) Annual income
   (e) Organizational participation
   (f) Cosmopoliteness
   (g) Extension media contact
   (h) Agricultural knowledge
   (i) Innovativeness
3. To determine the relationships of the selected characteristics of the farmers with their opinion leadership.

1.4 Scope and limitations of the Study

In order to conduct the research in a meaningful manner considering the time, money and other resources available to the researcher the following limitations were made and strictly followed throughout the investigation:

1. The study was conducted in one village namely, Purbachandrapur of Dagon Bhuiyan Thana under Feni District.
2. The study was kept limited among those whose profession was farming either on full time or part time basis.

3. Opinion leadership could be measured in a number of ways Sociometric technique was used in measuring opinion leadership in this study.
4. Characteristics of farmers are many and varied. However, only nine characteristics were selected for investigation in this study.
5. Opinion leadership of the farmers was investigated in four areas namely agriculture, politics, family affairs and religion.
6. Data were collected from the head of the family who was necessarily a male member. This means the leadership of female members was not taken into consideration.

1.5 Assumptions

An assumption is the supposition that an apparent fact or principle is true in the light of the available evident (Carter V. Good) (1943). The investigator carried out the research keeping the following assumptions in mind.

1. Respondents included in the sample were the true representatives of the farmers in the study area in respect of opinion leadership and the selected characteristics.
2. Respondents included in the sample were competent to give proper responses to the queries designed by the researcher.
3. The informations provided by the respondents were reliable.
4. The non-agricultural and landless families possessed no significant opinion leadership in the study area.

1.6 Hypothesis

Defined by Goode and Hatt (1952), a hypothesis is, “a proposition which can be put to a test to determine its validity. It may be seen contrary to, or in accord with, a common sense. It may prove to be correct or incorrect. In any event, however, it leads to an empirical test test”. In order to test the relationships of the selected

characteristics of the farmers with their opinion leadership, the researcher advanced the following null hypotheses.

1. There is no relationship between age of the farmers and their opinion leadership.
2. There is no relationship between education of the farmers and their opinion leadership.
3. There is no relationship between farm size of the farmers and their opinion leadership.
4. There is no relationship between income of the farmers and their opinion leadership.
5. There is no relationship between organizational participation of the farmers and their opinion leadership.
6. There is no relationship between cosmopoliteness of the farmers and their opinion leadership.
7. There is no relationship between extension contact of the farmers and their opinion leadership.
8. There is no relationship between agricultural knowledge of the farmers and their opinion leadership.
9. There is no relationship between innovativeness of the farmers and their opinion leadership.

1.7 Definition of Terms

The terms, used throughout the study are defined interpreted for the purpose of clarity of understanding.

Opinion Leadership

According to Rogers (1962), opinion leaders are those individuals to whom others seek information and advice. Katz and Lazarsfeld (1952) defined opinion leaders as individuals who receive information from the media and pass it along to their

peers. They are individuals who are knowledgeable about various topics and whose advice is taken seriously by others (Solmon, 1994). Opinion leaders can be found in all types of groups: occupational, social, community and others (Littlejohn, 1996). They often tend to be very socially active and highly interconnected within the community. Moreover, effective opinion leaders tend to slightly higher than the people they influence in terms of status and educational attainment, but not so high as to be in a different social class (Solmon, 1994). To sum up, opinion leaders are those to whom farmers go for seeking information and advice.

Age

Farmer's age was defined as the chronological duration of time from his birth to the time of interview. It was measured in terms of years.

Education

Education was defined as the development of desirable knowledge, skill and attitude in an individual through reading, writing and other related activities in educational institutions. It was measured in terms of years of schooling (i.e. highest class passed) of an individual.

Farm Size

The term referred to the cultivated area either owned by a farmer or cultivated on borga system, the area being estimated in terms of full benefit to the farmer. The right of a farmer on land taken on lease from others was regarded as ownership.

Income

Income referred to the total earnings of a farmer and the members of his family from agriculture and other sources during a year. It was expressed in takas.

Organizational participation

Organizations are social unit or human groupings deliberately constructed to specific goals. Participation in an organization was referred to as taking part in an organization as Ordinary member, Executive Committee member or Officer.

Cosmopoliteness

The term cosmopoliteness was used to refer to the degree to which an individual's orientation was external to a particular social system. Cosmopoliteness of a respondent is measured by computing a cosmopoliteness score. The cosmopoliteness score is assigned on the basis of different places and frequency of his visit extent to and outside of his own social system.

Extension media contact

Extension media contact is referred to the respondents becoming accessible to the influence of different information media through different extension teaching methods.

Agricultural knowledge

Agricultural knowledge referred to the understanding of the farmers about the different aspects of scientific agriculture such as improved seed, fertilizer, plant protection, irrigation, etc.

Innovativeness

Innovativeness is the degree to which an individual is relatively earlier in adopting new ideas than the other members of his social system. The innovators, who are significantly more educated, cosmopolite in orientation, and belong to higher socio-economic status categories, tend to use institutional as well as impersonal sources more frequently than early and late adopters. The innovators have close contact with the institutional sources and are the first to receive information on and adopt an agricultural innovation. Because of their external contact, innovativeness, and reputation as successful farmers, they play the role of opinion leaders in passing on the information to laggards and average farmers.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this chapter is to present the review of literature having relevance to the present investigation. This study was under taken to explore relationships of nine selected characteristics of the farmers with their opinion leadership. The researcher made an exhaustive search of available literature to find out studies dealing with the relationships of selected characteristics with opinion leadership. In course of review, he found studies dealing with the relationships of opinion leadership with nine characteristics, namely, age, education, organizational participation, cosmopoliteness, innovativeness, Agricultural knowledge, extension contact, farm size and income directly or indirectly with opinion leadership.

Review of literature will be presented in ten sections of this chapter. The first section will deal with the concept of opinion leadership. Findings of research studies and expert opinions dealing with the relationships (direct or indirect) of nine characteristics with opinion leadership will be presented in the remaining nine sections.

2.1 Concept of Opinion Leadership

Perhaps the most famous research on opinion leadership was done by Elihu Katz and Paul Lazarsfeld stated in their book Personal Influence. Katz and Lazarsfeld (1955) define opinion leaders as individuals who receive information from the media and pass it along to their peers. They are individuals who are knowledgeable about various topics and whose advice is taken seriously by others (Solomon, 1994, p.385). Opinion leaders can be found in all types of groups: occupational, social, community, and others (Littlejohn, 1996, p. 334).They often tend to be very socially active and highly interconnected within the community (Solomon, 1994, p. 385). Moreover, “effective opinion leaders tend to be slightly higher than the people they influence in terms of status and educational attainment, but not so high as to be in a different social class” (Solomon, 1994, p. 385). This way, the leaders are still a part of their audience’s reference group.

During the 1980's, theorists added a new dimension to the list of opinion leader characteristics. Maslach brought forth the idea of public individuation. Public individuation is a state in which "people feel differentiated, to some degree, from other people and choose to act differently from them" (Chan & Misra, 1990).This is important to being an opinion leader, because such people must be willing to set themselves apart from their audience. Additionally, certain personal characteristics like high confidence, high self-esteem, the ability to withstand criticism, and a strong need to be unique (Chan & Misra, 1990).

It is important to remember, however, that social power, educational attainment, and public individuation are not absolute requirements for opinion leadership. Despite the existence of opinion leaders, it is not always easy to distinguish them from the other members of groups. This is because opinion leadership is not a trait, but rather a role taken by some individuals under certain circumstances (Katz & Lazarsfeld, 1955, p. 33). In other words, anyone can be an opinion leader at any given time. Such leadership changes from time to time and from issue to issue (Littlejohn, 1996, p. 334).

Opinion leaders also play important roles in movements of social change. Opinion leaders can bring legitimacy to a social movement (Stewart, Smith, & Denton, 1994, p. 62). Known as "legitimizers," these social opinion leaders are judges, politicians, business executives, clergy members, sports figures and entertainers. Such people help "legitimize" a cause in the eyes of the public by marching in demonstrations, appearing at rallies, donating money, speaking in favor of the cause, and so forth (Stewart, Smith, & Denton, 1994, p. 62)

Who are opinion leaders and how can they be found?

As mentioned above, anyone can be an opinion leader, depending on the moment in tine and the issue at hand. Opinion leaders can be as small-scale as family members or as grand as celebrities. Some well-known examples of social opinion leaders who have helped bring legitimacy to various causes are: celebrities such as Robert Redford, Alan Alda, jane Fonda, Joanne Woodwaed, Barbara Streisand, the late John Denver, and Michael Jackson, politicians like Vice President Albert Gore, Senator Ted Kennedy, and clergy members Jerry Farrewell and Jesse Jackson. These people have donated tine, money, and support to such contemporary causes as the environmental, women's liberation, gay-rights, pro-choice, pro-life, and other movements. (Stewart, Smith, & Denton, 1994, p. 62).

Rogers (1962) points out that all persons do not exert equal amount of influence on the adoption decisions of others. These individuals who have a greater share of influence are called opinion leaders. According to Rogers, opinion leaders are these individuals from whom others seek advice and information.

Merton (1957) defined opinion leaders as men who exert personal influence upon a certain number of other people in certain situations.

Singh (1961) describes these persons as local leaders who show special interest and initiative in a local programme.

Trent (1966) considers these lay people as opinion leaders who by virtue of the social position, age, education, family reputations, wealth, prestige or political contacts influence opinions on most action programmes in the country.

Hays (1961) definition is significant in the sense that it defines leadership as a series of behaviors, not something inherent by the individual himself. For the present purpose and as far as the extension activities are concerned, the concept of

leadership will be discussed and interpreted in terms of leadership will be discussed and interpreted in terms of leadership behavior.

From the above definitions, emerge a picture which is helpful to have clear understanding of the concept of opinion leader. Opinion leaders are those persons who influence the actions of others by their advice and information. These persons possess some good qualities. The people respect them and go to them for advice. Opinion leadership, in the light of foregoing discussions, may be defined as the activity of influencing the actions of others by advice and information. Rogers has rightly pointed out that opinion leadership is a fairly widespread trait even though it is especially concentrated in a few individuals. Influence is a matter of degree and should properly be viewed as a continuous variable, rather than as dichotomy of leaders and followers.

2.2 Age and opinion leadership

Ahmed (1974) conducted a research on opinion leadership among rural area at Dhaljura union of Dhaka district. He found that 37 percent of the farmers fell in the old category (50-70), compared to 34 percent in the middle aged (36-50) category and 29 percent in the young category (26-35). He opined that decision making relating to farming affairs in the rural area depends mostly on the old and middle aged farmers.

Ulla (1974) investigated that most of the farmers fell in the young (33 percent) and middle aged (44 percent) groups.

Shah and patel (1970) investigated that most the opinion leaders (77%) belonged to the 31-50 gears age group. More importantly, 11 out of 12 “very effective opinion leaders came from this age group.

Reddy and sahy (1971) observed opinion leaders in two Andhra Pradesh villages belonged mostly to the middle age groups.

Singh et al. (1965) found “communications” or opinion leaders relatively older in age; younger farmers generally depended on older farmers for guidance and advice.

Supe and Kulkarni (1975) reported opinion leaders were found to be slightly younger in age, belonging mostly to the 21-40 years age group.

Dube et al. (1978) observed no significant relationship between age and opinion leadership.

Farrell (1994) studied influential persons’ awareness of community problems in a rural Wisconsin country. The findings of the study indicated that influential were more likely to be over fifty years of age.

Mannan (1972) conducting a research on rural leadership at Comilla Kotwali thana in Bangladesh found that the age of the leaders varied from 21 to 55 years. Seventy six percent of the leaders fell within the age group of (26-45) years as compared to 9 and 15 percent of leaders who fall within the age groups of (21-25) and (46-55) years. From these findings he concluded that rural leaders were neither too young nor too old.

Islam (1971) undertook a study in Comilla Kotwali thana on the characteristics of the leaders (Managers) of the primary cooperative societies. He found that almost half of the managers were within the age group (35-49) years and about one fifth of them were above 49 years. Only 33 percent of the managers belonged to the comparatively younger age group (20-34 years). He opined that leadership would

be more effective if managers were selected from among people of comparatively older age group.

Based on a review of literature in the area of human development, Carter (1961) emphasized that the most effective 4-H leaders would be those who belonged to the middle age group.

Zainuddin (1972) studied the factors associated with leadership in a rural village in Malaysia and found no association between leadership and age.

2.3 Formal education and opinion leadership

Dube et al. (1978) studied the mean education score of the opinion leaders of two Uttar Prasdash villages was more than twice as large as that of average farmers.

Raju (1969) reported more than halt of the opinion leaders in Andhra Pradash villages were found to have up to secondary or higher education while only of six percent of the average farmers had a similar level of education.

Bose and Saxena (1966) observed seventy five percent of the opinion leaders in a Rajasthan village were literate while the literacy rate among the average farmers was only 29 percent.

Rahudkar (1962) studied opinion leaders can very easily call on the block development officer and Agricultural Extension officer. Their information contacts are also wide. Even their Kinship relations are spread over a wide area. They are able to purchase agricultural books or subscribe to agricultural magazines and news papers. Thus these farmers have a number of contacts which they utilize for new information large farmers can afford to take the risk of implementing the contents of the information they obtain from various sources.

Farrell (1964) in conducting a study on influential persons' awareness of community problems in a rural Wisconsin county found that influential had a higher level of education. This was supported by Steele (1971) who studied opinion leadership in family living among low income home makers in the expanded food and nutrition programme in Ohio. He found that majority of opinion leaders had an education level of 10 to 12 years.

Mannan (1972) found that the leaders were educated up to the levels of primary, secondary, matriculate, and above matriculate and the corresponding percentages were 28, 63, 6, and 3. Upon analysis of data he concluded that some educational background was needed to exhibit leadership role effectively.

Islam (1971) found that all the cooperative societies' leaders were educated, the educational levels varying from primary to the realization of the people that some education is necessary for performing the functions as leaders.

Zaidi (1970) reported in his study that educated people were going to reported in his study that educated people were going to replace the traditional leaders in the rural community of Bangladesh.

Skeleton and Clark (1968) recommended graduates of twelve grade or more of formal schooling as the educational level for lay leaders in 4-H club activities.

Douglah (1965) found that youth leadership status was significantly related to formal education.

Wilson (1963) studied the characteristics of adults associated with leadership participation and interest in youth organization. The findings of the study Implied

that the efforts of professional workers would be more effective if local leaders were recruited from adults who had higher formal education. This was contradicted by Zainuddin (1972) who conducted a research in a rural village of Malaysia. He found no association between leadership and education.

2.4 Farm size and opinion leadership

Rahudkar (1960) observed opinion leaders can very easily call on the block development Officer and Agricultural Extension Officer. Their information contacts are also wide. Even their kinship relations are spread over a wide area. They are able to purchase agricultural books or subscribe to agricultural magazines and newspapers. Thus these farmers have a number of contacts which they may utilize for new information. Large farmers can afford to take the risk of implementing the contents of the information they obtain from various sources. The information on farming innovations thus first reaches the larger farmers of a village from extension agents and the mass media, which then transmit the information to other farmers.

Reddy and Sahy (1971) found ownership of larger holdings is associated with opinion leadership is that since landed property is an important indicator of social status and prestige in a village, people owning and operating larger holdings also trend to assume positions of opinion leadership.

Hossain (1971) studied the adoption of four improved farm practices by the transplanted Aman rice growers in Gouripur Union of Mymensingh District. The four practices included recommended variety of transplanted Aman paddy, line transplanting method, recommended doses of fertilizer and plant protection measure. Hossain found positive relationship of farm size with adoption of all the four improved farm practices.

Rahim (1971) also found that size of farm was positively related to adoption of improved farm practices. Similar findings have also been reported by Iqbal (1963). A study by Inayetullah (1962) however did not reveal any relationship between farm size and adoption of new practices.

Karim (1973) in his study in keyetkhali union of Mymensingh district found a positive relationship between farm size and adoption of fertilizers.

Ahmed (1974) in his study on the agricultural knowledge of the farmers observed that farm size had a positive relationship with the agricultural knowledge of the farmers.

Above research findings indicate that farm size has a positive relationship with adoption of improved farm practices and agricultural knowledge of the farmers. Opinion leaders need to have higher adoption of improved farm practices and more agricultural knowledge in order to effectively perform their role. One may therefore expect a positive relationship between farm size of the farmers and opinion leadership.

2.5 Income and opinion leadership

Dev and Sharma (1968) found income and opinion leadership two variables significantly related. While almost one-half of the opinion leaders in two Panjab villages had an annual income of Rupees 1100 or above only 14 percent of the average farmers had such a high income.

Raju(1969) observed in Andhra Pradesh, over tow thirds of the opinion leaders, compared to only 14 percent of the average farmers, had an average annual income of Rupees 6,000 or over from agriculture. Income appears to be related to

opinion leadership in the same way the ownership of large holdings is related to the latter.

A study by Rahman (1973) shows the influence of income on adoption of innovation. The findings indicate a positive relationship between income of the farmers and adoption of improved farm practices.

Ahmed (1974) found a positive relationship between income of the farmers and their agricultural knowledge.

Research findings as presented above reveal a positive relationship of income with adoption of improved farm practices and agriculture knowledge of the farmers. It is therefore; likely that income of the farmers will have a positive association with the opinion leadership.

2.6 Organizational Participation and Opinion Leadership

Shah and Patel (1970) found opinion leaders have a higher level of social and organizational participation than average farmers. The “very effective” leaders in two Gujrat villages participated in 46 formal and informal organizations while the “less effective” leaders participated only in 15 of such organizations.

Bose and Saxena (1966) reported the opinion leaders in a Rajasthan village participated in 15 organizations on an average compared with only nine for the average farmers.

Singh (1965) found in a comparative study between an agriculturally developed and a less developed village, the opinion leaders have a much higher level of participation in formal organizations than average farmers in the villages of both

types. The opinion leaders tended to had important offices in the formal organizations in which they participated.

After reviewing the related literature on opinion leadership Rogers (1967) generalized: “Opinion leaders have more social participation than their followers.” This generalization has also been supported by Merton (1957), Stewart (1947), Berelson et al. (1954) and Katz and Lazarsfeld (1955).

Lionberger (1953) and Vanden Ban (in press) found that farm opinion leaders had greater participation in formal organizations than had the participation by the farmers with less influence. But Rogers observed that opinion leaders had a greater degree of both formal and informal social participation.

Rahim (1963) reported that opinion leaders in a Pakistani village were members of more organization than their followers.

Mannan (1972) observed that 50 percent of the cooperative leaders were associated with different organizations other than the cooperative societies.

Zainuddin (1972) in his study found that leadership was associated positively with participation in local organizations.

2.7 Cosmopoliteness and opinion leadership

Bose and Saxena (1966) found opinion leaders have a significantly higher level of contact with the world outside village than average farmers. The “cosmopliteness score,” based on respondents’ frequency of visits to the nearest city, fairs, and exhibitions, was found to be significantly higher for the opinion leaders than the average farmers in a Rajasthan village.

Shah and Patel (1970) observed opinion leaders to visit fairs and exhibitions, the research station and the agricultural college and participate in group meetings and crop competitions outside the village more frequently than the average farmers in Gujarat village.

Dubey and Dwivedi (1978) examined opinion leaders had higher level of urban contact than average farmers in two Uttar Pradesh villages.
Rahudkar (1960) noticed opinion leaders had more frequent formal and informal outside contacts in a Maharashtra village. In other words, opinion leaders not only use the mass media and institutional sources more frequently than average farmers but are also more exposed to ideas originating from outside their frequent external contact.

After reviewing the related literature in opinion leadership, Rogers (1967) advanced a generalization, “Opinion leaders are more cosmopolite than their followers”.

Lionberger (1953) found that the farm opinion leaders tended to belong to formal organization located outside (rather than inside) the rural Missouri community where they lived in.

Rahudkar (1962) observed that the opinion leaders had more informal and formal contacts outside the village than they had with their followers inside the village.

Katz (1957) reported that among his sample of medical doctors, opinion leaders were more likely to participate in out-of-town medical meetings.

Rogers (1967) found in his study that the more influential IOWA farmers were more cosmopolite in their friendships, attended in formal organization and possessed reading behavior.

Vanden Ban (in press) found that farm opinion leaders in the Netherlands had many more contacts with urban centre during the preceding year than did their followers. The relationship between opinion leadership and cosmopoliteness held good for each of the three communities he studied. He also observed that opinion leadership was more closely related to cosmopoliteness in the modern communities than in the community with traditional norms.

Katz and Lazarsfeld (1955) reported that their fashion leaders and public affairs leaders (but not their movie and marketing opinion leaders) were more cosmopolite in their reading of books and magazines than were the less influential.

Stewart (1947) found little relationship between the degree of influence an individual possessed and his cosmopoliteness.

2.8 Extension media contact and opinion leadership

Dubey and Dwivedi (1978) observed opinion leaders use institutional sources of information more frequently than average farmers. The exposure to the mass media of both print and non print types is higher among opinion leaders than average farmers. Opinion leaders also have a greater contact with extension agents.

Triveddi (1972) studied the Village Level Workers, agricultural Extension Officer, and Block Development Officer were the most used sources by the opinion leaders.

Dev and Sharma (1968) found in Panjab villages 70 percent of the most sought after opinion leaders had ‘high’ and 30 percent had ‘medium’ contact with extension agents.

Raju and Neeladri (1966) conducted a study in Andhr Pradesh and it was found that institutional personal sources were used more frequently than the mass media by opinion leaders although “the mass media may play an important supporting role.” Among the Extension agents, the Block Development Officer, rather than the lesser officials, was most frequently used by opinion leaders for information.

Reddy and Kivlin (1968) conducted a study on the adoption of high yielding varieties in three Indian villages. They found that the adopters of HYV were more likely to listen to radio farm forums and to news broadcast. Contact with agricultural extension agents was also positively related to adoption of HYV. Adopters had substantially more contact with extension personnel.

Wilson and Gallup (1955) on the basis of a study concluded that the extent to which farmers and home makers made contacts with members of the extension staff largely determined the adoption of recommended practices. The study revealed that 87 percent of the contact group reported the adoption of agricultural practices in contrast with 38 percent of the non-contact group.

Karim (1973) in his study on the adoption of fertilizers by the transplanted Aman rice Growers found that extension exposure of the growers had a strong positive relationship with their adoption of fertilizers.

Ahmed (1974) conducted a study on the agricultural knowledge of the farmers. He found a positive relationship between extension contact of the farmers and their agricultural knowledge. Findings of research as presented above indicate that

extension contact has favorable influence on the adoption of improved farm practices and agricultural knowledge. Opinion leaders in the rural areas are the persons who generally have higher adoption of improved practices and more agricultural knowledge. These facts suggest a positive relationship between extension contact and opinion leadership.

2.9 Agricultural knowledge and opinion leadership

Sohi and Sandhu (1976) conducted a knowledge test on recommended practices in plant breeding, agronomy, soil management, plant protection, vegetables, fruit cultivation, and animal husbandry to 86 village level workers in Punjab. On a possible range of knowledge score from 0 to 100, 12 received a low score of 0-36, 38 a medium score of 37- 47, and 36 received a high score of 36-100. The average knowledge score of the VLWs also 45, that is, it fell in the medium range. According to the author of the study, since the VLWs also had to engage in work that was not related agriculture, they spent inadequate time in communicating agricultural information to farmers and consequently, they themselves did not always have the knowledge about the more recent innovations. The VLWs, however, had a high knowledge score for practices relating to soil management, plant protection, animal husbandry, and plant breeding, for they advised farmers on these practices more frequently. Their knowledge scores were low for the practices on vegetables, fruit cultivation and agronomy.

Islam (1971) examined the relationship of agricultural knowledge of the managers of primary agricultural cooperative societies with the adoption of innovations by their societies. Adoption on three innovations, namely, new crop, tractor cultivation and irrigation was investigated by Islam. He found positive relationship of agricultural knowledge of the managers with adoption of all the three innovations by their societies. The findings indicate that agricultural knowledge of the managers helps them to perform their leadership function better.

Lionberger (1953) found that the more influential farmers subscribed to more number of farm magazines and newspapers. Rogers on the basis of study also concluded that farm opinion leaders subscribed to more farm magazines and newspapers.

Rahim (1961) in a study of Pakistani village reported that opinion leaders (local leaders) used more magazines, newspapers and extension service bulletins. The findings indicate that the opinion leaders read more farm magazines and other printed materials in agriculture. It is likely that the opinion leaders, through such reading, acquire knowledge and skill which help them to function as opinion leaders. Such consideration suggests a positive relationship between agricultural knowledge of the farmers and opinion leadership in rural areas.

2.10 Innovativeness and opinion leadership

The available research evidence indicates that opinion leaders are more innovative than their followers.

Ulla (1974) reported that 45 percent of the farmers had medium innovativeness while 28 percent had low innovativeness and 26 percent had high innovativeness.

Katz (1955) found that doctors who were influential in convincing their colleagues to adopt a new medical drug were relatively earlier adopters of innovations.

Rahudkar (1962) in a study observed that opinion leaders had higher adoption rate than their followers.

In Bangladesh, Rahim (1963) found that opinion leaders had higher adoption score then the average farmers. Similar results were also obtained by Rogers and Burdge (1962) in seven Ohio truck growing communities. They observed that the average

innovativeness score for the sociometric leaders was 28 percent higher than the score obtained by the average truck growers in the sample. All but one of the 14 opinion leaders was more innovative than the average grower in their community.

Lionberger (1953) found in a Missouri community that the farmers having higher adoption rate were contacted by the ordinary farmers for information and advice as regards farming.

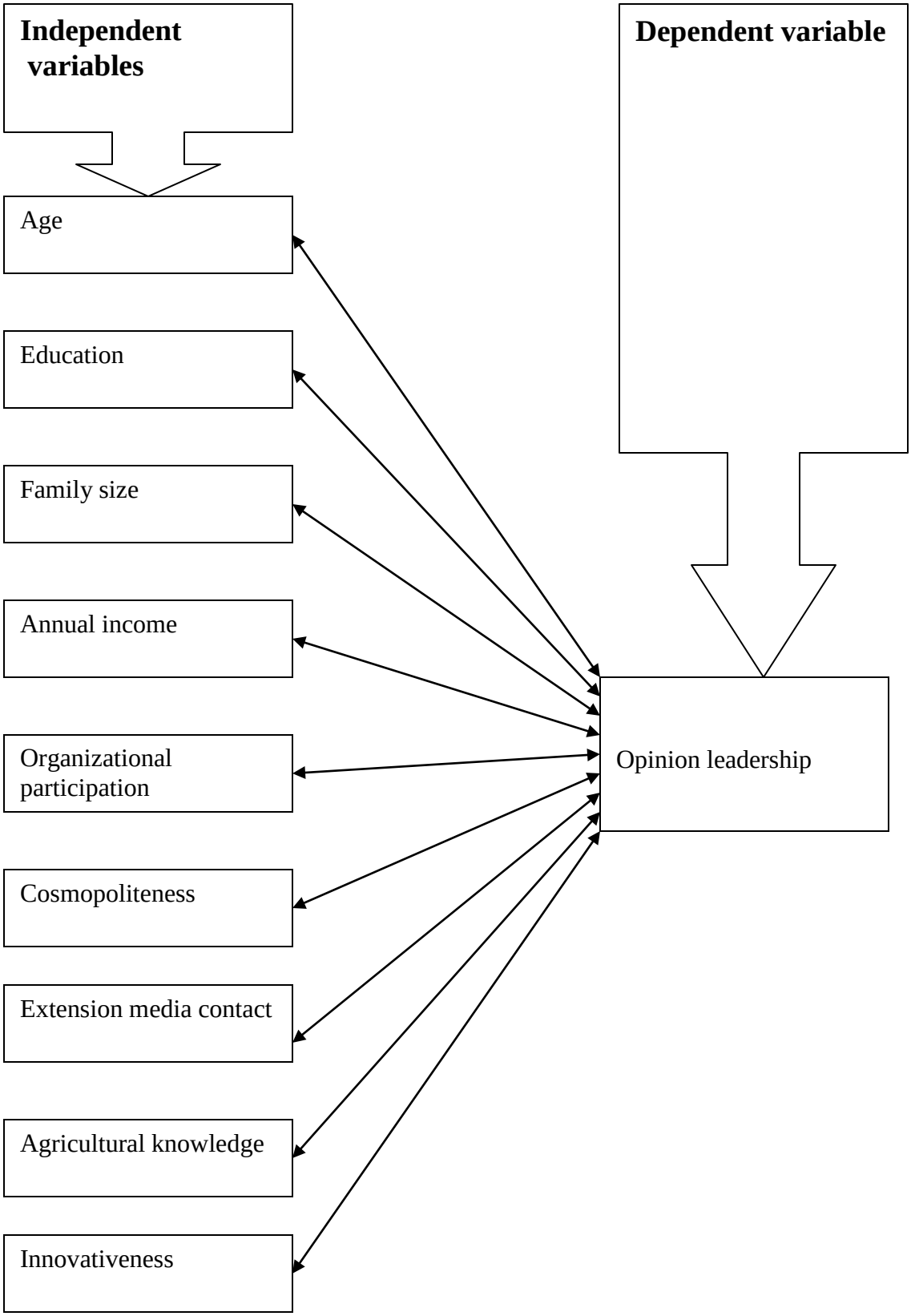
Coleman and Marsh (1954) found similar results in a Kentucky community in their earlier studies. But further proving revealed that in the areas of high adoption the farmers who were sought as sources of information were ahead in the use of recommended farm practices than the ordinary farmers while in the areas of low adoption this difference was obscure.
Wilkening (1952) found a different situation in a North Carolina community. He observed that the farm operators who were sought as sources of information by other farmers were not far ahead of the average farmers of the community as regards adoption of improved farm practices.

However, Rogers(1962) after undergoing an exhaustive review of past researches in relation to opinion leadership and adoption of improved farm practices reported that Lionberger (1955), Wilkening (1958 and 1961), Vanden Ban (in press), Rogers (1955 and 1957) found opinion leaders were more innovative than the average farmers.

Zainuddin (1972) found in his study in Malaysia that leadership was positively associated with adoption of new practices.

2.11 The Conceptual Framework of the Study

In scientific research, selection and measurement of variables constitute on 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 researcher introduces, removes or varies the independent variables (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 the review of literature, the researcher constructed a conceptual framework of the study which is self explanatory and is presented in Fig. 2.1.



Fig, 2.1 Conceptual framework of the study on opinion leadership

CHAPTER III

METHODOLOGY

The methodology used in conducting any research is critically important and deserves careful consideration. It enables the researcher to collect valid and reliable informations in terms of hypothesis or research instrument and to analyze the information properly to arrive at valid results.

3.1 Locale of the Study

The village Purbachandrapur of Purbachandrapurunion of Dagon Bhuiyan upazila of Feni district was purposely selected as the locale of the study. The area of Dagon Bhuiyan upazila is 145 sq km with 1,50,750 population. Purbachandrapur union is the north-west side of Dagon Bhuiyan upazila. The village is 3.5 kilometers away from upazila headquarter. Wheat is the second crop of the farmers of this village.

The map of Feni district showing Dagon Bhuiyan upazila and a map of Dagon Bhuiyan upazila showing the study area have been presented in Figs 3.1 and 3.2 respectively.

3.2 Population of the Study

In Purbachndrapur village there were 110 families. Out of these, 12 families were non-agricultural and 8 families were landless. Therefore, the number of total farm families was 90. Considering that the non-agricultural and landless families had no significant opinion leadership in agriculture, these were kept aside during data collection. Thus heads of 90 farm families constituted the sample population and respondent of the study.

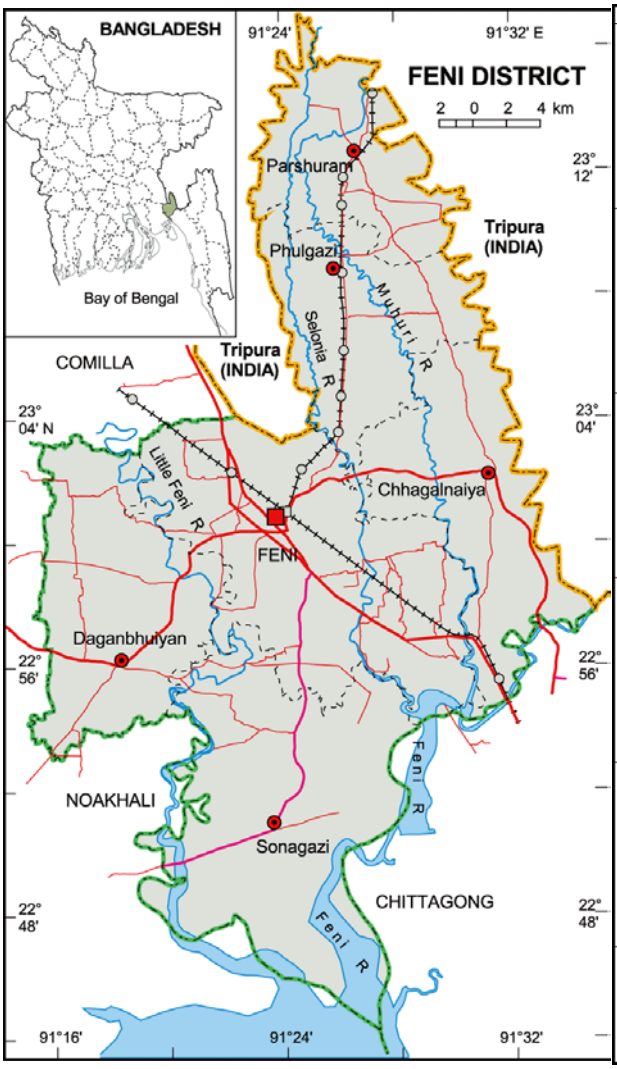


Fig: 3.1 Feni District

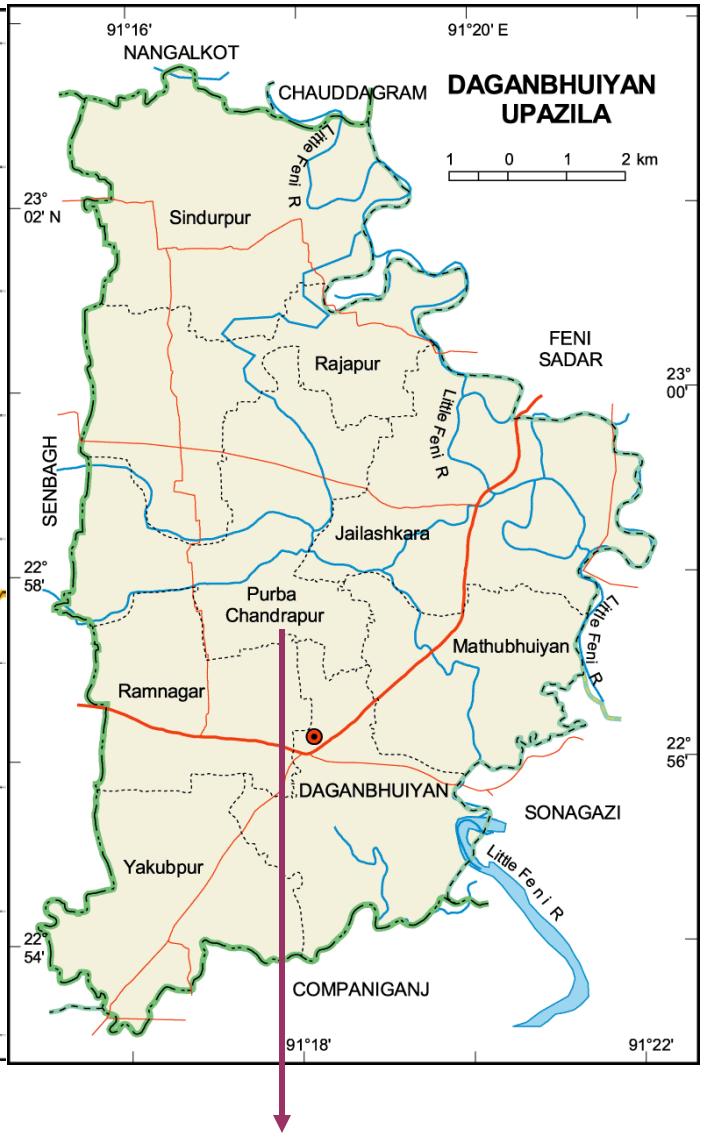


Fig: 3.2 Study area of Dagon Bhuiyan Upazila

3.3 Instrument for Collection of Data

In order to collect relevant data from the respondents an interview schedule was prepared keeping the objectives of the study in mind. Both open and closed form questions were use in collecting data. Simple and direct question were included in the schedule to ascertain four characteristics of the farmers, namely, age, education, farm size and income. The schedule also contains five scales for measuring five characteristics namely, agriculture knowledge, extension contact, organizational participation, cosmopoliteness and innovativeness. Four socimetric questions were included in the schedule to determine the opinion leadership of the farmers. The interview schedule was pre-tested with 15 farmers of the study area. On the test experiences, necessary additions, corrections and modification of the schedule were done. Valuable suggestions and comments were received from the research supervisor and co-supervisor. The schedule was prepared in Bengali. This helped the respondents to understand the questions and also to furnish the required informations. A copy of the interview schedule in English version is presented in the appendix-I.

3.4Collection of Data

Data were collected personally by the researcher himself from 90 farmers of Purbachandrapur village through face to face interview. Interview schedule prepared earlier was used for collecting the data. Interviews were usually conducted with the respondents during the leisure time. Before going to the respondents for interview, they were informed earlier so that they might be available at their respective residence at the scheduled time. Interviews were usually conducted with the respondents in their homes. While starting interview with any respondent the researcher took all possible care to establish rapport with him so that he did not hesitate to furnish proper responses to the questions and

statement in the schedule. However, if any respondent failed to understand any question the researcher took care to explain the issue. He received excellent co-operation from the respondents and others concerned during the time of interview. The entire process of collecting data took place during 16 October to 5 November 2006.

3.5 Selection of Variables of the Study

Selection of inappropriate and inconsistent type of variables may lead to the misleading and unfruitful results. The researcher keeping all these in mind took adequate measurement in selecting the dependent and independent variables of the study. Before setting the variable of the study, the researcher himself visited the study area and talked to the farmers and he was able to observe the selected characteristics of the farmers (in the study area) which might have influence on the opinion leadership. Based on this experience, review of literature, discussion with the relevant experts and academicians and also with the research supervisor, the researcher selected the dependent and independent variables. An independent variable is that factor which is manipulated by the researcher in his attempt to ascertain its relationship to an observed phenomenon. A dependent variable is that factor which appears, disappears or varies as the researcher introduces, removes or varies the independent variables (Townsend, 1953).

The dependent variable is often called ‘criterion or predicted variable’ whereas independent variable is called ‘treatment, experimental or antecedent variable’. Ezekiel and Fox (1959) stated variable as any measurable characteristics, which can assume varying or different values in successive individual cases.

3.5.1 Independent variables: The Research Advisory Committee and the researcher selected nine characteristics of the farmers as independent variables of the study. These were age, education, farm size, annual income, organizational participation, extension media contact, cosmopoliteness, knowledge on agriculture and innovativeness.

3.5.2 Dependent variables: A dependent variable is that factor which appears, disappears or varies as the experimenter introduces, removes or varies the independent variables. Opinion leadership among the farmers is selected as dependent variable.

3.6 Measurement of Variables

In order to conduct the study in accordance with the objectives, it was necessary to measure the selected variables. This section contains procedures for measurement of both independent as well as dependent variables of the study. The procedures followed in measuring the variables are presented below:

3.6.1 Measurement of independent variables

The selected characteristics of the farmers constituted the independent variables of the study. To keep the research within the manageable sphere, nine independent variables were selected for the study. The procedures of measurement of the selected variables were as follows:

3.6.1.1 Age

The age of individual is one of the important factors pertaining to his personality make up (Smith and Zope, 1970) which can play an important role in his opinion leadership. The age of a respondent was measured by counting the actual years from his birth to the time of interview on the basis of his statement. It was measured in terms of actual years. No fraction of year was considered. A score of one (1) was assigned for each years of age. Age was placed in item no.1 of the interview schedule.

3.6.1.2 Education

Education was measured in terms of grades of formal education (school/college) completed by an individual. It was expressed in terms of years of schooling. A score of one (1) was assigned for each year of schooling completed. For example, if the respondent passed the S.S.C. examination, his education score was given as 10, if passes the final examinations of class Seven (VII), his education score was given as 7. If the respondent did not know how to read and write, his education score was given as '0' (zero). A score of 0.5 (half) was given to that respondent who could sign his name only.

3.6.1.3 Farm size

Farm size of the respondent was measured as the size of his farm on which he continued his farm practices during the period of study. Each respondent was asked to mention the homestead area, the land under his own cultivation, own and given to others on borga (share cropping) system, land taken from others on borga system, land given to others on lease system, land taken from others on lease system, own pond, own garden and miscellaneous fallow land. The area was estimated in terms of full benefit to the growers or his family. The following formula was used in measuring the farm size:

Farm size = $A_1 + A_2 + ½ (A_3 + A_4) + A_5 + A_6 + A_7 + A_8$

Where,

A_1 = Homestead area

A_2 = Own land under own cultivation

A_3 = Own land given to others on borga system

A_4 = Land taken from others on borga system

A_5 = Land taken from others on lease system

A_6 = Own pond

A_7 = Own garden

A_8 = Others

The unit of measurement was in hectare.

3.6.1.4 Annual income

Annual income refers to the total earnings in taka of the respondent and all family members of a farm family from agriculture, livestock, fisheries and other sources (service, business etc.) during the previous year. The methods of ascertaining income from different sources were involved three phases. In the first phase, the yield of all the crops in the previous year was noted. Then all the yields were converted into cash income according to the prevailing market price. In the second phase, the prices of other enterprises (livestock, poultry, fisheries etc.) were also added to the price of crops. In the third phase, earning of each respondent himself or other members of his family from different sources (like service, business, and labor) were also included in calculating the income. Yearly earning from farming and other sources were added together to obtain total family annual income of a respondent. In case of business or service their monthly income was multiplied by twelve to determine annual income. Annual income of an individual was expressed in 1,000 Taka. A score of one was given for each Tk. 1000 to compute the annual income scores of the respondents. Data obtained in response to item no. 4 of the interview schedule were used to determine the family income of the respondents.

3.6.1.5 Organizational participation

Organizational participation of the respondent was measured in two-dimension status of his participation and duration of participation in different organizations during the time of interviewing.

Organizational participation score was determined by the following formula:

Organizational participation score = O_1 x 1 + O_2 x 2 + O_3 x 3

Where,

O_1 = Total duration (year) of participation as ordinary member

O_2 = Total duration (year) of participation as executive committee member

O_3 = Total duration (year) of participation as executive committee officer

Organizational participation score of the respondent was computed on the basis of his participation in different organizations as shown in item no.6 on the interview schedule. Scores were assigned for participation of a respondent in an organization in the following manner:

Nature of participation	**Score assigned**
No participation	0
Participation as ordinary member	1
Participation as executive committee member	2
Participation as executive committee officer	**3**

Organization participation score of a respondent was determined by adding his scores for participation in all organizations. Thus, the organizational participation score could range from 0-9, 0 indicated no participation and 9 indicated high participation.

3.6.1.6 Cosmopoliteness

Cosmopoliteness of a respondent was measured in terms of his nature of visits to the eight different places external to his own social system and as shown in item number 6 in the interview schedule**.** The respondents indicated whether they visited those places regularly, frequently, occasionally, rarely and not at all. Weights assigned to these visits were 4, 3, 2, 1 and 0 respectively. A respondent's cosmopoliteness score was obtained by adding the weights for his visits to all the places listed in the instrument. The cosmopoliteness score of the respondents could range from 0 to 32, where 0 indicating no cosmopoliteness and 32 indicating high cosmopoliteness.

3.6.1.7 Extension media contact

Extension media contact was measured as one's extent of exposure with different information sources. It was assumed that the more contact an individual would have with different information sources, the more he becomes educated and knowledgeable. An extension contact score was computed for each respondent on his extent of contact with 18 selected media. Each respondent was asked to mention the frequency of his contact with each of the 18 selected media. Here the score measured as 0 for no contact, 1 for rarely, 2 for occasionally, 3 for frequently and 4 for regularly of the contact respectively. Extension media contact score of the respondents could range from 0 to 72, where 0 indicating no extension media contact and 72 indicating very high extension media contact. Respondent's extension contact score was obtained by adding the weights for his responses to all the sources listed in the instrument.

3.6.1.8 Agricultural knowledge

To measure the agricultural knowledge of a respondent 14 questions was constructed in the interview schedule. Each respondent was asked to answer all the 14 questions. Out of assigned scores against each question, the summation of obtained scores against 14 questions represented the agricultural knowledge of a respondent. Agricultural knowledge was measured by the total knowledge score about agriculture. The total assigned score was 50. But, the score of each question was not equal, it was determined according to the extent of difficulty. Full score was assigned for each correct answer and zero (0) for the wrong answer. However, for correct responses to all questions, a respondent could get a total score of 50, while wrong responses to all questions he could get 0 (zero). 0 indicating no agricultural knowledge and 50 indicates high knowledge.

3.6.1.9 Innovativeness

Innovativeness of a respondent was measured by computing an "innovativeness score" on the basis of his adoption of 10 selected technologies. Innovativeness is the degree to which an individual adopts an innovation relatively earlier than other members in a social system (Rogers, 1995). Scores were assigned on the basis of time required by an individual to adopt each of the technology in the following manner:

Period of Adoption	Assigned Score
Within one year	5
Within two years	4
Within three years	3
Within four years	2
Within five years or above	1
Not at all	0

The scores for all the 10 selected technology were added together to constitute the innovativeness score of a respondent. Innovativeness score of a respondent growers could range from 0 to 50, where, 0 indicating no innovativeness and 50 indicating very high innovativeness.

3.6.2 Measurement of dependent variable

Opinion leadership of the farmers was the dependent variable of this study. Rogers (1955) has mentioned three methods of measuring opinion leadership, namely, a) sociometric technique b) key informants and c) self designating technique. In the present study, sociometric technique was used for measuring the opinion leadership of the farmers. The sociometric technique consists of asking group members to whom they go for advice and information about an idea. For

determining opinion leadership by this method, all members of a social system need to be interviewed.

This study investigated opinion leadership of the farmers in four areas, namely, agriculture, politics, family affairs and religion. One sociometric question was asked to determine opinion leadership in each of the four areas. Four scores were computed for each respondent to determine opinion leadership in four areas. Agriculture opinion leadership scores were computed on the basis of the respondents of the farmers to the question “to whom you go for advice when you face any problem on agriculture”. One point was assigned to a person for each citation of his name. The total number of citations of the name of a particular farmer by the fellow farmers indicated his agriculture opinion leadership score. Opinion leadership scores for politics, family affairs and religion were computed by following the same procedure on the basis of responses to the respective sociometric questions. Overall opinion leadership score of a farmer was obtained by summing his opinion leadership scores in agriculture, politics, family affairs and religion.

Data were collected from 90 farmers. One farmer, therefore, could receive citations from a maximum of 89 farmers. He might also get no citation from any farmer. Hence the opinion leadership score for any of the four areas could range from 0 to 89, 0 indicating no opinion leadership and 89 high opinion leadership. Consequently, the overall opinion leadership scores could range from 0 to 356.

3.7 Data Processing and Analysis

After completion of field survey, all the data were processed according to the objectives of the study. Local units were converted into standard unit. All the individual responses to questions of the interview schedule were transferred to master sheet to facilitate tabulation, categorization and organization. In case of

qualitative data, appropriate scoring technique was followed to convert the data into quantitative form. Data was transferred to coding sheet with numerical scores given to each question. Simple statistics like frequency, percentage, range, mean, standard deviation and rank order were used to perform the data analysis. Correlation coefficients were to determine the relationships between selected characteristics of the farmers and their opinion leadership.

3.8 Statistical Treatment

Data collected were compiled, coded, tabulated and analyzed in accordance with the objectives of the study. Qualitative data were quantified by means of suitable scoring techniques. The statistical measures such as range, mean, standard deviation, percentage distribution and rank order were used to describe both the independent and dependent variables. Tables were also used in presenting data for clarity of understanding. In order to explore the relationships of the selected characteristics of the growers with their opinion leadership, the Pearson's Product Moment Correlation Co-efficient was computed. Correlation matrix were also computed to determine the inter relationships among the variables. Five percent (0.05), one percent (0.01) and 0.001 percent level of significance was used as the basis of rejecting any null hypothesis. If the calculated value of co-efficient of correlation "r" was equal to or greater than tabulated value at designated level of significance for the relevant degrees of freedom, the null hypothesis was rejected and it was concluded that there was a significant relationship between the concerned variables. However, when the calculated value of co-efficient of correlation was found to be smaller than the tabulated value at the designated level of significance for the relevant degrees of freedom, it was concluded that the null hypothesis was accepted and hence, there was no relationship between the concerned variables. Co-efficient values significant at 0.05 level is indicated by single asterisk (*), at 0.01 level by double asterisks (**) and at 0.001 level by triple asterisk (***).

CHAPTER IV

RESULTS AND DISCUSSION

In this Chapter, the findings of the study and interpretation of the results have been presented. Data obtained from respondents by interview were measured, analyzed, tabulated and statistically treated according to the objectives of the study. These are presented in two sections according to the objectives of the study. Opinion leadership among the farmers in each of the four areas will be discussed in the first section and overall opinion leadership in the second section.

4.1 Opinion Leadership among the Farmers in Agriculture, Politics, Family Affairs and Religion

Opinion leadership score of the farmers in each of the four areas could range from 0 to 89, 0 indicating no opinion leadership and 89 very high opinion leadership. Computed opinion leadership scores of the farmers ranged from 0 to 32 in agriculture, 0 to 23 in politics, 0 to 33 in family affairs and 0 to 24 in religion. Average opinion leadership score was 4.05 in agriculture, 1.97 in politics, 2.81 in family affairs and 2.92 in religion. On the basis of opinion leadership scores, the farmers were classified into four categories are as follows:

Categories	**Opinion leadership score**
No opinion leadership	0
Low opinion leadership	1 to 3
Medium opinion leadership	4 to 6
High opinion leadership	7 and above

TABLE 1

Classification of Farmers According to Their Opinion Leadership in Agriculture, Politics, Family Affairs and Religion

Categories	Agriculture		Politics		Family affairs		Religion	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
No opinion leadership	58	64	67	74	57	63	66	73
Low opinion leadership	8	9	13	14	19	21	7	8
Medium opinion leadership	15	17	9	10	12	13	11	12
High opinion leadership	9	10	1	2	2	3	6	7

Data presented in Table 1 show the distribution of the farmers according to the extent of their opinion leadership in each of the four areas- agriculture, politics, family affairs and religion. Analysis of the data indicates that 64 percent of the farmers had no opinion leadership in agriculture. One-ninth (10 percent) of the farmers had high opinion leadership in agriculture and 9 percent low while 17 percent medium. Proportion of farmers having no opinion leadership in politics was 74 percent compared to 2 percent having high opinion leadership and 14 percent no opinion leadership. Slightly more than two-third (63 percent) of the farmers had no opinion leadership in family affairs while 3 percent had high opinion leadership, 21percent low opinion leadership and 13 percent medium opinion leadership. Almost four-fifth (73 percent) of the farmers had no opinion

leadership in religion while 7 percent had low opinion leadership and 8 percent high opinion leadership.

The above findings indicate that the proportion of the farmers having no opinion leadership was the lowest (63 percent) in family affairs and the highest (74 percent) in politics. Proportion of the farmers having high opinion leadership in agriculture (10 percent) and it was the lowest in politics (2 percent).

4.2 Overall opinion leadership among the Farmers

Overall opinion leadership score of a farmer was computed by summing his opinion leadership score in agriculture, politics, family affairs and religion. Overall opinion leadership scores of the farmers could range from 0 to 356, 0 indicating no opinion leadership and 356 high opinion leadership. Computed scores of the farmers ranged from 0 to 112, the average being 11.58. Based on the computed overall opinion leadership scores, the farmers were classified into four categories as shown below:

Categories	**Overall opinion leadership score**
No opinion leadership	0
Low opinion leadership	1 to 9
Medium opinion leadership	10 to 17
High opinion leadership	18 and above

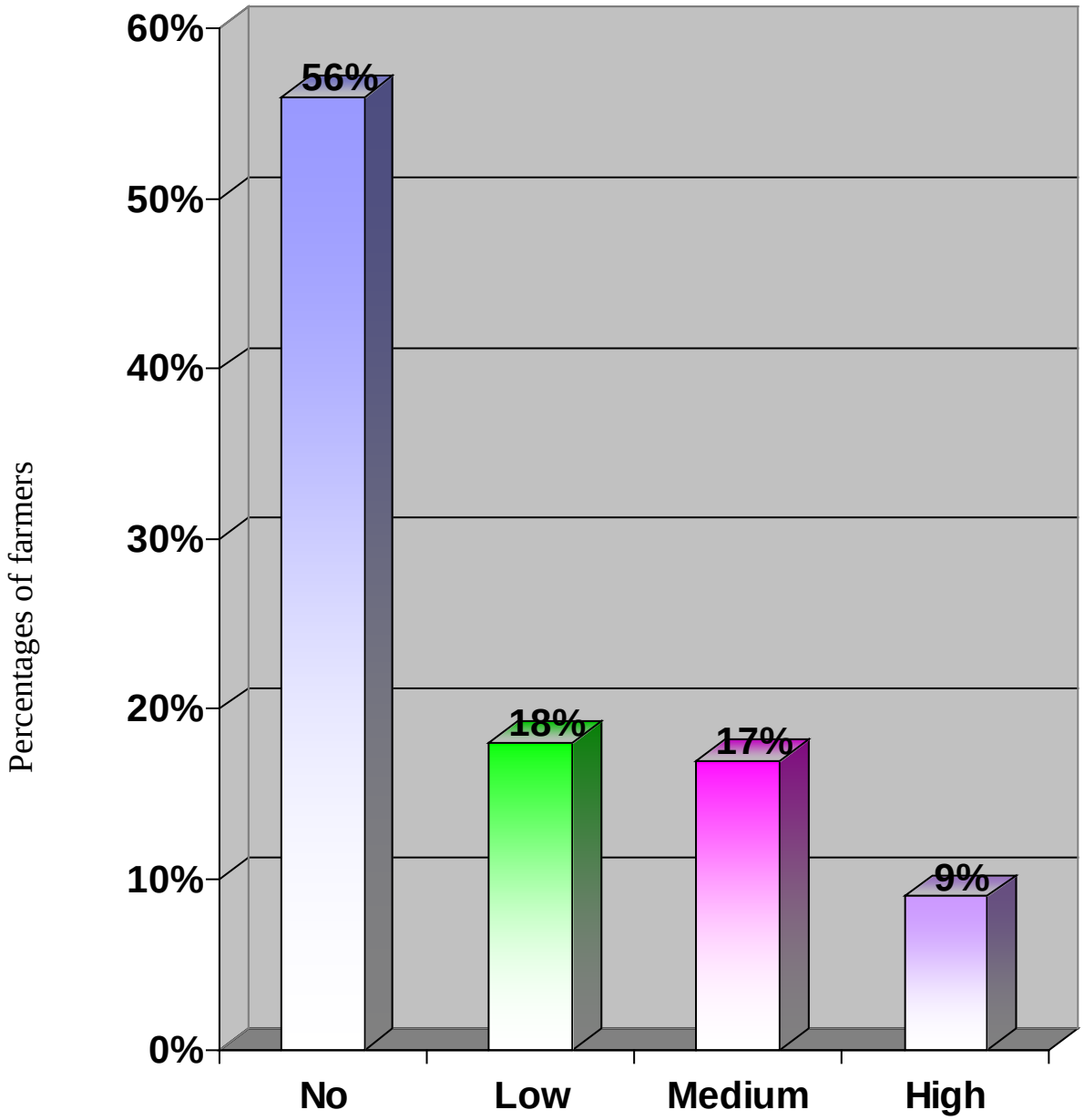
Data presented in Table 2 show the distribution of the farmers according to their overall opinion leadership. Data presented in the Table indicate that slightly more than five-eighth (56 percent) of the farmers had no opinion leadership. One-fifth (18percent) of the farmers had low opinion leadership

TABLE 2

Classification of Farmers According to Their Overall Opinion Leadership

Categories according to opinion leadership	**Farmer**	
	Number	**Percent**
No opinion leadership	51	56
Low opinion leadership	16	18
Medium opinion leadership	15	17
High opinion leadership	8	9
Total	90	100

Compared to only 9 percent having high opinion leadership, while 17 percent medium opinion leadership. Distribution of the farmers according to their overall opinion leadership has been visually shown in Figure 4.1. The findings indicate that almost one-eleventh of the farmers had high opinion leadership. Rogers has rightly pointed out that opinion leadership is a fairly widespread trait even though it is especially concentrated in a few individuals. Influence is a matter of degree and should properly be viewed as a continuous variable, rather than as dichotomy of leaders and followers. Merton defined opinion leaders as men who exert personal influence upon a certain number of other people in certain situations.



Overall Opinion Leadership

FIGURE 4.1

DISTRIBUTION OF THE FARMERS ACCORDING TO THEIR OVERALL OPINION LEADERSHIP

These are the people to whom rural people frequently go for information and advice. They can render substantial help to the extension workers to motivate farmers in adopting improved agricultural practices. Extension workers need to locate such persons and utilize them in planning, execution and evaluation of extension educational programmes.

4.3 Selected Characteristics of the Farmers (Independent variables)

This section deals with the classification of the farmers according to their various characteristics. Behaviour of an individual is largely determined by his characteristics. These characteristics of an individual contribute to a great extent in the matter of shaping of his behaviour. In this section the findings on the farmer's nine selected characteristics have been discussed. The selected characteristics are (i) age, (ii) education, (iii) farm size, (iv) annual income, (v) organizational participation,(vi) extension media contact, (vii) cosmopoliteness, (viii) agricultural knowledge and (ix) Innovativeness. Therefore; the major hypothesis of the study was that the opinion leadership of the farmers would also be influenced by various characteristics of the farmers. Range, mean and standard deviations of these characteristics of the farmers are described in this section.

4.3.1 Age

Age of the farmers ranged from 23 to 80 years, the average being 49.29 years and the standard deviation, 14.19. On the basis of their age, the farmers were classified into three categories: "young" (up to 35), "middle aged" (36-60) and "old" (above 60). The distribution of the farmers according to their age is shown in Table 3.The highest proportion 56 percent of the farmers fell in the "middle age" category, while 21 percent of them fell in the "young age" category and only 23 percent in the "old" category.

Table 3 Distribution of the farmers according to their age

Categories	Farmers (N = 90)	Mean	SD

	Number	Percent		
Young aged (up to 35)	19	21	49.29	14.19
Middle-aged (36-60)	50	56		
Old(>60)	21	23		
Total	90	100		

The findings indicate that a large proportion (77) of the farmers were young to middle aged. Young people are generally receptive to new ideas and things. They have a favorable attitude towards trying new ideas. However, the older growers because of their longer farm experience might have valuable opinions in regard to decision making. The extension agents can make use of these views and opinion in designing their extension activities. Hence, our nearly three-fifth belongs to middle-aged category (56%), nearly one-fourth young (21%) and 23% old-aged. This indicates that decision making relating to farming affairs in the rural area depends mostly on the middle-aged and old farmers.

4.3.2 Education

The education scores of the farmers ranged from 0 to 16. The average was 5.74 and the standard deviation was 4.36. On the basis of their educational scores, the farmers were classified into four categories, namely "illiterate/can sign only" (0-0.5), "primary" (1-5), “secondary" (6-10) and "above secondary" (above 10). The distribution of the farmers according to their education is shown in Table 4. The majority (40 percent) of the farmers had secondary level education compared to 20 percent of them having primary level education. 30 percent of the farmers were illiterate or can sign only, while 10 percent had above secondary level of education. The findings indicate that education of an individual is likely to be more receptive to the modern facts and ideas; they have much mental strength in deciding on a matter related to problem solving.

Table 4 Distribution of the farmers according to their education

Categories	Farmers (N=90)		Mean	SD
	Number	Percent		

Illiterate/can sign only(0-0.5)	27	30	5.74	4.36
Primary level(1-5)	18	20		
Secondary level(6-10)	36	40		
Above secondary level(>10)	9	10		
Total	90	100		

The findings also indicate that a remarkable number of farmers had no education or can sign only. The findings show that majority of the farmers had secondary level of education. But secondary education is not enough for opinion leadership. The percentage of literacy seems to be higher than the overall literacy condition of Bangladesh (64 percent). The main reason may be that the village is situated near the road side and the communication system of this village is well developed. Education helps an individual to gain new knowledge and skill which in turn enables him to give advice and information to others. Such considerations indicate that a considerable proportion of the farmers might have no or low opinion leadership.

4.3.3 Farm size:

The farm size of the respondents varied from 0.03 to 2.75 hectares. The average farm size was 0.75 hectare with a standard deviation of 0.55. The respondents were classified into the following three categories based on their farm size: "marginal farm" (up to 0.2 ha), "small farm" (0.21-1.0 ha), and "medium farm" (1.1-3.0). The distribution of the farmers according to their farm size is shown in

Table 5 Distribution of the farmers according to their farm size

Categories	Farmers (N =90)		Mean	SD
	Number	Percent		
Marginal farm(up to 0.2 ha)	15	17	0.75	0.55
Small farm(0.21-1.0 ha)	55	61		
Medium farm(1.1-3.0 ha)	20	22		
Total	90	100		

Nearly two-third (61 percent) of the farmers possessed small farm compared to about 22 percent of them having medium farm and only 17 percent marginal farm. Thus, the overwhelming majority 83 percent of the farmers were the owners of small to medium farm. Small farmers generally have less contact with change agents. Consequently, they remain deficient in knowledge and skill about the improved agricultural practices. Economically also, they are in a disadvantages position. Such consideration indicates that there will be little opinion leadership from the small farmers though they form about two-third of the total number of farmers.

Annual income:

The observed annual family income of the respondents ranged from 7.9 thousand Tk. to 435 thousand Tk., the mean being 124.90 thousand Tk and standard deviation 95.42. Based on their income scores, the farmers were classified into three categories: "low income" (up to 50), "medium income" (50.10-150.00) and "high income" (above 150). The distribution of the farmers according to their family income is shown in Table 6.

Table 6 Distribution of the farmers according to their annual income

Categories	Farmers (N =90)		Mean	SD
	Number	Percent		
Low income(up to 50)	20	22	124.90	95.42
Medium income(50.10-150.00)	49	55		
High income (above 150)	21	23		
Total				

From the above Table, it was observed that the highest portion (55 percent) of the respondents were medium income group, while 22 percent respondents were low income group and only 23 percent were high income group. Most of the farmers of the study area were low to medium income group. The average income of the farmers was much higher of the study area than national average income of the country. This might be due to the fact that the farmers of the study area were not engaged in only agriculture. They earned from other sources such as service, business etc.

4.3.5 Organizational participation:

Organizational participation scores of the respondents ranged from 0 to 47 with an average of 6.89 and a standard deviation of 10.44. On the basis of their organizational participation scores, the farmers were classified into four categories: "no participation" (0), "low participation" (1-4), "medium participation" (5-15) and "high participation" (16-47). The distribution of respondents according to their organizational participation is shown in Table 7.

Table 7 Distribution of the farmers according to their organizational Participation

Categories	Farmers (N = 90)		Mean	SD
	Number	Percent		
No participation (0)	44	49	6.89	10.44
Low participation (1- 4)	11	12		
Medium participation (5-15)	21	23		
High participation (16-47)	14	16		
Total	90	100		

From the above Table it was observed that majority (49%) of the respondents had no organizational participation. A mentionable (23%) number of respondents had medium organizational participation, while 12 percent had low and 16 percent had high participation. Therefore, it was clearly indicated that maximum respondents were engaged only their own occupation. The main reason is that most of the farmers engaged in business and service along with agriculture. So, they have not enough time to engage in different organizations.

4.3.6 Cosmopoliteness:

Cosmopoliteness scores of the respondents ranged from 2 to 29 with an average of 10.54 and a standard deviation of 5.94 against the possible range of 0 to 32. On the basis of their cosmopoliteness scores, the farmers were classified into three categories: "low cosmopolite" (0-5), "medium cosmopolite" (6-15) and "high cosmopolite" (16 and above). The distribution of the farmers according to their cosmopoliteness is shown in Table 8.

Table 8 Distribution of the farmers according to their Cosmopoliteness

Categories	Farmers (N = 90)		Mean	SD
	Number	Percent		
Low cosmopolite (up to 5)	17	19	10.54	5.94
Medium cosmopolite (6-15)	57	63		
High cosmopolite (16 and above)	16	18		
Total	90	100		

The majority (63 percent) of the farmers were "medium cosmopolite" compared to 19 percent of them being "low cosmopolite" and 18 percent "highly cosmopolite". Thus, almost all (82 percent) of the farmers were medium to low in terms of their cosmopoliteness. As the literacy rate was comparatively high and most of the farmers were engaged in business and service along with agriculture in the study area, usually they need to go out side of the village. So, there was appreciable cosmopoliteness among the farmers of the study area.

4.3.7 Extension media contact:

The computed extension media contact scores of the respondents ranged from 3 to 31 with an average of 17.29 and a standard deviation of 5.66 against the possible range of 0 to 72. On the basis of their extension media contact scores, the farmers were classified into three categories: “low extension contact" (up to 19), "medium extension contact" (20-30) and "high extension contact" (above 30). The distribution of the farmers according to their extension media contact is shown in Table 4.8.

Table 9 Distribution of the farmers according to their extension media contact

Categories	Farmers (N =90)		Mean	SD
	Number	Percent		
Low extension contact(up to 12)	16	18	17.29	5.66

Medium extension contact(13-22)	61	68		
High extension contact(23-31)	13	14		
Total	90	100		

The majority (68 percent) of the farmers had medium extension media contact, while only 14 percent of them had high contact. The proportion of the farmers having low extension media contact was 18 percent. Farmers generally receive informations about improved agricultural practices through the various sources of extension information. The findings of the study indicate that more than four-fifth (86%) of the farmers had low or medium contact with the sources of extension informations. These farmers may face difficulty in obtaining information about improved agricultural practices. Good opinion leaders in agriculture may render valuable help to such farmers having low or medium extension contact.

4.3.8 Agricultural knowledge:

Agricultural knowledge scores of the respondents ranged from 19 to 47 against the possible range of 0 to 50. The average and standard deviation were 34.9 and 6.41, respectively. Based on the observed agricultural knowledge scores and the procedures described in methodology chapter, the farmers were classified into the following three categories: "low knowledge" (up to 28), "medium knowledge" (29 to 40) and "high knowledge" (41-47). The distribution of the farmers according to their agricultural knowledge is shown in Table 10.

Table 10 Distribution of the farmers according to their agricultural knowledge

Categories	Farmers (N = 90)		Mean	SD
	Number	Percent		
Low knowledge(upto28)	15	17	34.9	6.41
Medium knowledge(29-40)	56	62		

High knowledge(41-47)	19	21		
Total	90	100		

The highest proportion (62 percent) of the farmers had medium agricultural knowledge compared to about 21 percent of them having high agricultural knowledge, and only 17 percent low agricultural knowledge. Thus, in general the agricultural knowledge level of the farmers of the study area was quite satisfactory. This might be due to the fact that the literacy rate of the study area was much higher than the national average. The findings indicate that more than one-fifth of the farmers had high agricultural knowledge. These farmers may be capable of providing opinion leadership in agriculture in the rural areas. Their usefulness may be increased further if change agents take adequate care to locate them and develop their abilities further.

4.3.9 Innovativeness:

The maximum innovativeness score of the respondents was 48 and the minimum was11against the possible range of 0 to 50. However, the average was 31.83 and the standard deviation was 6.60. Based on their innovativeness scores, the respondents were classified into three categories: “low innovativeness” (up to 25), “medium innovativeness” (26-37) and “high innovativeness” (38-48). The distribution of the respondents according to their innovativeness is shown in Table 11.

Table 11 Distribution of the farmers according to their Innovativeness

Categories	Farmers (N = 90)		Mean	SD
	Number	Percent		
Low Innovativeness (up to 25)	14	16	31.83	6.60
Medium Innovativeness (26-37)	58	64		
High Innovativeness (38-48)	18	20		

Total	90	100		

Data contained in table. 11 indicate that highest proportion (64 percent) of the farmers had medium innovativeness as compared to 20 percent high innovativeness and only 16 percent low innovativeness. Data also revealed that majority (84 percent) of the respondent farmers of the study area had medium to high level of innovativeness. It may also be concluded that almost all the respondents of the study area had the innovativeness. Theses two results would help the extension planners to chalk out future extension programme for transfer of technologies to the potential farmers.

4.4 Relationships between the Selected Characteristics of the Farmers and their Opinion Leadership

Coefficient of correlation was computed in order to explore the relationship between the selected characteristics of the farmers and their opinion leadership. The selected characteristics constituted independent variables and opinion leadership of the farmers constituted the dependent variable. Table 12 has been used for descriptive interpretation of the meaning of 'r'.

Table 12 The Meaning of 'r' values

R	Meaning
0.00 to 0.19	A very low correlation
0.20 to 0.39	Low correlation
0.40 to 0.59	A moderate correlation
0.60 to 0.79	A high correlation
0.80 to 1.00	A very high correlation

Source: Cohen and Holliday, 1982; 92-93.

As mentioned earlier, the nine characteristics of the farmers were the independent variables of the study. The variables were: age, education, farm size, annual income, organizational participation, cosmopoliteness, extension media contact, agricultural knowledge, and Innovativeness. The dependent variable was opinion leadership of the farmers. To explore the relationships, Pearson's product moment correlation co-efficient (r) has been used to test the hypothesis concerning the

relationships between two variables. Five percent, one percent level of significance were used as the basis of acceptance or rejection of a hypothesis. The summary of the results of the correlation co-efficient between the selected characteristics of the farmers and their opinion leadership is shown in Table 13.

Table 13 Co-efficient of correlation of the selected characteristics of the respondents and their opinion leadership

Independent variable	Computed value of 'r'	Dependent variable	Table value of 'r' of 88 degrees of freedom		
			0.05%	0.01%	0.001%
Age	0.305 **	Opinion leadership	± 0.211	± 0.275	± 0.347
Education	0.259 *				
Farm size	0.064 NS				
Annual income	0.051 NS				
Organization participation	0.701 ***				
Cosmopoliteness	0.389 ***				
Extension media contact	0.183 NS				
Agricultural knowledge	0.541 ***				
Innovativeness	0.291 **				

NS = Non significant
* = Significant at 0.05 level of probability
** = Significant at 0.01 level of probability
*** = Significant at 0.001 level of probability

4.4.1 Relationship between age of the farmers and their opinion leadership

The relationship between age of the farmers and their opinion leadership was examined by testing the following null hypothesis: "There is no relationship between age of the farmers and their opinion leadership."

As shown in the Table 13 the co-efficient of correlation between the concerned variables was computed and found to be ‘r’ = 0.305 which led to the following observation.

- There was positive trend between the concerned variables.
- The computed value of ‘r’ (0.305) was larger than the table value (r = 0.275) with 88 degrees of freedom at 0.01level of probability.
- Hence, the concerned null hypothesis was rejected.
- The correlation co-efficient between the two concerned variables was significant at 0.01 level of probability.

Based on the above findings, the researcher concluded that the age of the farmers had a positive and significant relationship with their opinion leadership. This indicated that the more farmers were older, the higher were their opinion leadership. The findings of the present study support the studies conducted by Islam (1971) and Farrell 1974). They opined that people of older age group exhibited greater leadership role than the people of both middle and younger age groups. There might be some reasons that older farmers exhibited greater opinion leadership role compared to other two groups of farmers. One of the main reasons is that generally people learn many things through experiences. Older farmers got the opportunity to have experience under different odd situations. Moreover in a typical rural community of Bangladesh people have a special regard for relatively elder persons.

4.4.2 Relationship between the education of the farmers and their opinion leadership

The relationship between the education of the farmers and their opinion leadership was examined by testing the following null hypothesis: “There is no relationship between education of the farmers and their opinion leadership.”

The co-efficient of correlation between the concerned variables was found to be 'r' = 0.259 as shown in Table 13. This led to the following observations regarding the relationship between the two variables under consideration:

- The relationship showed a tendency in the positive direction between the concerned variables.
- The computed value of 'r' (0.259) was larger than the table value (r = 0.211) with 88 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was rejected.
- The correlation co-efficient between the two concerned variables was significant.

The findings indicate that education of the farmers had significant and positive relationship with their opinion leadership. This indicated that the higher the formal education of the farmers was, the higher was their opinion leadership. Similar findings were also observed by Ulla (1974), Islam (1971), Mannan 1972), Farrell (1974), Steele (1971), Douglah (1965) and Wilson (1963). They concluded that some educational background was a pre-requisite to be an effective opinion leader. Generally, education is considered as an index of acquiring knowledge in various matters. By being educated a man becomes aware of various facts and phenomenon around him. This enables educated person to become rational in judging things critically and thereby to take action according to situation. Moreover, in Bangladesh, the educated persons are respected and honoured by the others. This is why people go to those persons who have at least some educational background for seeking advice and information.

4.4.3 Relationship between farm size of the farmers and their opinion leadership

The relationship between farm size of the farmers and their opinion leadership was examined by testing the following null hypothesis: "There is no relationship between farm size of the farmers and their opinion leadership."

Computed value of the co-efficient of correlation between farm size of the farmers and their opinion leadership was found to be 'r' = 0.064 as shown in Table 13. 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 tendency in the positive direction between the concerned variables.
- A very low relationship was found between the two variables.
- The computed value of 'r' (0.064) was found to be smaller than the table value (r = 0.211) with 88 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was accepted.
- The co-efficient of correlation between the concerned variable was not significant at 0.05 level of probability.

The findings imply that the farm size of the farmers had no significant relationship with their opinion leadership. The present study does not support the findings of Ahmed (1974), Rahudkar (1960), Rahim (1971), Reddy and Sahy (1971) and Karim (1973). This might be due to the fact that the population of the study area were much dependent on business and service than agriculture.

4.4.4 Relationship between annual income of the farmers and their opinion leadership

The relationship between annual income of the farmers and their opinion leadership was examined by testing the following null hypothesis: "There is no relationship between annual income of the farmers and their opinion leadership."

Computed value of the co-efficient of correlation between annual income of the farmers and their opinion leadership was found to be 'r' = 0.051as shown in Table 13. 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 tendency in the positive direction between the concerned variables.

- The relationship between the concerned variables was very low.
- The computed value of 'r' (0.051) was found to be smaller than the table value (r = 0.211) with 88 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis could not be rejected.
- The co-efficient of correlation between the concerned variable was not significant at 0.05 level of probability.

The researcher concluded that annual income of the farmers had a positive and no significant relationship with their opinion leadership. The present study supports the findings of the studies conducted by Raju and Neeladri (1969), Dev and Sharma (1986), Rahman (1973), Gill (1970) Sahy (1961) and Ahmed (1974).

4.4.5 Relationship between Organizational participation of the farmers and their opinion leadership

The relationship between Organizational participation of the farmers and their opinion leadership the following null hypothesis was tested "There is no relationship between Organizational participation of the farmers and their opinion leadership."

The co-efficient of correlation between the concerned variables was found to be 0.701 as shown in Table 13 this led to the following observations regarding the relationship between the two variables under consideration:

- **The relationship showed a tendency in the positive direction between the concerned variables.**
- **The relationship between the concerned variables was very high.**
- **The computed value of "r" (0.701) was grater than the table value (r= 0.347) with 88 degrees of freedom at 0.001 level of probability.**
- **The co-efficient of correlation between the concerned variable was significant at 0.001 level of probability.**
- **The null hypothesis was rejected.**

The findings demonstrate that the Organizational participation of the farmers had significant and positive influence on their opinion leadership. It means that farmers with larger Organizational participation were high opinion leadership.

The findings support the observations of Rogers (1983), Ulla (1974), Ahmed (1974), Lionberger (1953), Rahim (1971), Mannan (1972), Zainuddin (1972) and Vanden Ban (1963). It may, therefore, be concluded that organizational participation is needed to be an effective opinion leadership.

4.4.6 Relationship between cosmopoliteness of the farmers and their opinion leadership

The relationship between cosmopoliteness of the farmers and their opinion leadership was examined to the following null hypothesis: "There is no relationship between cosmopoliteness of the farmers and their opinion leadership."

The co-efficient of correlation between the concerned variables was found to be 'r' = 0.389 as shown in Table 13. This led to the following observations regarding the relationship between the two variables under consideration:

- The relationship showed a positive trend.
- A very high relationship was found to exist between the two variables.
- The computed value of 'r' (0.389) was greater than the table value (r = 0.347) with 88 degrees of freedom at 0.001 level of probability.
- Hence, the concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variable was significant at 0.001 level of probability.

The researcher concluded that cosmopoliteness of the farmers had positive and significant relationship with their opinion leadership. This means cosmopoliteness is an important trait for being an opinion leader. This indicates that opinion leadership among the farmers increased with the increase of their cosmopoliteness.

The present study conforms to the study of Ahmed (1974), Ulla (1974), Rahudkar (1960), Rogers (1983), Lionberger (1953), Kartz and Lazarsfeld (1955) and Vanden Ban (1963) who observed that opinion leaders were more cosmopolite in nature than their followers.

4.4.7 Relationship between extension media contact of the farmers and their opinion leadership

The relationship between extension media contact of the farmers and their opinion leadership was examined to the following null hypothesis: "There is no relationship between extension media contact of the farmers and their opinion leadership."

The co-efficient of correlation between the concerned variables was found to be 'r' = 0.183 as shown in Table 13. This led to the following observations were recorded regarding the relationship between the two variables under consideration:

- The relationship showed a positive trend.
- A very low relationship was found between the concerned variables.
- The computed value of 'r' (0.183) was smaller than the table value (r = 0.211) with 88 degrees of freedom at 0.05 level of probability.
- The concerned null hypothesis was accepted.
- The co-efficient of correlation between the concerned variable was not significant at 0.05 level of probability.

Thus, the researcher concluded that the extension contact of the farmers had no significant and positive relationship with their opinion leadership. Similar result was found by Bose and Saxena (1966), Dubey and Dwivedi (1978), Rahudkar (1960), Shah and Patel (1970). They observed opinion leaders not only use the mass media and institutional sources more frequently than average farmers but are also more exposed to ideas originating from outside through their frequent external contact.

4.4.8 Relationship between agricultural knowledge of the farmers and their opinion leadership

The relationship between agricultural knowledge of the farmers and their opinion leadership was examined by testing the following null hypothesis: “There is no relationship between agricultural knowledge of the farmers and their opinion leadership.”

Computed value of the co-efficient of correlation between agricultural knowledge of the farmers and their opinion leadership was found to be ‘r’ = 0.541 as shown in Table 13. 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 between the two variables.
- The computed value of ‘r’ (0.541) was found to be greater than the table value (r = 0.347) with 88 degrees of freedom at 0.001 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variable was significant at 0.001level of probability.

Thus, the researcher concluded that the agricultural knowledge of the farmers had positive significant relationship with their opinion leadership. Similar observations found by Islam (1971), Lionberger (1953), Rahim (1961), Sohi and Sandhu (1976).

4.4.9 Relationship between the innovativeness of the farmers and their opinion leadership

The relationship between innovativeness of the farmers and their opinion leadership was examined to the following null hypothesis: “There is no relationship between innovativeness of the farmers and their opinion leadership.”

The co-efficient of correlation between the concerned variables was found to be ‘r’ (0.291) as shown in Table 13. This led to the following observations regarding the relationship between the two variables under consideration:

- The relationship showed a positive trend.
- The relationship between the concerned variables was a moderate correlation.
- The computed value of ‘r’ (0.291) was greater than the table value (r = 0.275) with 88 degrees of freedom at 0.01 level of probability.
- Hence, the concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variable was significant at 0.01 level of probability.

Considering the findings the researcher concluded that innovativeness of the farmers had significant and positive relationship with their opinion leadership. Therefore, the investigator concluded that with increased rate of innovativeness there would be increased extent of opinion leadership activities among the farmers. This finding supports the findings conducted by Ulla (1974), Ahmed (1974), Rahim (1963), Rahudkar (1960), Rogers and Burdge (1962), Lionberger (19530), Coleman and Marsh (1954), and Zainuddin (1972). They found higher the innovativeness of the farmers was the more was their opinion leadership.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1Introduction

The economy of Bangladesh is predominantly agrarian, with the agriculture sector accounting for about 21 percent of Gross Domestic Product (GDP) (BBS, 2005). In the past decade, the agriculture sector contributed about three percent annum to the annual economic growth rate. The natural environment is generally favorable for crop production, and there are estimated to be about nine million hectares of land suited for cultivation. Over 80 percent of the population of Bangladesh, or roughly 15 million households, live in rural areas, and the agriculture sector employ around 62 percent of the labor force. The crop sector alone accounts for 57 percent of employment in Bangladesh. The agriculture sector comprises crops, forests, fisheries and livestock. Of the agricultural GDP, the crop sub-sector contributes 71 percent, forests 10 percent, fisheries 10 percent, and livestock 9 percent (BBS, 2005).

Agricultural research all over the world has developed useful technologies which, if used by the farmers in cultivation, will enormously increase agricultural production. However Morill (1968), reports that the farmers who are the backbone of the nation, are mostly illiterate and traditional, they are often skeptical towards new ideas and practices in agriculture, they often become frustrated with new practices in agriculture due to lack of proper understanding of the relevant factors. Therefore, the prerequisite for agricultural development is the communication of the benefit and know-hows of improved agricultural practices among the farmers so that they move forward to use them in production of crops.

Rural development depends not only on technology generation but also on dissemination of technology as per the needs of the target groups in a particular

farming system (Mettric, 1993). For effective dissemination of generated technology, the combined effort of extension personnel along with the opinion leaders is vital.

There are some people in the rural areas with experience and leadership qualities. Farmers go to them for opinion and advice. Activities of the farmers are, to a great extent, influence by the opinion leaders from whom they seek information and advice. Agricultural extension work in the rural areas will be greatly facilitated if the extension agents can utilize the opinion leaders will enable each extension agent to multiply himself many folds. Moreover, extension programmes will receive greater acceptance and participation of the people if their leaders are involved in those programmes.

In order to effectively utilize the opinion leaders, it is necessary to have a clear understanding about the nature of opinion leadership among the farmers in the rural area. Extension workers need to know the extent of opinion leadership exhibited by the farmers. For a clear insight, one also needs to ascertain if the characteristics of the farmers are associated with their opinion leadership. Since opinion leaders play a crucial role in the transformation of information, it is important to study their communication behavior (Rogers, 1983).

5.2 Specific objectives

The following specific objectives were formulated for giving direction to the study:

1. To determine and describe the extent of opinion leadership among the farmers.
2. To determine the selected characteristics of the farmers. These characteristics were:

   (j) Age

(k) Education

(l) Farm size

(m) Annual income

(n) Organizational participation

(o) Cosmopoliteness

(p) Extension media contact

(q) Agricultural knowledge

(r) Innovativeness

3. To determine the relationships of the selected characteristics of the farmers with their opinion leadership.

5.3 Methodology

The study was conducted in a village namely, Purbachandrapur at Purbachandrapur union of Dagon bhuiyan thana of Feni district. There were 110 families in the village. Out of these, 12 families were non-agricultural and 8 families were landless. Therefore, the number of total farm families was 90. Considering that the non-agricultural and landless families had no significant opinion leadership in agriculture, these were kept aside during data collection. Thus heads of 90 farm families constituted the respondent for data collection.

In order to collect relevant data from the respondents an interview schedule was prepared keeping the objectives of the study in mind. Both open and closed form questions were use in collecting data. Simple and direct question were included in the schedule to ascertain four characteristics of the farmers, namely, age, education, farm size and income. The schedule also contains five scales for measuring five characteristics namely, agriculture knowledge, extension contact, organizational participation, cosmopoliteness and innovativeness. Four socimetric questions were included in the schedule to determine the opinion leadership of the farmers.

Data collected were compiled, coded, tabulated and analyzed in accordance with the objectives of the study. Qualitative data were quantified by means of suitable scoring techniques. In order to explore the relationships of the selected characteristics of the growers with their opinion leadership, the Pearson's Product Moment Correlation Co-efficient was computed. Correlation matrix were also computed to determine the inter relationships among the variables. Five percent (0.05), one percent (0.01) and 0.001 percent level of significance was used as the basis of rejecting any null hypothesis. Co-efficient values significant at 0.05 level is indicated by single asterisk (*), at 0.01 level by double asterisks (**) and at 0.001 level by triple asterisk (***).

5.4 Summary of Findings

The major findings of the study are summarized below:

5.4.1 Selected characteristics of the farmers

Nine individual characteristics of the farmers were selected for investigation in this study.

The findings of nine characteristics of the farmers are summarized below:

5.4.1.1Age

The age of the farmers ranged from 23 to 80 years. The average age was 49.29 years with a standard deviation of 14.19. Highest proportions (56 percent) of the farmers were middle aged Category as compared to 21 percent being young and 23 percent old aged.

5.4.1.2 Education

Education of the farmers ranged from o to 16. The average score being 5.73 and the standard deviation was 4.36. The highest proportion (40 percent) of the farmers had "secondary level" compared to 20 percent having "primary education", 30 percent having "Illiterate or can sign" and only 10 percent having "above secondary education".

5.4.1.3 Farm size

Farm size of the farmers ranged from 0.03to 2.75 hectares with an average of 0.75 and the standard deviation was 0.55. The highest proportion (61 percent) of the farmers had small farm size compared to 22 percent having medium farm size and 17 percent having marginal farm size.

5.4.1.4 Annual family income

Annual family income scores of the farmers ranged from 7.9thousand to 435 thousand with an average of 124.90 thousand and the standard deviation was 95.41. The highest proportion (55 percent) of the farmers had medium income compared to 22 percent under low income and 23 percent under high income categories.

5.4.1.5 Organizational participation

Organizational participation scores of the farmers ranged from 0 to 47 against the possible range of 0 to 50 with an average of 6.89 and the standard deviation was 10.44. The highest proportion (49 percent) of the farmers had no participation in organization compared to 23 percent had medium participation, having 12 percent low and only 16 percent had high organizational participation categories.

5.4.1.6 Cosmopoliteness

Cosmopoliteness scores of the farmers ranged from 02 to 29, against the possible range was found to be 0 to 32. The average cosmopoliteness scores were found to be 10.54 with a standard deviation of 5.94. The highest proportion (63 percent) of the farmers had medium cosmopoliteness compared to 19 percent having low cosmopoliteness and only 18 percent having high cosmopoliteness.

5.4.1.7 Extension media contact

The Extension media contact scores of the farmers ranged from 3 to 31 against the possible range of 0 to 72. The average extension media contact score was found to be 17.29 with a standard deviation of 5.66. The highest proportion (68 percent) of the respondents had medium extension contact compared to 18 percent having low and only 14 percent having high extension media contact.

5.4.1.8 Agricultural knowledge

Agricultural knowledge scores of the farmers ranged from 19 to 47, against the possible range of 0 to 50 with an average of 34.9 and the standard deviation of 6.41. The highest proportion (62 percent) of the farmers had medium Agricultural knowledge as compared to 21 percent high Agricultural knowledge and only 17 percent with low Agricultural knowledge.

5.4.1.9 Innovativeness

The innovativeness scores of the farmers ranged from 11 to 48, against the possible range of 0 to 50 with an average of 31.83 and the standard deviation of 6.60. The highest proportion (64 percent) of the farmers had medium innovativeness as compared to 16 percent having low innovativeness and 20 percent having high innovativeness.

5.4.2 Overall Opinion leadership

Opinion leadership of the farmers was the main focus of the study. It was quantified by computing scores. These scores of the respondent ranged from 0 to 112, against the possible range of 0 to 356 with an average of 11.58 and the standard deviation of 6.47. The highest proportion (56 percent) of the farmers had no opinion leadership while 18 percent had low opinion leadership, having 17 percent medium opinion leadership and only 9 percent had high opinion leadership.

5.4.3 Relationship between the selected characteristics of the farmers with their opinion leadership

Nine null hypotheses were developed and tested to explore the relationship between nine selected characteristics of the farmers and their opinion leadership. The result of the tested hypothesis were summarized and presented below:

5.4.3.1 Relationship of age with opinion leadership

The age of the respondent farmers had positive and significant relationship with their opinion leadership at 0.01level of probability.

5.4.3.2 Relationship of education with opinion leadership

It was found that the education of the respondent farmers had positive and significant relationship with their opinion leadership at 0.05 level of probability.

5.4.3.3 Relationship of farm size with opinion leadership

There was no significant relationship between the farm sizes of the respondent farmers and their opinion leadership even at 0.05 level of probability.

5.4.3.4 Relationship of Annual income with opinion leadership

The annual family income of the respondent farmers had no significant relationship with their opinion leadership even at 0.05 level of probability.

5.4.3.5 Relationship of organizational participation with opinion leadership

It was found that the organizational participation of the respondent farmers had highly significant and positive relationship with their opinion leadership even at 0.001 level of probability.

5. 4.3.6 Relationship of cosmopoliteness with opinion leadership

There was positive and highly significant relationship between the cosmopoliteness of the respondent farmers and their opinion leadership at 0.001 level of probability.

5.4.3.7 Relationship of Extension media contact with opinion leadership

There was no significant relationship between the Extension media contact of the respondent farmers and their opinion leadership even at 0.05 level of probability.

5.4.3.8 Relationship of agricultural knowledge with opinion leadership

There was positive and highly significant relationship between the agricultural knowledge of the respondent farmers and their opinion leadership at 0.001 level of probability.

5.4.3.9 Relationship of Innovativeness with adoption:

There was positive and significant relationship between the Innovativeness of the respondent farmers and their opinion leadership at 0.01 level of probability.

5.5 Conclusions

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

I. The study revealed that 44 percent of the farmers possessed opinion leadership where as high opinion leadership was confined to only 9 percent of the farmers. From the findings it nay be concluded that opinion leadership was more or less widespread trait and that high opinion leadership was concentrated to a few persons. This observation was supported by Roger's generalization.
II. It was found that a particular farmer received information and advice on the selected four areas namely, agriculture, politics, family affairs and religion from the same person or persons. In other words, the person who gave advice on agriculture also gave advice on family affairs, politics and religion. From the findings it was concluded that opinion leadership among the farmers of

Purbachandrapur was polymorphic in nature. It supports the Roger's observation that in traditional society opinion leaders are polymorphic.

III. Age of the farmers had a positive and significant relationship with their opinion leadership. It may, therefore be concluded that relatively older people would exhibit opinion leadership role to a higher extent than the younger people.

IV. Education of the farmers showed that there was positive and significant relationship with their opinion leadership. From the findings it could be infer that educational level up to a certain level is a prerequisite to function as opinion leaders effectively.

V. Farm size of the farmers had no significant but a positive relationship with their opinion leadership. It was observed that opinion leadership was the highest among the farmers with large farms. These farmers generally have higher income and contact with various sources of information. Obviously, they can provide information and advice to others.

VI. Annual income of the farmers showed no significant and positive relationship with their opinion leadership.

VII. Organizational participation of the farmers had a substantial positive relationship with their opinion leadership. Through participation in organizations, individuals come in contact with other people. Such contacts help them to gain knowledge and skill from various sources. It may, therefore, be concluded that ability of opinion leadership dependent largely on the degree of participation in various organizations.

VIII. The findings of the study suggested that a strong and positive relationship held between cosmopoliteness and opinion leadership. Farmers with cosmopolite orientation visit places outside their village and thus come in contact with new people and new ideas. It may be concluded that

cosmopolite farmers with opinion leadership may be profitably utilized in extension educational programme.

IX. Extension media contact of the farmers had no significant but a positive relationship with their opinion leadership. Radio has been found to be used as the highest extent by the opinion leaders. Radio is now available in almost all villages. It may, therefore, be concluded that radio has a great potential for dissemination of useful agricultural information among the farmers through rural opinion leaders.

X. Agricultural knowledge of the farmers had a significant positive relationship with their opinion leadership. Bangladesh is an agricultural country. Obviously, farmers having high agricultural knowledge will be in a better position to give advice and information to others. It may, therefore, conclude that arrangement made for improving the agricultural knowledge of the opinion leaders will greatly facilitate dissemination of agricultural information among the farmers.

XI. Innovativeness of the farmers had a significant and positive relationship with their opinion leadership. It was observed that opinion leadership was the highest among the farmers with high innovativeness. A farmers comes forward to accept an innovation when he understands the benefits and knowhows of that innovation. It may, therefore, be concluded that the extension workers may help to develop opinion leadership among the farmers by providing them with needed information about improved agricultural practices.

5.6 Recommendations

5.6.1 Recommendations for policy implications

Based on the findings and conclusions of the study, the following recommendations are presented below:

I. The study revealed that opinion leadership was a widespread trait, though high opinion leadership concentrated to a few persons. Further it indicated that opinion leadership was polymorphic in nature. It is, therefore, strongly recommended that farmers having high opinion leadership need to be involved in programme planning and its execution in the area concerned. Such involvement of opinion leaders, will work as catalyst to bring about the desired change.

II. Existence of a positive relationship between age of farmers and opinion leadership may provide a basis to recommend relatively older farmers be selected for leadership training. On being trained, these farmers may be effectively used in the implementing change programmes in the locality.

III. In view of the positive relationship between formal education and opinion leadership, it is necessary that the change agents should consider the education of individuals while going to involve people as local leaders in the change programmes.

IV. Considering the importance of education for opinion leadership, it is recommended that adult literacy programmes should be introduced in the rural areas for development of opinion leadership.

V. Use of agricultural information sources by the opinion leaders has been found to be low. Consequently it will not be possible for the opinion leaders to advice effectively to the farmers about the improved agricultural practices. Therefore, steps should be taken to improve the present flow system of communication of agricultural information among the rural people.

VI. In order to use the opinion leaders as effective tools for dissemination of agricultural informations, it is necessary to pay proper attention to improve their agricultural knowledge.

VII. There is need for establishing various kinds of organizations in the rural areas according to the needs of the farmers. Such organizations will help development of opinion leadership among the farmers.

VIII. In view of the consistent positive relationship between cosmopoliteness of the farmers and their opinion leadership, extension workers need to locate cosmopolite farmers with high opinion leadership and enlist their support in extension educational programme.

IX. Extension workers need to provide adequate informations about the benefits and know-how of agricultural innovations among the farmers to develop innovativeness which, in turn, help development of opinion leadership.

X. A careful analysis of the factors that affect opinion leadership, as has been revealed by the present investigation the extension worker may locate who are the opinion leaders in his area. This will, no doubt save time and energy of the extension workers to get them involved in implementing extension programmes effectively.

Finally the investigator of the study believes that the concept, ideas, and nature of opinion leadership derived from the study will be helpful not only to the extension workers but also to the extension policy makers and programme planners.

5.6.2 Recommendations for further study

A small piece of study as has been conducted can not provide all information for the proper understanding of the opinion leadership. Therefore, the following suggestions are made for further study.

I. The present investigation explored the relationships of the nine characteristics of the farmers with their opinion leadership. Further research

may be conducted by taking other characteristics to observe relationships with their opinion leadership.

II. The present study was conducted in one village of Purbachandrapur union in Dagon bhuiyan thana under Feni district. So, similar studies may be undertaken in other parts of the country to verify the findings of the present study and in order to have a better understanding about the opinion leadership in the rural areas.

III. This study examined the relationship of the farmers' characteristics with their overall opinion leadership. There is need for exploring the relationships of the characteristics with opinion leadership in different areas separately.

IV. Farm size, annual income and extension media contact of the farmers are likely to considerably influence their opinion leadership. But this study did not reveal any significant relationship of farm size, annual income or extension media contact with opinion leadership. The findings need further verification.

V. The present study has been carried out among the male farmers only. So, a similar study may be conducted with the farm women to examine their opinion leadership.

VI. Research is necessary to formulate principles and procedures to involve opinion leaders in extension educational programmes effectively.

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APPENDIX-I

English Version of the Interview Schedule

Department of Agricultural Extension & Information System

Sher-e-Bangla Agricultural University, Dhaka- 1207.

An Interview Schedule for the Study of "Opinion Leadership among the Farmers in Village Purbachandrapur under Dagon Bhuiyan Upazila of Feni District"

Serial No……

Name of the respondent……..

Please answer the following questions. Your information will be kept completely secret.

1. Age:

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

2. Educational Qualification:

Mention your educational qualification (Give tick mark against appropriate answer/fill in the blank)

a) Do not know reading and writing ( )

b) Can sign only ( )

c) Read up to class ……

3. Farm size:

Please furnish the area of your land according to use.

SL No	Types of land tenure	Land area	
		Local Unit	Hectare
1	Homestead area		
2	Own land under own cultivation		
3	Land given to others on borga		
4	Land taken from others on borga		
5	Land taken from others on lease		
6	Own pond		
7	Own garden		
8	Others land (if any)		
	Total Land		

4. Annual Income

Please mention the amount of annual income from the following sources.

a) Income from agricultural crop

SL No	Crop name	Production (Kg/Maund)	Cost / kg/Maund (TK)	Total Cost (TK)
1	Rice			
2	Wheat			
3	Maize			
4	Potato			
5	Jute			
6	Pulse Crop			
7	Oil Crop			
8	Spice Crop			
9	Vegetables			
10	Fruits			
Total				

b) Income from domestic animals and fish resources

SL No	Income sources	Total Production Kg/Maund/Number	Cost per unit product (Tk)	Total Cost (Tk)
1	Domestic animal			
2	Poultry			
3	Fish resources			
Total				

c) Income from domestic animals and fish resources

SL No	Income sources	Total Income (Tk)
1	Service	
2	Business	
3	Day labour	
4	Other family members	
Total		

Total Income = (a+b+c)……Tk

5. Organizational participation

Please mention the nature of your participation with the following organization.

Tick in right place or mention year.

SL No	Income sources	Nature of participation (year)			
		No participation	Ordinary member	Executive member	Executive officer
1	Upazilla Council				
2	Union Council				
3	Village Government				
4	School Committee				
5	Madrasha/Temple Committee				
6	Farmer Co-Operative Society				
7	Mosque/Puja Committee				
8	Hat/Bazaar Committee				
9	Youth Club				
10	Any Political Organization				

6. Cosmopoliteness

Please, indicate the extent of tour travel to the following place (Tick the right answer)

SL No	Place of visit	Extent of visit				
		Regularly	Frequently	Occasionally	Rarely	Not at all
1	Other villages	7-8 times/m ( )	5-6 times/m ( )	3-4 times/m( )	1-2 times/m ( )	0 ( )
2	Other unions	7-8 times/m ( )	5-6 times/m ( )	3-4 times/m( )	1-2 times/m ( )	0 ( )
3	Upazilla head quarter	7-8 times/y ( )	5-6 times/y ( )	3-4 times/y( )	1-2 times/y ( )	0 ( )
4	Other Upazilla head quarter	7-8 times/y ( )	5-6 times/y ( )	3-4 times/y( )	1-2 times/y ( )	0 ( )
5	Own district	7-8times/y ( )	5-6 times/y ( )	3-4 times/y( )	1-2 times/y ( )	0 ( )
6	Other district	4 times/y ( )	3 times/y ( )	2 times/y ( )	1 time/y ( )	0 ( )
7	Regional agricultural research institute	4 times/y ( )	3 times/y ( )	2 times/y ( )	1time/y ( )	0 ( )
8	Capital city	At least 4 times in life ( )	At least 3 times in life ( )	At least 2 times in life ( )	At least 1 times in life ( )	0 ( )

7. Extension Media contact

Please mention the extent of your contact with the following agriculture information media (Tick the right answer)

SL No	Media of Communication	Extent of visit				
		Regularly	Frequently	Occasionally	Rarely	Not at all
	Interpersonal contact					
1	Block supervisor	7-8 times/y ( )	5-6 times/y ( )	3-4 times/y ( )	1-2 times/y ( )	0 ( )
2	Agricultural extension officer	7-8 times/y ( )	5-6 times/y ( )	3-4 times/y ( )	1-2 times/y ( )	0 ( )
3	Upazilla agricultural officer	7-8 times/y ( )	5-6 times/y ( )	3-4 times/y ( )	1-2 times/y ( )	0 ( )
4	Local leader	7-8 times/m ( )	5-6 times/m ( )	3-4 times/m ( )	1-2 times/m ( )	0 ( )
5	Neighbors	7-8 times/m ( )	5-6 times/m ( )	3-4 times/m ( )	1-2 times/m ( )	0 ( )
6	N.G.O. Workers	4 times/m ( )	3 times/m ( )	2 times/m ( )	1 time/m ( )	0 ( )
7	Seed/Fertilizer dealer	4 times/m ( )	3 times/m ( )	2 times/m ( )	1 time/m ( )	0 ( )
	Group contact					
8	Group discussion	7-8 times/y ( )	5-6 times/y ( )	3-4times/y ( )	1-2times/y ( )	0 ( )
9	Field day	4 times/y ( )	3 times/y ( )	2 times/y ( )	1 time/y ( )	0 ( )
10	Result demonstration	2 times/y ( )	1 time/y ( )	1 time/2y ( )	1 time/3y ( )	0 ( )
11	Participation in agricultural training	4-5 times in life ( )	3times in life ( )	2 times in life ( )	1 time in life ( )	0 ( )
	Mass media contact					
12	Daily news paper	Daily ( )	4-5 days/w ( )	2-3 days/w ( )	1day/w ( )	0 ( )
13	Radio	Daily ( )	4-5 days/w ( )	2-3 days/w ( )	1day/w ( )	0 ( )
14	Television	Daily ( )	4-5 days/w ( )	2-3 days/w ( )	1day/w ( )	0 ( )
15	Poster	7-8 times/y ( )	5-6 times/y ( )	3-4 times/y ( )	1-2 times/y ( )	0 ( )
16	Leaflets	7-8 times/y ( )	5-6 times/y ( )	3-4 times/y ( )	1-2 times/y ( )	0 ( )
17	Agriculture related books	7-8 times/y ( )	5-6 times/y ( )	3-4 times/y ( )	1-2 times/y ( )	0 ( )
18	Agricultural fair	2 time/y ( )	1 time/y ( )	1 time/2y ( )	1 time/y ( )	0 ( )

8. Agricultural knowledge

Please give the answer of the following questions

SL No	Questions	Total number	Obtained number
1	State the qualities of good seeds.	4	
2	What do you mean by seed treatment?	3	
3	What chemical fertilizers are available at present?	4	
4	State the functions of urea fertilizers.	4	
5	Name some important disease of rice.	4	
6	State the control measure of rice hispa.	4	
7	What is the proper time for planting potato?	3	
8	What is the spacing for planting potato?	3	
9	Name three winter crops	3	
10	State some improve varieties of wheat	4	
11	State the necessities of irrigation in wheat cultivation	4	
12	Name three crops cultivated for green manure	3	
13	What do you mean by IPM?	4	
14	State the procedure of compost manure	3	
	Total	50	

9. Innovativeness:

Please give your information about the use of following technologies

SL No	Name of the technology	Don't use	Duration of use after hearing				
			1st year	2nd year	3rd year	4th year	5th year
1	Use of green manure						
2	Use of crop rotation						
3	Use of inter-cropping						
4	Use of disease free and matured seed						
5	Use of organic manure						
6	Vegetables cultivation in homestead area						
7	Tree plantation in road side						
8	Use of weedicide						
9	Use of power tiller						
10	Integrated pest management						

10. i) Name of the persons with whom you consult when you face any problem relating to agriculture (such as seed, fertilizer, irrigation, insects etc.)

…….

…….

…….

ii) Name the persons from whom you seek advice as regards family affairs (illness, marriage, case etc.)

…….

…….

…….

iii) Name the persons of your village to whom you consult about voting.

…….

…….

…….

iv) Name of the persons to whom you go for advice observing social and religious ceremonies

…….

…….

…….

Thanks for your participation

Dated ……. ……..

Signature of interviewer