“EFFECTIVENESS OF RESULT DEMONSTRATION PROGRAM IN THE TRANSFER OF BRRI dhan50”

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CERTIFICATE

This is to certify that thesis entitled **"EFFECTIVENESS OF RESULT DEMONSTRATION PROGRAM IN THE TRANSFER OF BRRI dhan50"** submitted to the Faculty of Agriculture, Sher-e-Bangla Agricultural University, Dhaka, in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE in AGRICULTURAL EXTENSION, embodies the result of a piece of bona fide research work carried out by Fauzia Afroz, Registration No. 07-02299 under my supervision and guidance. No part of the thesis has been submitted for any other degree or diploma.

Date: June, 2014
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DEDICATED to
MY

BELOVED PARENTS

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The Author

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ABSTRACT

The purpose of the study was to ascertain the effectiveness of result demonstration program in the transfer of BRRI dhan50 and also to explore the relationships between effectiveness of result demonstration program in the transfer of BRRI dhan50 and some of the selected characteristics of the farmers. The study was conducted in three villages (Narikelbaria,Vupotipur and Chando) of Jhenaidah Sadar Upazilla under Jhenaidah district. Data were collected from a sample of randomly selected 90 farmers from 1165 farmers. The data were collected by using a structured interview schedule during 24 July 2014 to 20 August 2014. Pearson's Product Moment co-efficient of correlation (r) was computed in order to explore relationships between the dependent and independent variables. The findings of the study demonstrated that result demonstration program showed 64.40 percent medium effectiveness while 28.90 percent showed low and 6.70 percent showed high effectiveness to the transfer of BRRI dhan50. Among twelve characteristics of the farmer farm size, annual income, training exposure, innovativeness, personality, motivation had significant positive relationships with effectiveness of result demonstration program in the transfer of BRRI dhan50, while the other characteristics showed no significant relationships.

LIST OF ABBREVIATIONS AND ACRONYMS

BADC	Bangladesh Agricultural Development Corporation
BBS	Bangladesh Bureau of Statistics
BRRI	Bangladesh Rice Research Institute
DAE	Department of Agricultural Extension
GO	Government Organization
HYV	High Yielding Variety
IPM	Integrated Pest Management
MS	Master of Science
MOA	Ministry of Agriculture
NGO	Non Government Organization
No.	Number
‘r’	Co-efficient of Correlation
SD	Standard Deviation
UNDP	United Nations Development Program

CHAPTER I

INTRODUCTION

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INTRODUCTION

1.1 General Background

Agricultural extension education was emerged out of project works of many volunteer organizations, university professors and distinguished personalities. It has a long history from 2000 B.C. to 21st century. In Egyptian civilization, Mesopotamian civilization, Phoenician civilization and ancient China had demand led extension education based upon their own need and culture (Bhuiyan, 2014). In the mediaeval age extension education was taught by intellectuals through establishing schools and practical farm works. Since eighteenth century it was spread through publications, popular lectures and demonstration. From theses historical events agricultural extension has been established as an education for farm peoples who spreads innovational information among them for bringing about changes in their production behavior. Agricultural extension is very much concerned with intra changeable concepts of education, teaching and teaching methods. That is, there is no education without teaching and there is no teaching without meaningful use of teaching methods.

There are a number of teaching methods used by extension service for teaching farmers latest technologies and improved farm practices. Some teaching methods are used for conceptual learning, some are used for skill learning and some are used for motivational purposes and changing attitude. Result demonstration is a teaching method which provides farmers simultaneously conceptual learning, skill learning, motivation and attitude change as well. Further it is a method of seeing, hearing and doing. The methods, which include all these three things, are considered as effective teaching method.

Result demonstration is an effective teaching method. It is defined as a way of showing people the result of an innovation. This is done by comparing the improved technology and the old practice so that the farm community can see and judge the result of the technology with their own eyes. The effectiveness of improved seeds, new crops, new varieties, improved implements, improved cultural practices, use of chemical and bio-fertilizers, use of pesticides etc. are shown through result demonstration. In fact result

demonstration program becomes successful when the practices are selected based on real need of the farm community. Result demonstration originates from the term "Seeing is believing". Farmers believe the benefits of innovation when they see its result. The belief would be stronger if farmers have confidence over the demonstrator and extension workers as well.

Department of Agricultural Extension (DAE) is a government extension organization of Bangladesh. The principal function of DAE is to disseminate, educate and motivate farmers about latest technologies evolved from the agricultural research institutes. Agricultural research institutes are continuously developing new technologies for the sake of farmer's interest. DAE is also continuously disseminating those technologies through non formal education which is undertaken through selected teaching methods. Based on 'Seeing is believing' and 'Observability' attribute of innovation DAE organize result demonstration in the farmers' field and motivate groups of people in a community to adopt a new practice by showing its result as well as build up confidence of the farmers and extension agents. The role of DAE in conduction of result demonstration are analyzing the results and comparing them with the farmers' existing practice and using the result of the demonstration in future extension work and also pass onto the media for future dissemination.

DAE plays a vital role to conduct result demonstration in farmer's field for increasing knowledge, changing attitude and adoption of new rice variety among farmers. BRRI dhan50 is a long, slender, white and aromatic rice variety that was released by Bangladesh Rice Research Institute (BRRI) in 2008. The other name of BRRI dhan50 is *"Banglamoti*". It is similar to "*Basmoti*" rice of Pakistan and India, but its yield is double and the size of "*Banglamoti*" is finer than "*Basmoti*" Rice (Anonnymous, 2012). BRRI dhan50 is a Boro rice variety and the sowing time of this variety is November to mid January. The seed rate of this variety is 35 kg/ha and total 150-155 days are required for its maturity. The yield of this variety is approximately 6-6.5 ton/ha (Anonnymous, 2011). BRRI dhan50 is suitable for stress prone environment. It is the blessing for southern region farmers in Bangladesh. Jhenaidah district is also located at the southern part of Bangladesh. The DAE has arranged result demonstration program on BRRI dhan50 for

disseminating the variety among Boro farmers of Jhenaidah district. Now the cultivation of *Banglamoti* variety of rice has been gaining popularity among the farmers in Jhenaidah creating a new hope for them. However, Department of Agricultural Extension Officials in Jhenaidah said this newly developed variety of rice could become a blessing for the Boro farmers. The commercial cultivation of *Banglamoti* has been expanding day by day as farmers already achieved success in experimental cultivation as result demonstration. Farmers are motivated to adopt BRRI dhan50. There is few or no empirical study has so far been conducted regarding the effectiveness result demonstration in adoption of BRRI dhan50. There is a need to study on the effectiveness of result demonstration incorporating knowledge on rice cultivation, attitude of farmers towards BRRI dhan50 and its adoption. This is why the researcher has become interested to undertake a research, entitled "Effectiveness of Result Demonstration Program in the transfer of BRRI dhan50".

1.2 Statement of the problem

The DAE, Jhenaidah started result demonstration program on BRRI dhan50 since 2007 and they arranged several result demonstration programs at several times. Their main objectives of result demonstration on BRRI dhan50 were to increase knowledge, change attitude and enhance adoption of BRRI dhan50 by the farmers of Jhenaidah district. But the extent to which result demonstration program achieved its objectives were not examined systematically. Thus, the researcher was intended to undertake this piece of research entitled, "Effectiveness of Result Demonstration Program in the transfer of BRRI dhan50".

Therefore, it is necessary to know the effectiveness of result demonstration program in the transfer of BRRI dhan50. The present study was undertaken to answer the following research questions:

1. a. To what extent the result demonstration program was effective among farmers in the transfer of BRRI dhan50?
   b. What was the level of knowledge of the farmers on BRRI dhan50 cultivation?
   c. What level of attitude the farmers possess towards BRRI dhan50?
   d. What was the rate of adoption about BRRI dhan50?
2. What were the characteristics of the Boro rice farmers that made result demonstration program effective in the transfer of BRRI dhan50?
3. What were the relationshipss were between the selected characteristics of the farmers and effectiveness of result demonstration program in the transfer of BRRI dhan50.

1.3 Specific Objectives of the Study

To conduct the study in proper direction the following specific objectives had been set forth:

1. To measure the effectiveness of result demonstration in the transfer of BRRI dhan50 considering knowledge on rice cultivation, attitude toward BRRI dhan50 and its adoption rate among the farmers of Jhenaidah Sadar upazila ;
2. To identify and describe some selected characteristics of the farmers.

   The selected characteristics include:

   i. Age
   ii. Level of Education
   iii. Farm Size
   iv. Annual Income
   v. Farming Experience,
   vi. Extension Media Contact
   vii. Training Exposure
   viii. Organizational Participation
   ix. Cosmopoliteness
   x. Innovativeness
   xi. Personality
   xii. Motivation

3. To explore the relationshipss between the selected characteristics of the farmers and effectiveness of result demonstration program in the transfer of BRRI dhan50.

1.4 Justification of the Study

Bangladesh Rice Research Institute (BRRI) has developed and released 73 modern varieties among them BRRI dhan50 is only one high yielding aromatic rice variety. The yield of this variety is approximately 6-6.5 ton/ha and it is suitable for stress prone environment. But this excellent aromatic rice variety is till now obscure among many farming communities might be due to lack of proper extension program. However, people are more motivated and interested when they see the result of any new innovation by their own eyes. With this context, result demonstration is one of the best way to reach directly to the farmers' domain. DAE had undertaken numerous program to popularize many new varieties throughout the year. But there is very few or no systematic investigation has so far been conducted to measure the effectiveness of the program. The findings of the research would exert pressure to the extension personnel to organize result demonstration more carefully and judiciously. The particular piece of research is, therefore, aimed at exploring a systemic analysis of the effectiveness of result demonstration program in the transfer of BRRI dhan50.

1.5 Scope of the study

The main focus of the study was to determine the effectiveness of result demonstration in the transfer of BRRI dhan50. The findings of the study would be specifically applicable to the selected three villages namely Narikelbaria, Vupotipur and Chando under Jhenaidah Sadar Upazilla of Jhenaidah district. However, the findings would also have implication for other areas of the country where the physical, socio-economic, cultural and geographical conditions are more or less similar with the study area. The investigator believes that the findings of the study would reveal the phenomenon related to the effectiveness of result demonstration program in the transfer of BRRI dhan50.

The findings of the study are expected to help the researchers, academicians, trainers, development practitioners and policy maker to point in more sophistication to conduct more research and reorganize existing result demonstration program to make more effective program. The findings were also expected to be useful to the field works of

different nation building departments and organization to develop appropriate extension strategies for effective working procedure for farming communities.

1.6 Assumptions of the study

The researcher had the following assumptions in the mind while undertaking this study:

1. The respondents selected for the study area were capable to provide proper response to the question in the interview schedule.
2. The responses furnished by the respondents were reliable. They expressed the truth about the conviction and awareness.
3. Views and opinion furnished by the respondents included in the sample were the representative views and opinion of the whole population of the study area.
4. The researcher who acted as interviewer was well adjusted to the social and cultural environment of the study area. Hence the respondents furnished their correct opinion without hesitation.
5. Result demonstration would be effective in diffusion and adoption of BRRI dhan50.

1.7 Limitations of the study

In order to make the study manageable and meaningful from the point of view of research, it was necessary to impose certain limitations as noted below:

1. The study was confined to purposively Narikelbaria, Vupotipur and Chando villages of Narikelbaria and Porahati union of Jhenaidah sadar under Jhenaidah district.
2. The characteristics of the Boro rice farmers were many and varied, but only twelve characteristics were selected for investigation in this study.
3. Farmers maintain contact with extension agents through different extension methods. They discuss about innovations with people who have earlier experience. They keep formal contact with extension agents, attend meeting and result demonstration program and so on. But only effectiveness of result demonstration has been selected for investigation in this study.

4. The investigation depended on the data furnished by the interviewing of selected farmers only.

1.8 Hypotheses of the study

The null hypotheses were formulated to explore the relationships existed between the selected characteristics of the Boro rice farmers and effectiveness of result demonstration program in the transfer of BRRI dhan50.

Null Hypotheses

2 There was no relationship between the selected characteristics of the farmers and effectiveness of result demonstration program in the transfer of BRRI dhan50. The selected characteristics were i) Age ii) Level of Education iii) Farm Size iv) Annual Income v) Farming Experience vi) Extension Media Contact vii) Training Exposure viii) Organizational Participation ix) Cosmopoliteness x) Innovativeness xi) Personality and xii) Motivation.

1.7 Definition of Important Terms

Certain terms were used throughout the study which needed clarity for understanding through their definitions.

Effectiveness

Effectiveness means how well the program solved the problem. It means the usefulness or efficiency for the specific objectives. It is defined as the degree to which a group or social system achieves its goal.

Result Demonstration

Result demonstration is a method of teaching which establishes proof that an improved practice advocated by the extension worker is superior to the one in existence and applicable locally.

Effectiveness of Result Demonstration

Effectiveness of Result Demonstration means the extent to which result demonstration program achieves its objectives. The main objectives of result demonstration program are to increase knowledge, change attitude and enhance adoption of concerned practices by

the farmers. The effectiveness of result demonstration program in the transfer of BRRI dhan50 was measured by combining and averaging knowledge, attitude and adoption scores of the farmers and expressed as percentage.

Age

Age of an individual farmer was defined as the period of time in years from his birth to the time of interview.

Education

Education of an individual farmer was defined as the formal education received up to a certain level from an educational institute at the time of interview.

Farm Size

Farm size of a respondent referred to the area of farmland employable for raising crops and animal grazing. It includes the land holdings, which the farmers has got ownership upon and has the prospect of engaging in farm activities as and when s/he wishes.

Annual income

Annual income was defined as the total earnings of all the family members from farming and other sources (services, business etc.) during previous year. It was measured on the basis of total earnings of a respondent in Taka.

Farming Experience

Farming Experience means the experience of a farmer in years which s/he gained directly from farming activities. In this study, farming experience referred how many years s/he had been cultivating rice.

Extension media contacts

It referred to an individual exposure or contact with different communication media, source and personalities being used for dissemination of new technologies among the farmers.

Training exposure

It referred to the total number of days that a respondent received training in her/his entire life from different organizations under different training program.

Organizational Participation

The term organization is defined as an association of persons, which has a name, a regular set of officers and at least one face to face meeting in a year. In this study, organizational participation referred to her/his participation in various organizations as ordinary member, as executive member, as President/Secretary with a specific period of time.

Cosmopoliteness

The term Cosmopoliteness referred to the farmer's mobility from their own village to the number of different type of places. Cosmopoliteness of a respondent was measured by computing cosmopolite score. The cosmopoliteness score was assigned on the basis of different places and frequency of her/his external to and outside of her/his social system.

Innovativeness

The term innovativeness refers to the degree to which an individual is relatively earlier in adopting new innovations, new ideas, practices and things than the other member of a social system (Rogers, 1983). This was comprehended by the quickness of accepting innovation by an individual in relation to others and was measured on the basis of time dimension. In this study, innovativeness of a respondent was measured on the basis of adoption 15 improved agricultural practices by the respondents.

Personality

Personality means total quality of an individual (Woodworth and Marquis, 2012). In this study, 10 characteristics of a farmer were identified as their personality ingredient, viz. problem solving efficiency, communication skill, ability to perform assigned duties according to extension approach, leadership behavior and mentality to accept new challenge, understanding capacity, social interaction and ability to hard work, knowledge seeking tendency and group participation.

Motivation

Motivation is the driving force of behavior. In this study, seven (7) motivational item were identified which gives energy and direction of a farmer to adopt BRRI dhan50 through result demonstration.

Knowledge

It referred to the knowledge gained by the farmers on different aspects of BRRI dhan50 from different sources and also through their experience of farming. In this study, 10 questions related to BRRI dhan50 were asked to the farmers to test their knowledge level about BRRI dhan50.

Attitude

Attitude is the one of the main determinants of individual human behavior. It mean one's feelings, believes and action towards an object. In this study, five (5) positive and five (5) negative statements were asked to the farmers to justify farmer's opinion towards BRRI dhan50 as favorable or unfavorable.

Adoption

According to Rogers (1983) adoption is a decision to make full use of an innovation as the best course of action available: when an individual takes up a new idea as the best course of action available: when an individual takes up a new idea as the best course of action and practices it, the phenomenon is known as adoption.

CHAPTER II

REVIEW OF LITERATURE

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REVIEW OF RELATED LITERATURE

This chapter deals with the review of past research related to this investigations. The reviews were conveniently presented based on the major objectives of the study. In spite of sincere effort adequate numbers of direct related literatures were not readily available for this study. However, the literatures of available studies have been briefly discussed in this chapter as effectiveness of result demonstration program in transfer of BRRI dhan50.

2.1 Certain Fundamental and General Observation on Result Demonstration

Dr. Seaman Knapp an American professor in 1902 observed that cotton field was due to insect infestation by cotton weevil. He successfully controlled this insect by using insecticides with the help of local and central government of through result demonstration (Bhuiyan, 1999)

Karim (1969) found that his respondents mentioned more than one information source for learning about improved rice farming. He found that 97 percent of the entire study group mentioned friends and neighbors as information source, while 26 percent named result demonstration, field tour, method demonstration, meeting and short course training as the source of farm information..

Van Den Ban and Hawkins (1986) in their book "Agricultural Extension" made some valuable comments on the characteristics and importance of demonstration and the inherent causes for their success and failure. Their observations were "Farmers will often accept that the experience on the demonstration farm is valid for conditions and the demonstration farm and farmers are similar to their own situation. Result demonstration is very important for making people aware of innovations in countries where the mass media play a limited role because of illiteracy or limited access to media outlets. Demonstration must show clear difference between traditional and recommended practices, and they must be well managed. Demonstration plots should be kept simple, preferably comparing only the traditional with the improved method on a good-sized field. Selection of the farm where a demonstration is to be given can have considerable impact on the effectiveness of demonstration."

Hossain and Akanda (1987) cited the findings of a study conducted in India on farmers' credibility ranking of different information sources. Based on the findings of the study, it was reported that demonstration ranked first. It has followed by scientists, block extension agency, progressive farmers, television, radio, folders/leaflets/bulletins and newspapers.

Ibrahim and Mahmoud (2004) showed that practical demonstration had the highest impact on agricultural extension engineers' knowledge and practice, followed by use of a sound filmstrip, a video flim, a cassette and a pamphlet.

Muhammad et al. (2005) conducted a field study in Punjab, Pakistan, to assess the role of demonstrations in the adoption of recommended agricultural technologies by the farmers. The data show that majority (56.67%) of the respondents were aware of the existence of rice crop demonstration plots in their area/village. None of the respondents acknowledged the role of demonstrations in the dissemination of rice crop recommendations including seed rate, seed treatments, time of sowing/transplanting, seed bed preparation, use of fertilizers, application of zinc sulfate, irrigation, weed control, application of plant protection measures and harvesting.

Shamsuzzoha (1967) in another study with Texas cotton growers, observed that 70 percent of cotton farmers received information about result demonstration in cotton production from farm magazine followed by newspaper and country agricultural agent with 67 and 65 percent, respectively. These were again followed equally by radio, demonstration and field tours with 60 percent in each case. Other important sources of information used were television, friend and neighbors, commercial dealers and personal visit to demonstration plots with 53, 42, 39 and 34 percent, respectively.

Dinpanah et al. (2005) conducted a questionnaire survey among wheat farmers in Isfahan, Iran, to determine the influence of on-farm demonstration and other factors on the farmers' technical knowledge. Multiple regression analysis of the data revealed that mechanization level, size of wheat-cultivated landholding, level of education and wheat farming experience explain 36.4% of the variation in wheat farmers' technical knowledge. It also revealed that wheat farmer social status, extent of familiarity with media, and extent of use of communication channels 55.7% of the variation in wheat

farmer technical knowledge. Significant differences were found among the mean scores of technical knowledge in relation to the type of agricultural system, type of seed used, and methods of cultivation. Significant differences in mean scores of technical knowledge were also found between farmers who attended on-farm demonstration and those who did not. He found that the percentages of agents reporting the use of different teaching methods were 97 in method demonstration.

2.2 Relationships between selected characteristics of Boro rice farmers and effectiveness of result demonstration

2.2.1 Age and Effect of Result Demonstration

Paul (1989) found that age of the farmers had a significant positive relationship with their opinion on effect of result demonstration on the adoption of improved practices in rice cultivation.

Hussen (2001) conducted a study, which concluded that of the sugarcane growers had a significant negative relationship with their adoption of modern sugarcane cultivation practices. Rahman (1995) also found similar result in his study.

Islam (2002) conducted a study on adoption of modern agricultural technologies by the farmers of Sandip. He found that age of the farmers was not related to their adoption of modern agricultural technologies.

Rahman (2001) observed that there was no significant relationship between age and adoption of Aalok-6201 hybrid rice cultivation practices. Podder (1999) and Hossain (1971) have similar results result in their respective studies

2.2.2 Level of Education and Effect of Result Demonstration:

Paul (1989) found that education of the farmers had a significant positive relationship with their opinion on effect of result demonstration on the adoption of improved practices in rice cultivation.

Sarkar (1997) conducted a study to determine the relationships between selected characteristics of potato growers and their adoption of improved potato cultivation practices in five villages of Comilla district. He found that education of potato growers had significant relationships with their adoption of improved potato cultivation practices.

Rahman (2001) conducted a study on knowledge, attitude and adoption of the farmers regarding Aalok-6201 hybrid rice in Sadar upazila in Mymensingh district. He found that academic qualification of the farmers had a significant positive relationship with their adoption regarding Aalok-6201 hybrid rice.

Aurangozeb (2002) conducted a study on adoption of integrated farming technologies by the rural women in RDRS. He found that there was a positive relationship between education and their adoption integrated farming technologies.

Sardar (2002) conducted a study on adoption of IPM practices by the farmers under PETRRA project of RDRS. He found that education of the farmers had a positive significant relationship with their adoption of IPM practices.

Islam (2003) conducted a study on adoption of organic manures. He found that there was a positive and significant relationship between education of the farmers and adoption of organic manures.

2.2.3 Farm Size and Effect of Result Demonmstration

Paul (1989) found that farm size of the farmers had a significant positive relationship with their opinion on effect of result demonstration on the adoption of improved practices in rice cultivation.

Sarkar (1997) found that farm size of the potato growers had a significant positive relationship with their adoption of improved potato cultivation practices. Similar findings on adoption of selected BINA technologies were also reported by Chowdhury (1997).

Hussen (2001) conducted an investigation on adoption of modern sugarcane cultivation practices by the farmers of Dewangonj upazila in Jamalpur district. He observed that there was a significant positive relationship between farm size of the farmers and their adoption of modern sugarcane cultivation practices.

Rahman (2001) conducted a study on knowledge, attitude and adoption of the farmers regarding Aalok 6201 hybrid rice in sadar upazila of Mymensingh district. He found that size of the farm had a significant and positive relationship with their adoption regarding Aalok 6201 hybrid rice.

Sardar (2002) conducted a study on adoption of IPM practices by the farmers under PETRRA project of RDRS. He found that the farm size of the farmers and a positive significant relationship with their adoption of IPM practices.

Aurangozeb (2002) conducted a study on adoption of integrated homestead farming technologies by the rural women in RDRS. He found that farm size had no relationships with adoption of integrated homestead farming technologies.

2.2.4 Annual Income and Effect of Result Demonstration

Paul (1989) found that annual income of the farmers had a significant positive relationship with their opinion on effect of result demonstration on the adoption of improved practices in rice cultivation.

Pal (1995) in his study found a positive significant relationship between income of the farmers and their adoption of recommended practices in sugarcane cultivation.

Chowdhury (1997) found that the annual income of the respondents had a positively significant relationship with their adoption of selected BINA technologies. Similar findings were reported by Sarker (1997) and Alam (1997).

Islam (2002) conducted a study on adoption of modern agricultural technologies by the farmers of Sandip. He observed that he annual income of the farmers had no relationships with their adoption of modern agricultural technologies.

Aurangozeb (2002) conducted a study on adoption of integrated homestead fanning technologies by the rural women in RDRS. He found that there was a positive significant relationship between annual income of the respondent and their adoption of integrated homestead farming technologies.

2.2.5 Farming Experience and Effect of Result Demonstration

Wright (1992) found no significant relationships between farming experience and opinion about result demonstration in adoption of wheat cultivation.

Sarkar (1997) reported that farming experience had insignificant relationships with the effectiveness of agricultural information through agricultural radio program.

2.2.6 Extension Media Contact and Effect of Result Demonstration

Ahmed (1977) study also indicated existence of a positive and significant relationship between extension exposure and use of information sources in the adoption of three improved practices. The practices wares recommended variety of Jute, recommended doses of fertilizer and plant protection measures.

Paul (1989) found that extension media contact of the farmers had a significant positive relationship with their opinion on effect of result demonstration on the adoption of improved practices in rice cultivation.

Rahman (1995) studied farmers' knowledge of improved practices in potato cultivation indicated a significant relationships between extension contact and adoption of improved practices.

Sarker (1997) found that extension contact of potato growers had a positive significant relationship with their adoption of improved potato cultivation practices. Chowdhury (1997) also observed similar findings.

Alam (1997) studied use of improved farm practices of rice cultivation by the farmers of Anwara thana of Chittagong district. The study indicated no significant relationships with their use of improved farm practices in rice cultivation.

Hussen (2001) conducted a study on farmers' knowledge and adoption of modern sugarcane cultivation practices. He found that extension contact of the growers had significant relationships with their adoption of modern sugarcane cultivation practices

2.2.7 Training Exposure and Effect of Result Demonstration

Rahman (2001) observed in study that training received of the farmers had a significant and positive relationship with their adoption regarding Aalok-6201 hybrid rice.

Wright (1992) found no significant relationships between training exposure and opinion about result demonstration in adoption of wheat cultivation.

Islam (2002) conducted a study on farmers' knowledge and adoption of ecological agricultural practices under the supervision of Proshika. He found that agricultural training exposure of the farmers had no significant relationships with their adoption of ecological agricultural practices.

2.2.8 Organizational Participation and Effect of Result Demonstration

Rahim (1961) conducted a study in Bangladesh and found that socio cultural variables such as membership of organizations, of farmers were significantly associated with adoption.

Hoffer (1966) study in the United States indicated that participation in formal groups was related to adoption of farm practices.

Reddy and Kivlin (1968) in their study of three Indian villages on the adoption of innovation found that those who participated in formal organization tended to adopt more than those who were non-members of such organization.

Hossain (1971) also indicated that the association of organizational participation was highly significant with adoption of recommended doses of fertilizer and plant protection measures.

2.2.9 Cosmopoliteness and Effect of Result Demonstration

Rahman (2001) conducted an investigation on knowledge, attitude and adoption of Aalok-6201 hybrid rice by the farmers of sadar upazila in Mymenshigh district. He observed that there was a significant positive relationship between cosmopoliteness of the farmers and their adoption of Aalok-6201 hybrid rice.

Hussen (2001) conducted an investigation on adoption of modem sugarcane cultivation practices by the farmers of Dewangonj upazila in Jamalpur district. He observed that there was a significant positive relationship between cosmopoliteness of the farmers and their adoption of modem sugarcane cultivation practices.

Aurangozeb (2002) conducted a study on adoption of integrated homestead farming technologies by the rural women in RDRS. He found that cosmopoliteness of the respondents had a significant positive relationship with their adoption of integrated homestead farming technologies.

Hossain (1999) found a positive significant relationship between cosmopoliteness of the farmers and their adoption of fertilizer.

Chowdhury (1997) found that there was no significant relationship between the farmers' cosmopoliteness and their adoption of selected BINA technologies.

2.2.10 Innovativeness and Effect of Result Demonstration

Rahman (1973) found a positive relationship between modernism and adoption of farm practices. Modernism as used by him is synonymous with the innovation proneness or in other words innovativeness of the present study.

Muhammad (1974) conducted the study on the extent of adoption of strong positive relationships by the farmers. He observed a strong positive relationship between innovativeness and adoption of insect measures.

Sharma and Sonoria (1983) observed higher average innovativeness among contact farmers than the non contact farmers. They also found that contact farmers' adoption of innovations differed significantly with their variation in innovativeness.

Islam (2002) conducted a research study on adoption of modern agricultural technologies by the farmers of Sandwip. He found that innovativeness of the farmers had significant and positive relationships with their adoption of modern agricultural technologies.

2.2.11 Personality and Effect of Result Demonstration

Wright (1992) found positive significant relationships between personality and opinion about result demonstration in adoption of wheat cultivation.

Paul (1989) found that personality of the farmers had a significant positive relationship with their opinion on effect of result demonstration on the adoption of improved practices in rice cultivation.

Hussen (2001) conducted an investigation on adoption of modem sugarcane cultivation practices by the farmers of Dewangonj upazila in Jamalpur district. He observed that there was a significant positive relationship between personality of the farmers and their adoption of modem sugarcane cultivation practices.

2.2.12 Motivation and Effect of Result Demonstration

No available research review was found concerning motivation and effectiveness of result demonstration.

2.2.13 Knowledge on BRRI dhan50 Cultivation and Effect of Result Demonstration

Paul (1989) found that knowledge on rice cultivation of the farmers had a significant positive relationship with their opinion on effect of result demonstration on the adoption of improved practices in rice cultivation.

Sarker (1997) found that potato production knowledge of potato growers had positive and significant relationships with their adoption of improved potato cultivation practices.

Moullik et. al. (1996) conducted a study on predictive values of some factors of adopting nitrogen fertilizers in north India. He found a significant and positive relationship between agricultural knowledge and adoption of nitrogenous fertilizers among the cultivators.

Veeranna (2000) found that the majority (66 percent) of the respondents had medium level of adoption followed by low (22 percent) and (12 percent) levels of adoption of scientific goat rearing practices. The extent of adoption was 62.33 percent. Two traits viz. age and knowledge of scientific rearing practices had significant positive relationships with adoption of scientific goat rearing practices.

2.2.14 Attitudes of Farmers towards BRRI dhan50 and Effect of Result Demonstration

Paul (1989) found that attitudes of the farmers had a significant positive relationship with their opinion on effect of result demonstration on the adoption of improved practices in rice cultivation.

Rahman (1973) in his study revealed that attitude of the farmers in adoption of improved farm practices in T. Aman cultivation had positive significant relationships towards use of pesticides.

Hossain, and Akanda (1987) in his study conducted that the attitude towards modern agricultural technologies of the farmers and had no relationships with their use of mass media in receiving agricultural information.

Sarkar (1997) studied to measure the effectiveness of agricultural information dissemiated to the farmers through agricultural radio program. He obtained non significant positive relationships between the farmers attitude toward agricultural technologies.

2.2.15 Adoption of BRRI dhan50 and Effect of Result Demonstration

Wright (1992) in his study concluded that that adoption of the farmers had a significant positive relationship with their perception on effect of result demonstration on the adoption of improved practices in wheat cultivation.

Hussen (2001) conducted an investigation on adoption of modem sugarcane cultivation practices by the farmers of Dewangonj upazila in Jamalpur district. He observed that there was a significant positive relationship between selected characteristic of the farmers and their adoption of modem sugarcane cultivation practices.

Paul (1989) found that adoption behavior of the farmers had a significant positive elationship with their opinion on effect of result demonstration on the adoption of improved practices in rice cultivation.

2.3 Conceptual Framework

The present study would be tried to focus two concepts: first the farmer's selected characteristics and the second, the effectiveness of result demonstration program in transfer of BRRI dhan50. In scientific research selection and measurement of variables constitute an important task. The hypothesis of a research while constructed properly consist at least two important elements i.e.: a dependent variable and independent variable. A dependent variable is that factor 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 relationships to an observed phenomenon. Variable together are the causes and the phenomenon is effect and thus, there is cause effect relationship in the universe. Effectiveness of result demonstration program in transfer of BRRI dhan50 was considered as dependent variables and twelve selected characteristics were considered as independent variables. It is not possible to deal with all independent variables in a single study. It was therefore necessary to limit the independent variables which include (a) Personal Characteristics: i) Age ii) Education iii) Farming Experience iv) Training exposure (b) Economic Characteristics: i) Farm size ii) Annual income (c) Social Characteristics: i) Organizational Participation ii) Extension media contact iii) Innovativeness iv) Cosmopoliteness (d) Psychological Characteristics: i) Motivation ii) Personality for this study. Considering the above mentioned discussion, a conceptual framework has been developed for this study, which is diagrammatically presented in the following Figure 2.1.

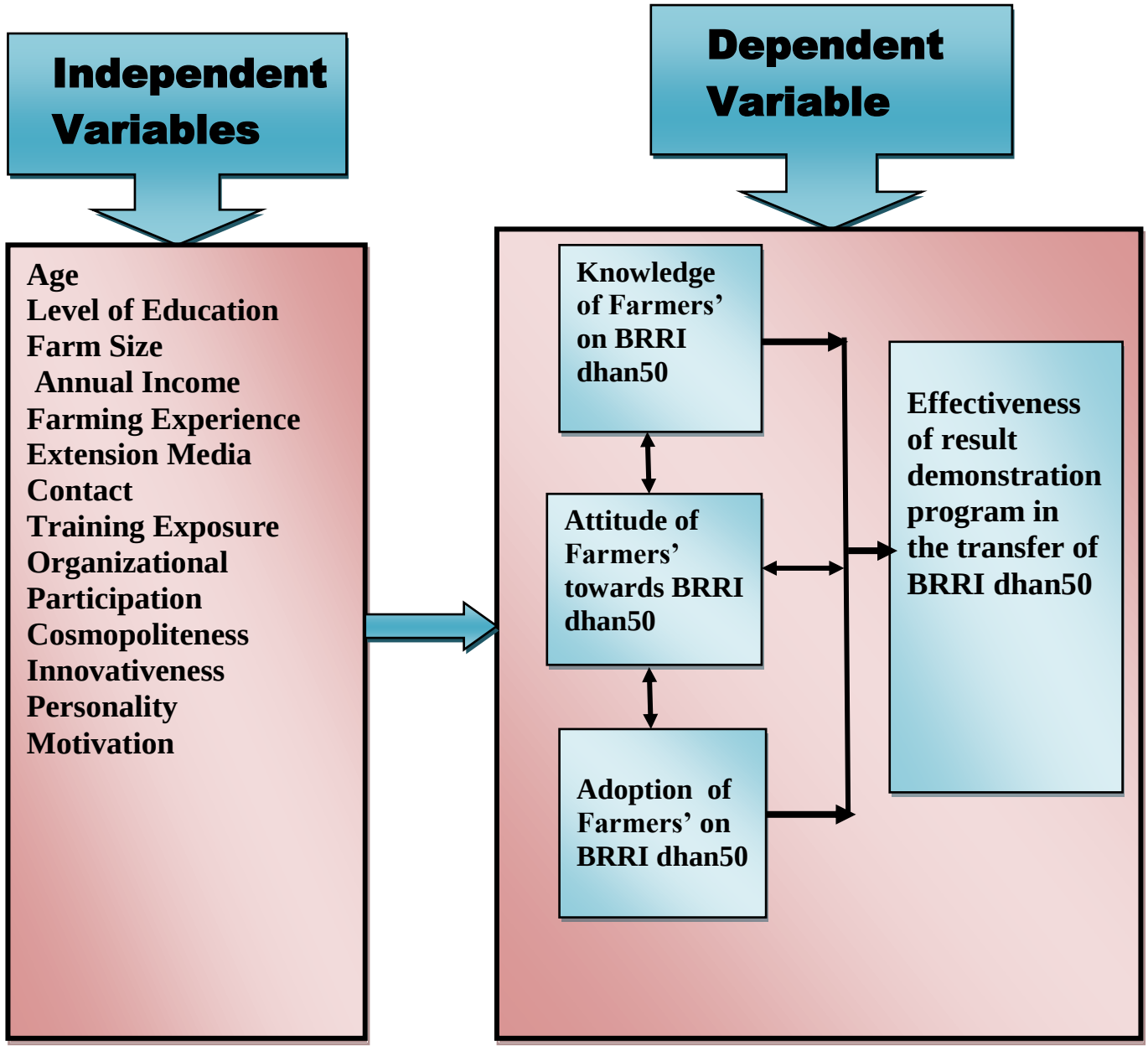


Figure 2.1 The conceptual framework of the study

CHAPTER III

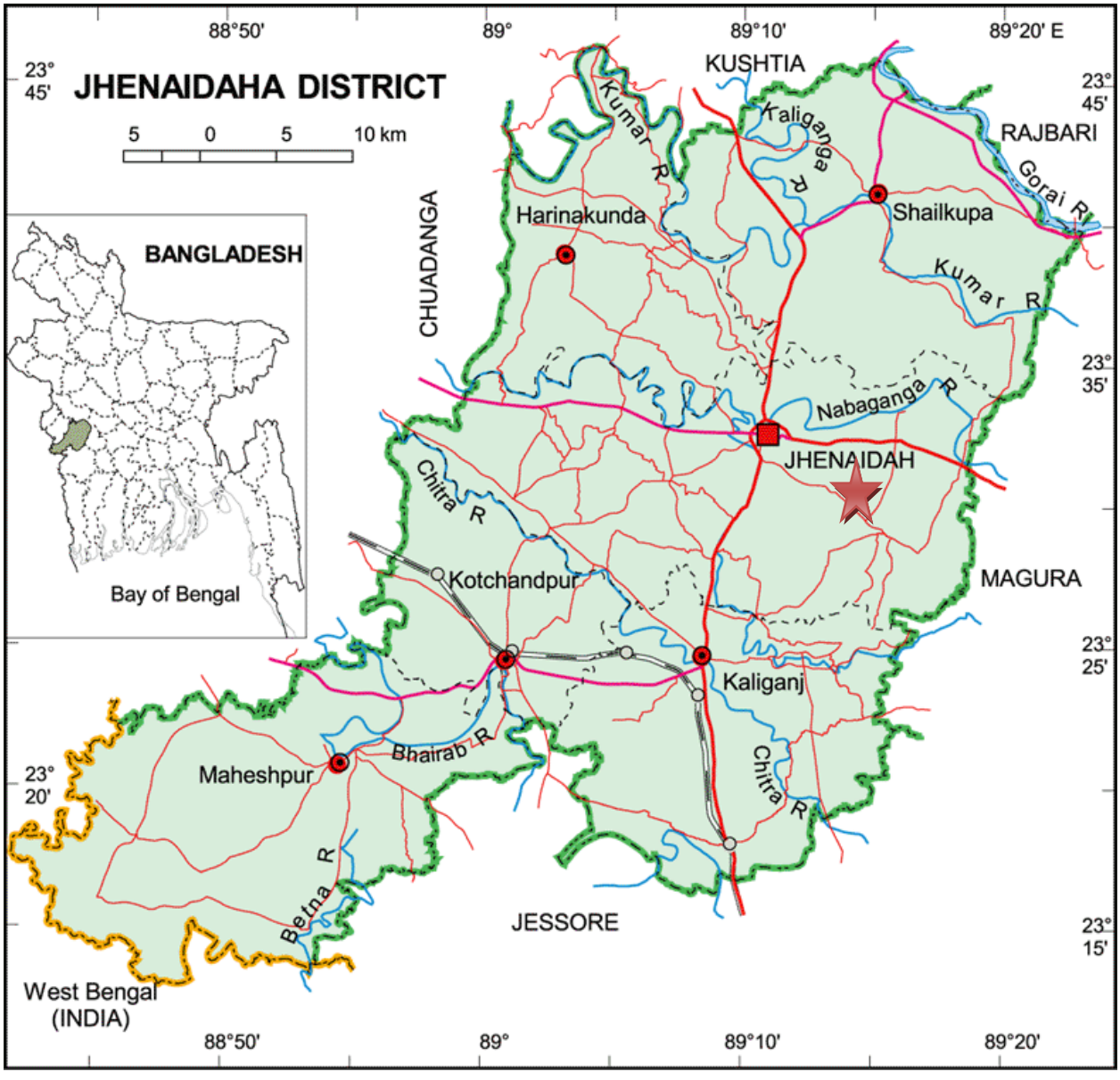
METHODOLOGY

CHAPTER III
METHODOLOGY

To measure the effectiveness of result demonstration program in the transfer of BRRI dhan50, it is necessary to establish a suitable methodology. Keeping this in mind, the researcher had taken intensive care for the use of proper method in all respects of the present investigation. Method and procedure followed in this investigation have been described in this chapter.

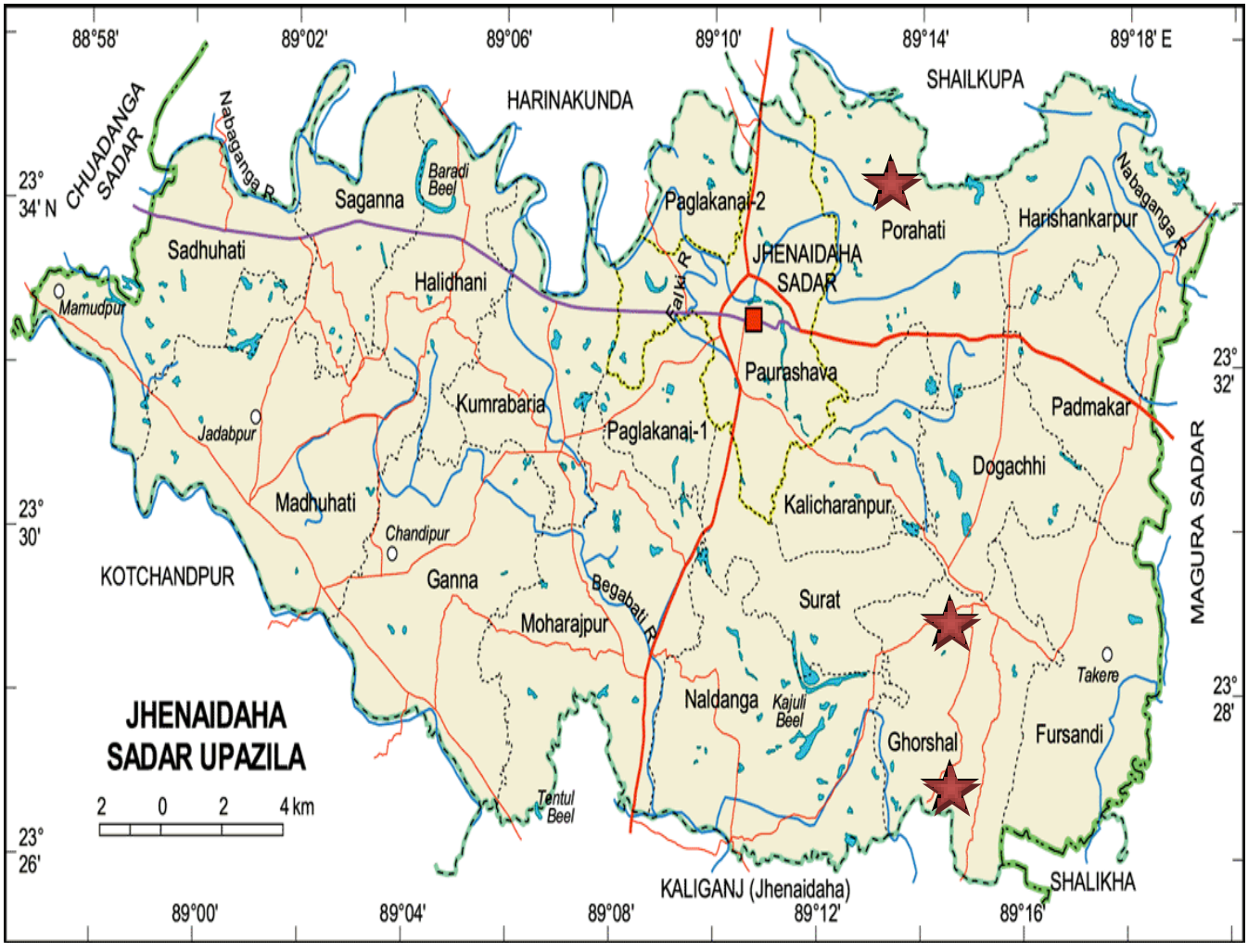
3.1 Locale of the study

To achieve the objectives of the present investigation, data were collected from Jhenaidah Sadar upazila. This upazila occupies an area of 467.75 square kilometer. Jhenidah Sadar has a population of 3,94,152. It was observed that DAE was organized the numerous numberof result demonstration program in Narikelbaria and porahati Unions. Considering the result demonstration program was practiced or observed by the farmers, Narikelbaria, Vupotipur and Chand under Narikelbaria and porahati Unions of Jhenaidah Sadar Upazilla was purposively selected as the study locality of the study. For clarity of understanding, map of Jhenaidah district that showing Jhenaidah sadar upazila and map of Jhenaidah Sadar upazila that showing the study area have been shown in the Figure 3.1 and Figure 3.2.



Study Area = ★

Figure 3.1 A Map of Jhenaidah District Showing Jhenaidah Upazila



Study Area =

Figure 3.2 A Map of Jhenaidah Sadar Upazila Showing the Study Area

3.2 Population and Sampling

Firstly, the list of result demonstrations that organized the previous years was collected from the local Upazila Agricultural Office with the help of Sub Assistant Agricultural Officers (SAAO). The researcher carefully noticed the villages where most of the result demonstration programs were implemented. Out of these villages, three villages Narikelbaria, Vupotipur and Chando under Jhenaidah Sadar upazila were purposively selected. All the Boro farmers who conducted or observed result demonstration programs under three selected villages were constituted the population of the study. A up to date list of the Boro rice farmers of these three villages was collected from the the local Upazila Agricultural Office with the help of Sub Assistant Agricultural Officers (SAAO). Then the farmer's list was chronologically numbered from 1 to 1165 in which the number of farmers of Narikelbaria, vupotipur and Chando were 356, 302 and 507 respectively. Sample size was determined as 90 farm by taking help from the following Yamane's (1967) given formula ,where, 10% level of precision, 50% degree of variability and 95% Confidence level were chosen. Then 90 farmers were selected by using simple random sampling method.

$$n = \frac{z^2 P(1-P) N}{z^2 P(1-P) + N(e)^2}$$

where, n = sample size

N = population size (Here, N =1165)

e = level of precision (Here, e = 10%)

z = confidence level (Here, z = 95%)

P = degree of variability (Here, P = 50%)

These 90 farmers constitute the sample of the study. In addition, a reserve list of 10 farmers was prepared at the rate of 10% from the sample size for collecting data in case of unavailability or preoccupation of the tested farmers.

The distributions of the farmers included in the population, sample and those in the reserve list from the selected villages in shown in Table 3.1.

Table 3.1 Population and sample distribution

Name of the villages	Number of respondents	Sample	Reserve list
Narikelbaria	356	34	7
Vupotipur	302	11	2
Chando	507	45	9
Total	1165	90	18

3.3 The Research Instrument

A standard interview schedule was used as the data collecting instrument for this study. Both open and close form questions were included in the schedule. Simple and direct questions were also included to determine the effectiveness of result demonstration program in the transfer of BRRI dhan50. Appropriate scales were developed to measure both independent and dependent variables. The interview schedule was prepared in accordance with the objectives of the study. The interview schedule was pre tested with 10 farmers from the study area other than listed in the sample and reserve list. Necessary correlation, addition, alternation and modification were made in the interview schedule based on the pretest results. The modified and corrected interview schedule was then printed as final form in English. A copy of the interview schedule is presented both Bangla and English in to Appendix I & II.

3.4 Data Collection Procedure

The researcher herself collected the data from the sample respondents through personal contact with the help of interview schedule. Whenever any respondent faced difficulty in understanding questions, more attention was taken to explain the same with a view to enabling the farmers to answer properly. No serious problem was faced by the investigator during the data collection period. Data collection was started in 24 July, 2014

and completed in 20 August, 2014. The investigator herself collected data on the basis of objectives to test the hypothesis.

3.5 Variables of the study

In a descriptive social research two type of variables are used, viz. Independent variable and dependent variable. The independent variables of this study were the selected characteristics of the Boro farmers. The selected characteristics of the Boro farmers include: (a) Personal Characteristics: i) Age ii) Education iii) Farming Experience iv) Training exposure (b) Economic Characteristics: i) Farm size ii) Annual income (c) Social Characteristics: i) Organizational Participation ii) Extension media contact iii) Innovativeness iv) Cosmopoliteness (d) Psychological Characteristics: i) Motivation ii) Personality. On the other hand, the dependent variable was effectiveness of result demonstration program in the transfer of BRRI dhan50.

3.5.1 Measurement of independent variables

The selected characteristics of the farmers constituted the independent variables of the study. To keep the research within the manageable limit, 12 independent variables were selected for the study.

The measurement procedures of the selected variables were as follows:

3.5.1.1 Age

The age of a respondent was measured in terms of actual years from her/his birth to the time of interview on the basis of her or his response. A score of one (1) was assigned for each year of age.

3.5.1.2 Level of education

Level of education of a respondent was measured on the basis of classes s/he had passed in formal educational institution. For example, if a respondent passed class 4, her/his education score was assigned as 4. If a respondent did not know how to read and write her/his education score was assigned as zero (0). A score of 0.5 was given to that respondent who could sign her/his name only.

3.5.1.3 Farm size

Farm size of the respondent was measured as the size of his farm (including rice and other crops) on which s/he continued her/his farm practices during the period of study. It included the area of farm owned by her/his as well as those obtained from others as sharecropping, lease or mortgage. The area was being estimated in terms of full benefit to the growers in terms of hectare.

The farm size of a respondent was measured by using the following formula:

Farm Size= A + B + ½(C + D) +E

Where,

A= Homestead
B= Own land under own cultivation
C= Land taken from others on borga
D= Own land given to others on borga
E= Land taken from others on lease

3.5.1.4 Annual family income

Annual family income refers to the total earnings of all the active members of a household in previous year from agriculture (Rice, Wheat, Jute, Mustard, Pulse, Vegetables, Fruit, and Flower), livestock, poultry, and fisheries and non agricultural sector (service, business, labor and other family members' incomes under him). Annual earnings from farming and other sources were added together to obtain total family income of a respondent. In case of business or service, their monthly income was multiplied by twelve to determine annual family income. A score of one was given for each Tk. 1000 to compute the annual family income scores of the respondents. Data obtained in response to item no.4 of the interview schedule was used to determine the annual family income of the respondent.

3.5.1.5. Farming Experience

Farming experience means knowledge derived from farm operations during a time period. In this study, farming experience score of a respondent was measured by the number of years of a respondent had been involved with rice cultivation in her/his entire life. A score of one (1) was assigned for each year of involvement of rice cultivation. If a respondents had 15 years of farming experience, s/he would be credited with score 15.

3.5.1.6. Extension Media Contact

It was measured on the basis of respondents' extent of exposure with different information sources. Extension media contact score of the farmers was determined by summing the scores obtained from all the 16 selected extension media contact. The extension media contact score could range from 0 to 48; where '0' (zero) indicates no extension media contact and '48' indicates very high extension media contact.

The scale used for computing the extension media contact has been presented below:

Extent of extension media contact	Assigned Score
Regularly	3
Often	2
Rarely	1
Not at all	0

3.5.1.7. Training Exposure

Agricultural training score of a respondent was measured by the number of days that a respondent had received agricultural training in her/his entire life. Data obtained in response to item no 7 of the interview schedule were used to obtain agricultural training score of a respondent. If a respondent received training for three days her/his training exposure scale would be 3.

3.5.1.8. Organizational Participation

Organizational Participation of a respondent was measured on the basis of nature of membership in the concerned organization. Nature of membership was identified as president/secretary, executive member, ordinary member and no participation. Scores were assigned each of the nature of membership as follows:

Nature of Involvement	Assigned Score
President/Secretary	3
Executive Member	2
Ordinary member	1
No participation	0

One respondent may involve in one or more than one organization. According to the question number 8 in the interview schedule names of nine organizations were mentioned, where a respondent had opportunity to be member of all 09 organizations or

no participation. So the organizational participation score could range from 0 to 27. Zero (0) indicate no participation and 27 indicate high participation.

3.5.1.9. Cosmopoliteness

Cosmopoliteness of respondent farmers was measured in term of her/his nature of visits to ten different places external to her/his own social system. The scale used for computing the cosmopoliteness score has been presented below:

Frequency of visit	Assigned Scores
Regularly	3
Occasionally	2
Rarely	1
Not at all	0

The cosmopoliteness score of a respondent was determined by adding the scores obtained for her/his visits to each of the ten types of places as shown in the interview schedule. The cosmopoliteness scores of an individual could range from 0 to 30; where '0' (zero) indicating no cosmopolteness and '30' indicating very high cosmopoliteness.

3.5.1.10. Innovativeness

Innovativeness is the degree to which an individual is relatively earlier in adopting new innovations, new ideas, practices and things than the other member of a social system (Rogers, 1983). In this study, innovativeness of a respondent was measured on the basis of the period of adoption of 15 improved agricultural technologies. Score was 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 1 year after hearing	4
Within 2 years after hearing	3
Within 3 years after hearing	2
Within More than 3 years after hearing	1
No Adoption	0

Innovativeness score of a respondent was obtained by adding his scores for adoption of all the 15 improved agricultural technologies. Innovativeness of a respondent could range from 0 to 60; where '0' (zero) indicating no innovativeness and 60 indicating very high innovativeness.

3.5.1.11. Personality

Every person is unique in her/his behavior and characteristics. This uniqueness of a person is her/his personality. For determining the respondent's personality, ten independent characteristics were carefully selected to develop personality scale. A respondent was asked to indicate her/his extent of personality about each of the characteristics along with a four point scaling as 'poor', 'medium', 'good' and 'very good'. Scores were assigned to these four alternate responses as 1, 2, 3 and 4 respectively for each characteristic. However, the score of a respondent was obtained by adding her/his scores for all the 10 characteristics. This score could range from '1' to '40', where '1' indicates poor personality of a respondent and '40' indicates very good personality of a respondent.

3.5.1.12. Motivation

Motivation is the driving force of behavior. Motivation gives energy and direction of an individual to perform her/his work. Motivated person becomes more active and gives her/his best effort to achieve desire goal. In this research work for determining the respondent's motivation, seven independent statements were carefully constructed to develop motivation scale. A respondent was asked to indicate her/his degree of motivation about each of the statements along with a four point scaling as 'very low', 'low', 'medium' and 'high'.

Scores were assigned to these four alternate responses as 1, 2, 3 and 4 respectively for each statement. However the score of a respondent was obtained by adding her/his scores for all the 7 statements. This scores could range from '1' to '28', where '1' indicates very low motivation towards result demonstration program for transfer of BRRI dhan50 and '28' indicates high motivation towards result demonstration program for transfer of BRRI dhan50.

3.5.2 Measurement of dependent variable

Effectiveness of result demonstration program among farmers of Jhenaidah Sadar upazila in the transfer of BRRI dhan50 was the dependent variable of the study. Three dimensions were identified for measurement of effectiveness of result demonstration viz. (i) knowledge on BRRI dhan50 cultivation (ii) Attitude of farmers towards BRRIdhan50 (iii) Adoption of BRRI dhan50. The effectiveness of result demonstration program in the transfer of BRRI dhan50 was measured by combining and averaging knowledge, attitude and adoption scores of the farmers and expressed as percentage. To determine the effectiveness of result demonstration program perceived by the farmers for transfer of BRRI dhan50, effectiveness score was computed from knowledge, attitude and adoption score.

The ES of each respondent was calculated by using following formula:

$$ES = \frac{1}{3} \times \left(\frac{O_k}{P_k} + \frac{O_{At}}{P_{At}} + \frac{O_{Ad}}{P_{Ad}}\right) \times 100$$

Here,

ES= Effectiveness score

O_K = Observed Knowledge score

P_K= Possible Knowledge score

O_{At}= Observed attitude score

P_{At}= Possible attitude score

O_{Ad}= Observed adoption score

P_{Ad}= Possible adoption score

Thus the values of ES could range from 6.6% to 100%, where o indicates not at all effective and 100 % indicates very high effectiveness.Each of the dimensions was measured by applying appropriate scale. Knowledge on BRRI dhan50 cultivation was measured by knowledge test, attitude of farmers towards BRRIdhan50 was measured by Likert-scale and adoption of BRRI dhan50 was measured on the basis of area and time score.

3.5.2.1 Knowledge on BRRI dhan50 Cultivation

Knowledge on BRRI dhan50 of a respondent was measured by asking 10 questions related to BRRI dhan50 cultivation. It was measured assigning score 02 against each of the questions. The total assigned scores of all the questions were 20. For correct answer to all the questions, a respondent could get a total score of 20, while for wrong answer to all the questions could get zero (0). If any respondent's answer against a question was considered partially correct, s/he would get half of the score that is one (1). Thus, agricultural knowledge of a respondent could range from zero (0) to 20, where zero (0) indicating no knowledge on BRRI dhan50 cultivation and 20 indicating very high knowledge on BRRI dhan50 cultivation.

3.4.2.2 Attitudes of Farmers towards BRRI dhan50

The farmers' attitudes towards cultivation of BRRI dhan50 was another independent dimension of dependent variable. Ten relevant statements were carefully constructed to develop attitude scale. Basically, the 'Likert-Scale' of summated rating was used to serve the purpose. There were 5 positive and 5 negative statements in the scale. These statements were randomly arranged. A respondent was asked to indicate her/his degree of agreement about each of the statements along with a five point scale as 'strongly agree', 'agree', 'no opinion', 'disagree' and 'strongly disagree'. Scores were assigned to these five alternate responses as 5,4,3,2 and 1 respectively for each positive statement. In case of negative statements reverse scores were assigned. However, the score of a respondent was obtained by adding her/his scores for all the 10 statements. This score could range from 10-50, where '10' indicates most unfavorable attitude towards BRRI dhan50 and '50' indicates most favorable attitude towards BRRI dhan50.

3.4.2.3 Adoption of BRRI dhan50

The adoption of BRRI dhan50 score was calculated by multiplication of score of area coverage and score of time. This was done in the following way.

Adoption of BRRI dhan50 = Score of Area Coverage × Score of Time

(a) Calculation of Percentage of Area Coverage :

The adoption of BRRI dhan50 was measured by the proportion of land allotted for BRRI dhan50 and total amount of land suitable for BRRI dhan50, which was expressed in percentage popularly known as area coverage percentage. A respondent was asked about her/his both of the total amount of allotted BRRI dhan50 and suitable area for BRRI dhan50. From their response, percentage of area coverage was computed using following formula (Kashem, 2004, In: Bhuiyan, 2014):

$$\% \text{ of area coverage} = \frac{l}{L} \times 100$$

Where, l= Amount of land allotted for BRRI dhan50 cultivation
L= Total suitable land for BRRI dhan50 cultivation

The scale used for computing the range of area coverage score were presented below:

Percentage of Area Coverage (%)	**Assigned Score**
No cultivation of BRRI dhan50	0
1-25	1
26-50	2
51-75	3
76-100	4

(b) Calculation of time score: For determining time score the respondent was asked how many years s/he had been cultivating BRRI dhan50. The time score was assigned as follows:

Length of Time using BRRI dhan50	Assigned Score
No cultivation of BRRI dhan50	0
Up to 1 year	1
>1 to 2 years	2
>2 to 3 years	3
>3 years	4

(c) Calculation of adoption of BRRI dhan50:

The adoption of BRRI dhan50 score was calculated by multiplication of score of area coverage and score of time. This was done in the following way:

Adoption of BRRI dhan50 = Score of Area Coverage × Score of Time

The highest adoption score would be 4×4=16. Therefore, adoption score of BRRI dhan50 could range from 0-16, where 0 indicating no adoption and 16 indicating high adoption.

3.8 Hypothesis of the study

The following null hypothesis were formulated and tested to explore the nature of relationships between the dependent and independent variables.

H_o: There was no relationship between the selected characteristics of the farmers and their effectiveness of result demonstration program in transfer of BRRI dhan50.

3.9 Data Processing

The following steps were followed for data processing:

3.9.1 Data Compilation

After completion of field survey all the interview schedules were complied, tabulated and analyzed according to the objectives of the study. In this process, all the responses in the interview schedule were given numerical coded values. The responses to the question in interview schedule were transferred to a master sheet to facilitate tabulation. Tabulation was done on the basis of categories developed by the investigator herself.

3.9.2 Respondents' Categorization

Respondents were classified into various categories for describing the various independent and dependent variables. In developing categories, the researcher was guided by the nature of data and general consideration prevailing in the social system. The procedures have been discussed while describing the variable in the subsequent sections of the next chapter.

3.10 Data analysis

Data collected from the respondents were complied, coded, tabulated and analyzed in accordance with the objectives of the study. Various statistical measures such as frequency counts, percentage distribution, average and standard deviation were used in describing data. SPSS (Version 16) computer program were used for analyzing the data. The categories and tables were used in describing and processing data for better understanding. For determining effectiveness of result demonstration program in transfer of BRRI dhan50, Pearson's Product Moment Correlation was used. Five percent (0.05) level of probability was used as the basis for rejecting any null hypothesis. In order to find out the relationships between the selected dependent and independent variables correlation co-efficient was done.

CHAPTER IV

RESULTS AND DISCUSSION

CHAPTER IV
RESULTS AND DISCUSSION

In this chapter, the findings of the study and interpretation of results have been presented. The findings of this study are presented in this Chapter in three sections. The first section deals with the characteristics of the farmers, the second section focuses on the effect of result demonstration and the third section deals with the relationships of the selected characteristics of the farmers and the effectiveness of result demonstration.

4.1 Selected characteristics of the farmers

Decisions related to farming activities are being influenced largely by different characteristics of an individual. The characteristics of the farmers were selected to find out their relationships with the effectiveness of result demonstration program for transfer of BRRI dhan50. The salient features of the respondents with their twelve selected characteristics have been presented.

Table.4.1 A summary statement showing categories and salient features of the selected characteristics of the farmers

Characteristics	Measuring Unit	Range		Category	Respondents		Mean	S.D
		Possible	observed		Number (N=90)	Percent		
Age	Year	-	27-58	Young (Up to 35 yrs) Middle (36-50 yrs) Old(above 50yrs)	23 52 15	25.60 57.80 16.7	41.17	8.58
Educational Qualification	Years of schooling	-	0-12	No Education (0) Primary level (1-5) Secondary level (6-10 Above Secondary (>10)	48 22 19 1	53.34 24.44 21.11 1.11	3.04	3.35
Farm size	Hectares	-	0.28-2.60	Landless (Up to 0.020 ha) Marginal(0.021-0.20 ha) Small (0.21-1.0 ha) Medium (1.01 -3.0 ha) Large (Above 3 ha)	0 0 63 27 0	0 0 70 30 0	0.92	0.49
Annual Income	Taka	-	40-220	Low (Up to 60) Medium (61-120) High (Above 120)	32 42 16	35.60 46.70 17.80	86.60	45.96
Farming Experience	Year	-	7-38	Low (Up to 9 yrs) Medium (10-18 yrs) High (Above 18 yrs)	17 32 41	18.90 35.60 45.60	17.67	8.33
Extension Media Contact	Score	0-48	9-39	Low (Up to 10) Medium (11-20) High (Above 20)	27 57 6	30.00 63.30 6.70	13.91	5.35
Training Exposure	Score	-	0-7	No training Short (1-3 days) Medium (4-7 days)	23 58 9	25.60 64.40 10.00	1.72	1.58
Organizational Participation	Score	0-30	2-21	Low (Up to 10) Medium (11-20) High (Above 20)	76 12 2	84.40 13.30 2.20	6.21	4.21
Cosmopoliteness	Score	0-30	0-16	Very low (Up to 6) Low (7-10) Medium(above 10)	40 32 18	44.44 35.55 20.00	8.63	3.83
Innovativeness	Score	0-60	3-41	Low (Up to 15) Medium (16-30) High (Above 30)	41 47 2	45.60 52.20 2.20	15.83	9.42
Personality	Score	1-40	9-35	Weak (Up to15) Medium (16-30) Strong (Above 30)	21 59 10	23.30 65.60 11.10	20.02	5.89
Motivation	Score	1-21	0-23	No Motivation (0) Low(1-7) Medium (8-14) High (Above 14)	12 21 51 6	13.33 23.33 56.67 6.67	9.57	4.92
Knowledge on BRRI dhan50	Score	2-20	2-20	Poor (Up to 8) Medium (9-14) High (Above 14)	26 57 7	28.90 63.30 7.80	9.98	3.92
Attitude toward BRRI dhan50	Score	1-50	10-45	Most Unfavourable (Upto 10) Unfavourable (11-20) Neutral (21-30) Favourable (31-40) Most Favourable (41-50)	0 7 17 41 25	0 7.80 18.90 45.60 27.80	35.52	7.83
Adoption of BRRI dhan50	Score	0-16	0-9	No Adoption (0) Very Low (1-2) Low (3-4) Medium (Above 4)	28 24 18 20	31.10 26.70 20.00 22.20	2.79	2.68

4.1. 1 Age

The age of an individual is one of the most important factors pertaining to her/his personality makeup which play an important role in her/his adoption behavior (Tripp and Woolley, 1989). Age of the farmers ranged from 27 years to 58 years having average of 40.13 with standard deviation 9.34. On the basis of age of the farmers, they were classified into three categories as shown in Table 4.2.

Table 4.2 Distribution of the respondents according to their age

Categories	Frequency	Percent	Mean	Std. Deviation
Young (Up to 35 yrs)	23	25.60	41.17	8.58
Middle (36-50 yrs)	52	57.80		
Old (above 50yrs)	15	16.7		
Total	90	100		

The findings indicated that decision making relating to BRRI dhan50 production technologies in the study area would be considerably influenced by relatively middle aged. It might be due to the middle aged respondents can easily take risk to receive the new technology by their knowledge and experience. It is expected that middle aged farmers are more involved in farming activities and may possess the favorable attitude on the effect of result demonstration on the adoption of improved agricultural practices. Conclusion could be drawn that young and middle aged farmers are receptive to new idea and things. They have a favorable attitude towards trying of new ideas. However, the older farmers of their longer farm experience might have valuable options regard to adoption of BRRI dhan50. The extension agents can make use these views and options in designing their extension activities.

4.1.2 Level of Education

Farmer's education is expected to play an important role in increasing the production through influencing the farmers in the adoption of technology. Level of education of respondent was measured by the level of her/his formal education i.e. highest grade (class) passed by him. The education scores of Boro rice farmers ranged from 0 to 12 with mean and standard deviation 3.044 and 3.335 respectively. On the basis of their educational scores, the Boro rice farmers were classified into four categories, namely, no education (0), primary (1-5), secondary (6-10) and above secondary level (above 11). The distribution of the Boro rice farmers according to their education has been shown in Table 4.3.

Table 4.3 Distribution of the respondents according to their level of education

Categories	Frequency	Percent	Mean	Std. Deviation
No Education (0)	48	53.34	3.04	3.35
Primary level (1-5)	22	24.44		
Secondary level (6-10)	19	21.11		
Above secondary level (>10)	1	1.11		
Total	90	100		

The findings indicate that, the highest proportion (53.34 percent) of the respondents was illiterate at the selected study area. That is rate of no education or illiteracy seemed to be higher than national illiteracy rate. The reasons behind this scenario are lack of awareness and consciousness among farmers about importance of education. Besides social problems, family problems, and motivational problems were also prevailed there.

4.1.3 Farm Size

The land holding plays a major role in determining the income of the framers and adoption of agricultural technology as well. The farm size of the Boro rice farmers varied from 0.28 to 2.60 hectares with the mean and standard deviation 0.916 and 0.493 respectively. The Boro rice farmers were classified into five categories (DAE, 1999), viz. Landless (Up to 0.020 ha), Marginal (0.021-0.20 ha), Small (0.21-1.0 ha), Medium (1.01 -3.0 ha) and Large (Above 3 ha). The distribution of the Boro rice farmers according to their farm size is shown in Table 4.4.

Table 4.4 Distribution of the respondents according to their farm size

Categories	Frequency	Percent	Mean	Std. Deviation
Small (0.21-1.0 ha)	63	70	0.92	0.49
Medium (1.01 -3.0 ha)	27	30		
Total	90	100		

The overwhelming majority (70 percent) of the farmers were the owner of small farm. The reason of this is continuously divided land area due to population pressure from generation to generation. Moreover, Jhenaidah Sadar is densely populated area. Hence, almost all of the farmers possessed small farm size.

4.1.4 Annual Family Income

In this study, annual income of the respondent was considered as the earnings of all the active members of the family in previous year from all available sources. Annual family income score of the Boro rice farmers ranged from 40 to 220 with mean and standard deviation 86.605 and 45.956 respectively. Based on their income scores, the Boro rice farmers were classified into three categories: 'Low income' (Up to 60),' 'Medium income' (61-120) and 'High income' (Above 120). The distribution of the Boro rice farmers according to their annual family income has been shown in Table 4.5.

4.5 Distribution of the respondents according to their annual income

Categories	Frequency	Percent	Mean	Std. Deviation
Low (Up to 60)	32	35.60	86.60	45.96
Medium (61-120)	42	46.70		
High (Above 120)	16	17.80		
Total	90	100		

The findings indicate that most of the farmers in the study area were in low to medium income group. The average income of the farmers at study area is much higher than national average income of the country. This might be due to the fact that, the farmers of the study area were not engaged only in agriculture. They earned from other source, such as service, business etc.

4.1.5 Farming Experience

Farming experience scores of the farmers ranged from 7 to 38 with mean and standard deviation of 17.688 and 8.331 respectively. On the basis of farming experience scores, the respondents were classified into three categories: low farming experience (Up to 9 yrs), medium farming experience (10-18 yrs) and high farming experience (Above 18 yrs). The distribution of the respondents according to their farming experience score is shown in Table 4.6.

Table 4.6 Distribution of the respondents according to their farming experience

Categories	Frequency	Percent	Mean	Std. Deviation
Low (Up to 9 yrs)	17	18.90	17.69	8.33
Medium (10-18 yrs)	32	35.60		
High (Above 18 yrs)	41	45.60		
Total	90	100		

The findings indicate that the highest proportion (45.60 percent) of the respondents had high farming experience. The cause behind is family history, that means there was a family trend if their parents are farmer, they want to be farmers. For this they don't care about their formal education but they are highly experienced in their farming activities.

4.1.6 Extension media contact

Extension media contact scores of the farmers ranged from 9 to 39 with mean and standard deviation of 13.911and 5.354 respectively. On the basis of extension media contact scores, the respondents were classified into three categories: low extension media contact (Up to 10) , medium extension media contact (11-20) , high extension media contact (Above 20). The distribution of the respondents according to their extension media contact score is shown in Table 4.7.

Table 4.7 Distribution of the respondents according to their extension media contact

Categories	Frequency	Percent	Mean	Std. Deviation
Low (Up to 10)	27	30.00	13.91	5.35
Medium (11-20)	57	63.30		
High (Above 20)	6	6.70		
Total	90	100		

The findings indicate that highest proportion (45.60 percent) of the respondents had medium extension media contact. In real situation they can not afford with newspaper, dish channels, internet etc. type of modern communication due to lack of their educational qualification and economic hardship. Moreover, they can not maintain regular contact with the extension personnel for their scarcity of time. They remain busy especially in the cropping season. So their extension media contact became low to medium.

4.1.7 Training Exposure

Training Exposure scores of the farmers ranged from 0 to 7 with mean and standard deviation of 1.722 and 1.579 respectively. On the basis of training exposure scores, the respondents were classified into three categories: no training (0 days), short training (1-3 days), medium training (4-7 days). The distribution of the respondents according to their training exposure score is shown in Table 4.8.

Table 4.8 Distribution of the respondents according to their training exposure

Categories	Frequency	Percent	Mean	Std. Deviation
No training (0days)	23	25.60	1.72	1.58
Short (1-3 days)	58	64.40		
Medium (4-7 days)	9	10.00		
Total	90	100		

The findings indicate that highest proportion (64.00 percent) of the respondents had short training exposure. Due to lack of extension advices and services, potential adopters can not get proper training. So, there is need to train up the farmers about different agricultural activities. Lack of proper training and illiteracy are also responsible for extension media contact.

4.1.8 Organizational Participation

Organizational Participation of farmers was determined on the basis of their membership in different organizations for a particular period of time. The observed organizational participation score of the respondents ranged from 2 to 21 with mean and standard deviation 6.211 and 4.214 respectively. On the basis of organizational participation scores, the respondents were classified into three categories as shown in Table 4.9.

Table 4.9 Distribution of the respondents according to their organizational participation

Categories	Frequency	Percent	Mean	Std. Deviation
Low (Up to 10)	76	84.40	6.21	4.21
Medium (11-20)	12	13.30		
High (Above 20)	2	2.20		
Total	90	100		

From the above table 4.9, it was observed that majority (84.40 percent) of the respondent had low organizational participation. Therefore, it was clearly indicated that maximum respondents were engaged only to their own occupation. For this, their participation in different organization remained low. An individual comes in contact with other people, through participation in organizations. S/he learns new ideas the new ways of doing things. It is therefore; likely that organizational participation may help individuals to assess the work of individual production. Sarkar (1997) and Rahman (2001) found that majority of the respondents (both demonstrated and non-demonstrated) had no or low organizational participation in their studies.

4.1.9 Cosmopoliteness

The extent of orientation of an individual external to her/his own social system is referred to as cosmopoliteness. Cosmopoliteness scores of the farmers ranged from 0 to 16 with mean and standard deviation of 8.633 and 3.834 respectively. On the basis of cosmopoliteness scores, the respondents were classified into three categories: very low cosmopoliteness (Up to 6), low cosmopoliteness (7-10), medium cosmopoliteness (Above 10). The distribution of the respondents according to their cosmopoliteness score is shown in Table 4.10.

Table 4.10 Distribution of the respondents according to their cosmopoliteness

Categories	Frequency	Percent	Mean	Std. Deviation
Very low (Up to 6)	40	44.44	8.63	3.83
Low (7-10)	32	35.55		
Medium(above 10)	18	20.00		
Total	90	100		

The findings indicate that highest proportion (79.99 percent) of the respondents had very low to low cosmopoliteness. None of the farmers were in high cosmopolite category. This was because, they were used to be busy with diversified farming activities and other income generating activities. Due to lack of their time, they could not go outside of their premises.

4.1.10 Innovativeness

Innovativeness scores of respondents were computed on the basis of their extent use of new practices. Innovativeness scores of the farmers ranged from 3 to 41 with mean and standard deviation of 15.833 and 9.425 respectively. On the basis of innovativeness scores, the respondents were classified into three categories: low innovativeness (Up to 15), medium innovativeness (16-30) and high innovativeness (Above30). The distribution of the respondents according to their innovativeness score is shown in Table 4.11.

Table 4.11 Distribution of the respondents according to their innovativeness

Categories	Frequency	Percent	Mean	Std. Deviation
Low (Up to 15)	41	45.60	15.83	9.42
Medium (16-30)	47	52.20		
High (Above 30)	2	2.20		
Total	90	100		

The findings reveal that majority (97.80 percent) of the respondents of the study area were innovative from less to moderate extent. The reason behind this, farmers contained suspicion of new practice in terms of maintaining their profit and asses uncertainty of innovation in term of extent of economic benefit. Whatever this finding would help the extension planners to chalk out future extension program at study area for transfer of new ideas to the potential farmers.

4.1.11 Personality

Personality scores of the farmers ranged from 9 to 35 with mean and standard deviation of 20.022and 5.899 respectively. On the basis of personality scores, the respondents were classified into three categories: Weak personality (Up to15), medium personality (16-30), strong personality (Above 30). The distribution of the respondents according to their personality score is shown in Table 4.12.

Table 4.12 Distribution of the respondents according to their personality

Categories	Frequency	Percent	Mean	Std. Deviation
Weak (Up to15)	21	23.30	20.02	5.89
Medium (16-30)	59	65.60		
Strong (Above 30)	10	11.10		
Total	90	100		

From the above table 4.12, it was observed that majority (65.60 percent) of the respondent had medium personality. The person who contains weak personality was always afraid to adopt new innovation due to fear of crop failure or reduced yield. They want immediate benefit from the adoption of innovation, most of the time which is not possible.

4.1.12 Motivation

Motivation scores of the farmers ranged from 0 to 23 with mean and standard deviation of 9.566 and 4.921 respectively. On the basis of motivation scores, the respondents were classified into four categories: No motivation (0), low motivation (1-7), medium motivation (8-14) and high motivation (Above 14). The distribution of the respondents according to their motivation score is shown in Table 4.13.

Table 4.13 Distribution of the respondents according to their motivation

Categories	Frequency	Percent	Mean	Std. Deviation
No Motivation (0)	12	13.33	9.57	4.92
Low(1-7)	21	23.33		
Medium (8-14)	51	56.67		
High (Above 14)	6	6.67		
Total	90	100		

The findings reveal that majority (56.57 percent) of the respondents of the study area had medium motivation and 13.33 percent respondents had no motivation that is really unfortunate. This is due to mainly lack of innovation information. The innovation information contains generally what is it, what's the benefit, how it works, where its origin, where is available, how to apply etc. Lacking of such information potential adopters can not motivate towards new innovation.

4.2 Determination and Description of Effectiveness of Result Demonstration Program in the transfer of BRRI dhan50

Here, three dimensions were identified for measurement of effectiveness of result demonstration viz. (a) knowledge on BRRI dhan50 cultivation (b) Attitude of farmers towards BRRIdhan50 (c) Adoption of BRRI dhan50.

(a) Knowledge on BRRI dhan50 cultivation

The observed knowledge score of the respondents ranged from 2 to 20 with mean and standard deviation 9.98 and 3.92 respectively. On the basis of knowledge scores, the respondents were classified into three categories as shown in Table 4.7.

Table 4.14 Distribution of the respondents according to their knowledge on BRRI dhan50 cultivation

Categories	Frequency	Percent	Mean	Std. Deviation
Poor (Up to 8)	26	28.90	9.98	3.92
Medium (9-14)	57	63.30		
High (Above 14)	7	7.80		
Total	90	100		

The findings seem that the higher proportion (63.30 percent) of the farmers had fair knowledge on BRRI dhan50 cultivation. Possession of comparatively medium knowledge on BRRI dhan50 cultivation is likely to be contributory to the effectiveness of result demonstration program in the transfer of BRRI dhan50.

(b) Attitude of farmers towards BRRI dhan50

In this study 'Likert Scale' was used to determine the attitude of farmers towards BRRI dhan50. The observed attitude score of the respondents ranged from 10 to 45 with mean and standard deviation 35.52 and 7.83 respectively. On the basis of attitude scores, the respondents were classified into five categories as shown in Table 4.7.

Table 4.15 Distribution of the respondents according to their attitude towards BRRI dhan50

Categories	Frequency	Percent	Mean	Std. Deviation
Strongly disagree	0	0	35.52	7.83
Disagree	7	7.80		
Undecided	17	18.90		
Agree	41	45.60		
Strongly Agree	25	27.80		
Total	90	100		

The findings reveal that highest proportion (45.60 percent) of the respondent growers could possess 'Agree' attitude that means favourable attitude towards BRRIdahn50 cultivation. This might be for their easy access to quality seed, suitable soil and farming environment, higher yield and profit of this variety. Besides observing other farmers successful farming is also responsible to build up favourable attitude towards BRRI dhan50 cultivation. Therefore, it can be assumed that, majority of the farmers of the study are showed interest to participate in BRRI dhan50 cultivation.

(c) Adoption of BRRI dhan50

The adoption of BRRI dhan50 score was calculated by multiplication of score of area coverage and score of time. The observed adoption score of the respondents ranged from 0 to 9 with mean and standard deviation 2.79 and 2.68 respectively. On the basis of adoption scores, the respondents were classified into four categories as shown in Table 4.16.

Table 4.16 Distribution of the respondents according to their adoption score

Categories	Frequency	Percent	Mean	Std. Deviation
No adoption	28	31.10	2.79	2.68
Very low	24	26.70		
Low	18	20.00		
Medium	20	22.20		
Total	90	100		

Data presented in Table 4.16 indicate that only 22.20 percent of the respondents had medium adoption of BRRI dhan50. A mentionable percent (31.10 percent) had no adoption towards BRRI dhan50 cultivation. Lack of media facilities is mainly responsible for this scenario. After development of technology, it requires commercialization. So that ultimate users can avail it through marketing. For this reason, many potential adopters do not adopt innovation. There is also a major reason behind this scenario. That is lack of technical assistance from extension service. Extension agents of farmers always view that they do not get institutional support from change agency in adoption of innovation.

(d) Effectiveness of result demonstration

The effectiveness of result demonstration program in the transfer of BRRI dhan50 was measured by combining and averaging knowledge, attitude and adoption scores of the farmers and expressed as percentage. Effectiveness of result demonstration scores of the farmers ranged from 11.66 to 74.16 with mean and standard deviation of 44.294 and 16.101 respectively. On the basis of effectiveness of result demonstration scores, the respondents were classified into three categories : low effectiveness (Up to 33.33),

medium effectiveness (33.34-66.66), high effectiveness (Above 66.66).The distribution of the respondents according to their effectiveness score is shown in Table 4.14

Table: 4.17 Distribution of the respondents according to the effectiveness of result demonstration program among farmers in the transfer of "BRRI dhan50

Characteristics	Measuring Unit	Range		Category	Respondents		Mean	S.D.
		Possible	observed		Number (N=90)	Percent (%)		
Effectiveness of result demonstration program in the transfer of BRRI dhan50	Score	0-100	11.66-74.16	Low Effectiveness (Up to 33.33)	26	28.90	44.29	16.10
				Medium Effectiveness (33.34-66.66)	58	64.40		
				High Effectiveness (Above 66.66)	6	6.70		

The findings indicate that result demonstration program had medium effectiveness (64.40 percent) among farmers in the transfer of BRRI dhan50. During measuring of effectiveness of result demonstration, it was noticed that though knowledge on BRRI dhan50 and attitude towards BRRI dhan50 are quite enthusiastic but the adoption rate is not comprehensive and satisfactory, so need more visionary and stimulating extension work to disseminate and popularize of BRRI dhan50 among farmers at the selected study areas.

4.3 Relationships between the selected characteristics of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

This section deals with the relationships of the 12 selected characteristics of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. The selected characteristics constituted the independent variables. The dependent variable was the effectiveness of result demonstration program in the transfer of BRRI dhan50. The purpose of this section was examining the relationships of each of the independent variable with dependable variable.

Pearson's Product Moment Correlation Co-efficient (r) has been used to test the hypothesis concerning the relationships between two variables. Five percent (0.05) and

one percent (0.01) level of significance were used as the basis for acceptance or rejection of a hypothesis. The table value of 'r' was calculated at (90-2) =88 degrees of freedom.

Co-efficient of correlation 'r' between the selected characteristics of the Boro rice farmers and their perceived effectiveness of result demonstration program for transfer of BRRI dhan50 have been presented in Table 4.16. The correlation matrix has been presented in Appendix III.

Table 4.18 Co-efficient of correlation of the selected characteristics of the farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

Dependent Variable	Independent Variables	Computed Value of 'r'	Table value of 'r'with 88 d.f.	
			0.05 level	0.01 level
Effectiveness of result demonstration program in the transfer of BRRI dhan50	Age	0.027^{NS}	0.2072	0.2702
	Level of Education	0.106 ^{NS}		
	Farm size	0.687**		
	Annual family income	0.601**		
	Farming Experience	0.096 ^{NS}		
	Extension Media Contact	0.132 ^{NS}		
	Training Exposure	0.617**		
	Organizational Participation	0.088 ^{NS}		
	Cosmopoliteness	0.113 ^{NS}		
	Innovativeness	0.432**		
	Personality	0.453**		
	Motivation	0.765**		

Here, NS = Non Significant

** = Significant at 1 percent (0.01) level of probability

4.3.1 Relationships between age of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between age of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between age of the Boro rice farmers and effectiveness of result demonstration program in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.027 as shown in Table 4.16. The following observation were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.027 was smaller than then tabulated value (r=0.2072) 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 variables were not significant at 0.05 level of probability.

The findings imply that the age of the Boro rice farmers were not an important for effectiveness of result demonstration program in the transfer of BRRI dhan50. This means that both of the variables were independent to each other.

4.3.2 Relationships between education of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between education of the Boro rice farmers and effectiveness of result demonstration program among farmer in the transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between education of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.106 as shown in Table 4.16. The following observations were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.106 was smaller than then tabulated value (r=0.2072) 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 variables were not significant at 0.05 level of probability.

It might be concluded that the education of the Boro rice farmers were not an important for effectiveness of result demonstration program in the transfer of BRRI dhan50. This means that both the variables were independent to each other.

4.3.3 Relationships between farm size of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between farm size of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between farm size of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.687 as shown in Table 4.16. The following observations were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.687 was greater than then tabulated value (r=0.2702) with 88 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected
- The co-efficient of correlation between the concerned variables were significant at 0.01 level of probability.

The findings reflect that the farm size of Boro rice farmers had a positive significant relationship to the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. Hence, large farmers get more scope than the small farmers as they can invest money for their effectiveness of result demonstration program in the transfer of BRRI dhan50.

4.3.4 Relationships between annual income of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between annual income of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between annual income of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.601 as shown in Table 4.16. The following observations were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.601 was greater than then tabulated value (r=0.2702) with 88 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables were significant at 0.01 level of probability.

The findings demonstrate that the annual income of Boro rice farmers had a positive significant relationship to the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. It requires huge amount of money as BRRI dhan50 rice farming is an expensive task. Result demonstration program is more effective for comparatively rich farmers, especially for BRRI dhan50 cultivation.

4.3.5 Relationships between farming experience of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between farming experience of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between farming experience of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.096 as shown in Table 4.16. The following observations were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.096 was smaller than then tabulated value (r=0.2072) 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 variables were not significant at 0.05 level of probability.

The findings reveals that the farming experience of the Boro rice farmers were not an important for the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. This means that both of the variables were independent to each other.

4.3.6 Relationships between extension media contact of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between extension media contact of the Boro rice farmers and their perceived effectiveness of result demonstration program for transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between extension media contact of the Boro rice farmers and their perceived effectiveness of result demonstration program in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.132 as shown in Table 4.16. The following observations were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.132 was smaller than then tabulated value(r=0.2072) 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 variables were not significant at 0.05 level of probability.

The findings seems that the extension media contact of the Boro rice farmers were not an important for the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. This means that both the variables were independent to each other.

4.3.7 Relationships between training exposure of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between training exposure of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between training exposure of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.617 as shown in Table 4.16. The following observations were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.617 was greater than then tabulated value (r=0.2702) with 88 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables were significant at 0.01 level of probability.

The findings demonstrate that the training exposure of Boro rice farmers had a positive significant relationship to their effectiveness of result demonstration program in the transfer of BRRI dhan50. Training exposure plays a vital role in effectiveness of result demonstration program in the transfer of BRRI dhan50.

4.3.8 Relationships between organizational participation of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between organizational participation of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between organizational participation of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.088 as shown in Table 4.16. The following observations were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.088 was smaller than then tabulated value (r=0.2072) 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 variables were not significant at 0.05 level of probability.

The findings imply that the organizational participation of the Boro rice farmers were not an important for the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. This means that both the variables were independent to each other.

4.3.9 Relationships between cosmopoliteness of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between cosmopoliteness of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between cosmopoliteness of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.113 as shown in Table 4.16. The following observations were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.113 was smaller than then tabulated value (r=0.2072) 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 variables were not significant at 0.05 level of probability.

The findings seem that cosmopoliteness of the Boro rice farmers were not an important for effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. This means that both the variables were independent to each other.

4.3.10 Relationships between innovativeness of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between innovativeness of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between innovativeness of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.432 as shown in Table 4.16. The following observations were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.432 was greater than then tabulated value (r=0.2702) with 88 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables were significant at 0.01 level of probability.

The findings demonstrate that the innovativeness of Boro rice farmers had a positive significant relationship to the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. Farmer's higher innovativeness played role for higher effectiveness of result demonstration program in the transfer of BRRI dhan50.

4.3.11 Relationships between personality of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between personality of the Boro rice farmers and their effectiveness of result demonstration program for transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between personality of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.453 as shown in Table 4.16. The following observations were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.453 was greater than then tabulated value (r=0.2702) with 88 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables were significant at 0.01 level of probability.

The findings demonstrate that the personality of Boro rice farmers had positive significant relationships to the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. Farmer's personality plays a vital role in effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50.

4.3.12 Relationships between motivation of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50

The relationships between motivation of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50 were examined by testing the following null hypothesis.

"There is no relationship between motivation of the Boro rice farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50".

The computed value of co-efficient of correlation between the concerned variables was found to be 0.765 as shown in Table 4.16. The following observations were made regarding the relationships between these variables on the basis of co-efficient of correlation:

- The relationships showed a positive trend.
- The computed value of r=0.765was greater than then tabulated value (r=0.2702) with 88 degrees of freedom at 0.01 level of probability.
- The concerned null hypothesis was rejected.
- The co-efficient of correlation between the concerned variables were significant at 0.01 level of probability.

The findings demonstrate that the motivation of Boro rice farmers had a positive significant relationship to the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. Motivation plays a vital role in effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50.

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

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

5.1 Summary of the findings

5.1.1 Introduction

Result demonstration is one of the most effective ways that leads many people to try new innovations. Other people are more readily convinced by the experience of successful farmers in their community and by results of local demonstration. Through result demonstration method, farmers get the opportunity to observe the results of innovations in their own situation. They also get opportunity to observe the different stages of development of innovation and learn from their own experiences and also compare the output between existing and modern farming practices. After completing the research, effectiveness of result demonstration program for transfer of BRRI dhan50 will be determined. It will help the future researcher, academicians and policy maker to conduct more research and reorganize existing result demonstration program to make more effective program. The particular piece of research is, therefore, aimed at exploring a systemic analysis of the effectiveness of result demonstration program in the transfer of BRRI dhan50.

5.1.2 Objectives of Research Work: To conduct the study in proper direction the following specific objectives had been set forth:

3 To identify and describe effectiveness of result demonstration program in the transfer of BRRI dhan50.

4 To determine and describe the selected characteristics of the farmers. The characteristics were i) Age ii) Level of Education iii) Farm Size iv) Annual income v) Farming Experience vi) Extension Media Contact vii) Training Exposure viii) Organizational Participation ix) Cosmopoliteness x) Innovativeness xi) Personality and xii) Motivation.

5 To explore the relationships between the effectiveness of result demonstration program in the transfer of BRRI dhan50 and selected characteristics of the farmers.

5.1.3 METHODOLOGY

Methodology was very important in any scientific research. It deserved a very careful consideration for conduction of research. Methods and procedures followed in this study have been described in below:

5.1.4 Locale of the study: Three villages namely Chando, Narikelbaria and Vupotipur at Jhanaidah sadar Upazilla under Jhenaidah District were purposively selected.

5.1.5 Population and Sampling Procedure: All Boro growers of the selected three villages of Sadar upazilla were constituted the population of the study. An appropriate sample was determined from the population by using standard sampling technique.

5.1.6 Data Collection Instrument and Data Analysis: As a research instrument a set of interview schedule was prepared keeping in view the objective of the study. Data was collected through face to face interview. SPSS computer program was used for analyzing the data in order to explore the relationshipss between the effectiveness of result demonstration program among farmers and their selected characteristics. Pearson's Product Moment Correlation(r) was used. Five percent (0.05) level of significance was sued as basis for rejecting any null hypothesis.

5.1.7 Major findings

According to the objectives of the study, the followings findings were summarized as follows**:**

5.1.7.1 Selected characteristics of the Boro rice farmers

Age

Age of the farmers ranged from 27 years to 58 years having average of 40.13 with a standard deviation 9.34. On the basis of age of the farmers, they were classified into three categories as young age (Up to 35 yrs), middle age (36-50 yrs) and old age (above 50yrs). Data indicates that the highest population (57.80 percent) of the farmers was in middle aged category compared to 25.60 percent being young and 16.7 percent was in old aged category. The findings indicated that decision making relating to BRRI dhan50

production technologies in the study area would be considerably influenced by relatively middle aged farmers.

Level of Education

The education scores of the Boro farmers ranged from 0 to 12 with mean and standard deviation 3.044 and 3.335 respectively. On the basis of their educational scores , the Boro rice farmers were classified into four categories, namely No Education (0), Primary (1-5), secondary (6-10) above secondary education (above 11). Data indicates that a majority (53.30 percent) of the respondents fell under the category of 'no education' compared to 24.40 percent had 'primary education', 21.10 percent had 'secondary education' and 1.10 percent had above secondary education.

Farm Size:

The farm size of the Boro rice farmers varied from 0.28 to 2.60 hectares with the mean and standard deviation 0.916 and .493 respectively. Based on DAE given farmers categories (1999), the Boro rice farmers were classified into the following five categories: landless (Up to 0.020 ha), marginal (0.021-0.20 ha), small (0.21-1.0 ha), medium (1.01 -3.0 ha) and large (Above 3 ha). Data reveals that the highest proportion (70 percent) of respondent's possessed small farm while 30 percent possessed medium farm.

Annual Family Income

Annual family income score of the Boro rice farmer's ranges from 40 to 220 with mean and standard deviation 86.605 and 45.956 respectively. Based on their income scores, the Boro rice farmers were classified into three categories: 'low income '(Up to 60),' medium income '(61-120) and 'high income'(Above 120). Data indicates that the highest proportion (46.70 percent) of the respondents had medium income while 35.60 percent had low income and 17.80 percent had high income.

Farming Experience:

Farming experience scores of the farmers ranged from 7 to 38 with mean and standard deviation of 17.688 and 8.331 respectively. On the basis of farming experience scores, the respondents were classified into three categories: low farming experience (Up to 9 yrs), medium farming experience (10-18 yrs), and high farming experience (Above 18

yrs). Data presented indicates that the highest proportion of the respondents (45.60 percent) had high farming experience compared to 35.60 percent had medium farming experience and 18.90 percent had low farming experience.

Extension media contact:

Extension media contact scores of the farmers ranged from 9 to 39 with mean and standard deviation of 13.911 and 5.354 respectively. On the basis of extension media contact scores, the respondents were classified into three categories: low extension media contact (Up to 10) , medium extension media contact (11-20) , high extension media contact (Above 20). Data indicates that the highest proportion of the respondents (63.30 percent) had medium extension media contact compared to 30.00 percent had low extension media contact and 6.70 percent had high extension media contact.

Training Exposure:

Training exposure scores of the farmers ranged from 0 to 7 with mean and standard deviation of 1.722 and 1.579 respectively. On the basis of training exposure scores, the respondents were classified into three categories: no training (0 days), short training (1-3 days), medium training (4-7 days). Data indicates that the highest proportion of the respondents (64.40 percent) had short training exposure compared to 25.60 percent had no training exposure and 10.00 percent had medium training exposure.

Organizational Participation

The observed organizational participation score of the respondents ranged from 2 to 21 with mean and standard deviation 6.211 and 4.214 respectively. On the basis of organizational participation scores, the respondents were classified into three categories: low organizational participation (up to 10), medium organizational participation (11-20), high organizational participation (above 20). Data indicates that the highest proportion of the respondents (84.40 percent) had low participation in organization compared to 13.30 percent had medium participation and only 2 .20 percent had high participation.

Cosmopoliteness

Cosmopoliteness scores of the farmers ranged from 0 to 16 with mean and standard deviation of 8.633 and 3.834 respectively. On the basis of cosmopoliteness scores, the respondents were classified into three categories: very low cosmopoliteness (Up to 6) ,

low cosmopoliteness (7-10) , medium cosmopoliteness (Above 10). Data presented in Table 4.5 indicate that the highest proportion of the respondents (44.44 percent) had very low cosmopoliteness compared to 32.00 percent low cosmopoliteness and 20.00 percent had medium cosmopoliteness

Innovativeness:

Innovativeness scores of the farmers ranged from 3 to 41 with mean and standard deviation of 15.833 and 9.425 respectively. On the basis of innovativeness scores, the respondents were classified into three categories: low innovativeness (Up to 15), medium innovativeness (16-30), high innovativeness (Above 30). Data indicates that the highest proportion of the respondents (52.2 percent) had medium innovativeness compared to 45.60 percent had low innovativeness and 2.20 percent had high innovativeness.

Personality:

Personality scores of the farmers ranged from 9 to 35 with mean and standard deviation of 20.022 and 5.899 respectively. On the basis of personality scores, the respondents were classified into three categories: weak personality (Up to15), medium personality (16-30), strong personality (Above 30). Data presented indicates that the highest proportion of the respondents (65.60 percent) had medium personality compared to 23.30 percent had weak personality and 11.10 percent had strong personality.

Motivation:

Motivation scores of the farmers ranged from 0 to 23 with mean and standard deviation of 9.566 and 4.921 respectively. On the basis of motivation scores, the respondents were classified into four categories: no motivation (0), low motivation (1-7), medium motivation (8-14) and high motivation (Above 14). Data indicates that the highest proportion of the respondents (56.70 percent) had medium motivation compared to 23.30 percent had low motivation and 12.12 percent had no motivation. Only 10.00 percent had high motivation towards result demonstration program for transfer of BRRI dhan50.

5.1.8 Determination and description effectiveness of result demonstration program in the transfer of BRRI dhan50

Effectiveness of result demonstration scores of the farmers ranged from 11.66 to 74.16 with mean and standard deviation of 44.294 and 16.101 respectively. On the basis of effectiveness of result demonstration scores, the respondents were classified into three categories : low effective (Up to 33.33), medium effective (33.34-66.66), high effective (Above 66.66). Data indicates that the highest proportion of the respondents (64.40 percent) had medium effective compared to 28.90 percent low effective and 6.70 percent had high effective of result demonstration.

5.1.9 Relationships between motivation of the Boro rice farmers and effectiveness of result demonstration program in the transfer of BRRI dhan50

The effectiveness of result demonstration program in the transfer of BRRI dhan50 was the dependent variables of the study. Twelve selected characteristics of the Boro rice growers were the independent variables of the study. The co-efficient of correlation analysis showed that farm size, annual family income, training exposure, innovativeness, personality, motivation had significant positive relationships with their effectiveness of result demonstration program in transfer of BRRI dhan50.The other characteristics such as age, educational qualification, farming experience, extension media contact, organizational participation, cosmopoliteness of the farmers showed no significant relationships with effectiveness of result demonstration program in transfer of BRRI dhan50 .

5.2 Conclusions

On the basis of the findings and logical interpretations of the study the following conclusions could be drawn:

1. About two thirds (64.40%) of the farmers perceived that result demonstration program had medium effectiveness (64.40 percent) among farmers compared to 28.90 percent being low effectiveness and 6.70 percent had high effectiveness in the transfer of "BRRI dhan50. It also played an important role in related aspects like transferring information for improved knowledge, developing skill, changing outlook.
2. Age and education of the respondents had no significant relationships with the effectiveness of result demonstration program in the transfer of BRRI dhan50. Therefore, it may be concluded that age and education are not very important factor for effectiveness of result demonstration in the transfer of "BRRI dhan50.
3. The family size and annual family income of the respondents had positive significant relationships with the effectiveness of result demonstration program in the transfer of BRRI dhan50. This seems that larger the farm size, higher the income of the respondent's that leads higher effectiveness of result demonstration program in the transfer of BRRI dhan50. Higher annual income was possessed by farmers to maintain higher economic and social status in the society. They had risk bearing ability and could undertake a venture some program, if they were motivated. It may, therefore, be concluded that farmers having more income will be in a better position to conduct a result demonstration.
4. Farming experience of the respondents had no significant relationships with effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. Therefore, it may be concluded that farming experience can not affect effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50.
5. Extension media contact of the respondents had no significant relationships with effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. Extension media contact helps the farmers to become more

experienced helps to develop the idea and become effective motivator. In this study, extension media contact did not play any role for effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50.

6. Training exposure had positive significant relationships with the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. Training plays a vital role for the development of knowledge, skill and attitude of a person which leads her/him to be more capable and competent.
7. Organizational participation and cosmopoliteness of the respondents had no significant relationships with the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. It is concluded that possession of organizational participation and cosmopoliteness had been not helpful to enhance effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50.
8. Innovativeness had positive significant relationships with the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. So, it is concluded that an innovative farmer is more receptive to new innovations and technologies.
9. Personality had positive significant relationships with the effectiveness of result demonstration program in the transfer of BRRI dhan50. So, it is concluded that the person who bears strong personality is easily taking her/his decision to adopt technologies.
10. Motivation had positive significant relationships with the effectiveness of result demonstration program for transfer of BRRI dhan50. . So, it is concluded that motivated persons perform their works in a prescribed process to satisfy her/his needs.

5.3 Recommendation

Recommendations have been divided into two sub-sections, viz. recommendation for policy implication and recommendation for further study.

5.3.1 Recommendations of policy implication

1. In view of the absence of any relationships between age and education of the respondents and the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50, it is recommended that the extension workers should do work with the respondents of all age groups as well as all kinds of educated groups to adopt BRRI dhan50. There is an urgent need for an effective program of adult education to improve the level of literacy. This is required for developing necessary knowledge, skill and favorable attitude of the farmers in respect of improved practices.
2. Farm size and annual family income of the Boro rice farmers had significant positive relationships the effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. It implies that extension services have to increase farm size by organizing co-operative farming practices and have to increase annual income by farm management advice to the farmers. It is recommended that DAE should start cooperative farming practice by organizing small and marginal farmers.
3. It is recommended that massive and relevant training program should be conducted for the Boro rice farmers to upgrade their awareness and understandings of the use of different production technologies. The various GOs and NGOs should be involved in the conduction of training program.
4. It is also recommended that extension personnel should be up scaled extension media contact by proper motivation through radio, television, different demonstration plots, communication with SAAO, AEO, UAO, etc. Extension personnel should also increase organizational participation and community facilities that will be increase farmers receptive capacity to adopt BRRI dhan50.
5. In the context of available results on the effectiveness of result demonstration, it is recommended that special care should be taken to make successful demonstration. It may be kept in view that failures in one result demonstration may lead to loss of faith in some subsequent innovations which may take a long time to overcome because of psychological resistance to demonstrations.

5.3.2 Recommendations for Further Study

A small piece of study has been conducted which cannot provide all the information for the popper understanding of the farmers towards BRRI dhan50. Future studies should be undertaken covering more dimensions of on effectiveness of result demonstration program in the transfer of BRRI dhan50. Therefore the following recommendations were made for further study:

1. The present study was conducted in Jhenaidah upazila under Jhenaidah district. It is recommended that similar studies should be conducted in other areas of Bangladesh.
2. This study investigated the relationships of twelve characteristics of the farmers with their perception on effectiveness of result demonstration program for transfer of BRRI dhan50. Therefore, it is recommended that further study may be conducted with different independent and dependent variables.
3. A positive trend of relationships had observed between extension media contact of the farmers and effectiveness of result demonstration program among farmers in the transfer of BRRI dhan50. Although the relationships was not statistically significant. Hence, further studies are necessary to find out the relationships between the concerned variables.
4. Research should also be undertaken to identify the factors causing hindrance to the farmers on effectiveness of result demonstration program in the transfer of BRRI dhan50.
5. More research should be conducted to investigate the comparative effect of result demonstration with other extension methods and also for identifying factors influencing the effect of result demonstration on the basis of the characteristics pattern of Bangladesh and its farming population.
6. Similar study may also be replicated in future for studying any change of pattern regarding effect of result demonstration among the same population of the present study area.

CHAPTER VI

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APPENDICES

APPENDIX I

(*English Version of the Interview Schedule)*

Dept. of Agricultural Extension & Information System
Sher-e-Bangla Agricultural University
Dhaka-1207

AN INTERVIEW SCHEDULE
On
"Effectiveness of Result Demonstration Program in the Transfer of BRRI dhan50"

Date:…… **Respondents No:……**

Name of the respondent :
Village: Union:
Upazila: District:

Please answer the following questions:

1. Age
How old are you ? ……years.

2. Level of Education
Please mention your level of education :

a) I cannot read and write (……)
b) I can sign only (……)
c) I studied up to class (……)

3. Farm Size

Please mention the area of your land according to use:

Sl. No.	Type of land Use	Area of land	
		Local Unit (Decimal/Bigha)	Hectare
a.	Homestead area including garden, pond and fallow land		
b.	Own land under own cultivation		
c.	Land taken from others as share cropping		
d.	Land given to others as share cropping		
e.	Land taken from others on lease		
	Total Farm Size =a+b+1/2(c+d)+e		

4. Annual Family Income

Please mention your last year annual income from the following sources:

(A) Income from agricultural crops

Sl. No.	Name of crops	Total income (Tk.)
1.	Rice	
2.	Wheat	
3.	Jute	
4.	Mustard	
5.	Pulse	
6.	Vegetables	
7.	Fruits	
8.	Flowers	
9.	Others (if any)	
	Sub-total	

(B) Income from domestic animals and fisheries

Sl. No.	Source of income	Total income (Tk.)
1.	Livestock	
2.	Poultry	
3.	Fisheries	
	Sub-total	

(C) Income from non-agricultural source

SL NO	Source of income	Total income (Tk.)
1.	Service	
2.	Business	
3.	Day Labor	
4.	Other Family Members	
	Sub-total	

Total annual family income = (A+B+C) =……Taka

5. Farming Experience

How many years have you been cultivating rice? (…….) yrs

6. Extension Media Contact

Please mention the frequency of communication of the following persons and agriculture related media.

Sl No	Communication media	Extent of Communication			
		Regularly (3)	**Occasionally (2)**	**Rarely (1)**	**Not at all (0)**
	A. Personal Contact				
1	SAAOs	>4 times/ month ( )	3-4 times/ month ( )	1-2 times/ month ( )	
2.	Agril. Extension Officer	>4 times/ year( )	3-4times/ year ( )	1-2 times/ year ( )	
3.	Local leader	>4 times/ month ( )	3-4times/ month ( )	1-2 times/ month ( )	
4.	Neighbors	>10 times/ month ( )	6-10 times/ month ( )	1-5 times/ month ( )	
5.	NGO workers	>4 times/ month ( )	3-4times/ month ( )	1-2 times/ month ( )	
6.	Seed /fertilizers dealer	>4 times/ month ( )	3-4 times/ month ( )	1-2 times/ month ( )	
	B. Group Contact				
1	Group discussion	>4 times/ year( )	3-4 times/ year ( )	1-2 times/ year ( )	
2.	Result demonstration	>6 times/ life ( )	4-6times/ life ( )	1-3 times/ life ( )	
3.	Field day	>2 times/ year ( )	2 times/ year ( )	1 time/ year ( )	
4.	Farmers field school	>4 times/ year( )	3-4 times/ year ( )	1-2 times/ year ( )	
	C. Mass Media Contact				
1	Daily Newspaper	>4 times/ week ( )	3-4 times/ week ( )	1-2 times/ week ( )	
2.	Listening farm Radio talk	>4times/ week ( )	3-4 times/ week ( )	1-2 time/ week ( )	
3.	Watching Agricultural Program in Television	>4times/ month ( )	3-4 times/ month ( )	1-2 time/ month ( )	
4.	Poster	>4 times/ year ( )	3-4 times/ year ( )	1-2 times/ year ( )	
5.	Magazine(Krishi katha and Krishi Batra)	>5 times/ year ( )	4-5 times/ year ( )	1-3time/ year ( )	
6.	Krshimela	5-6 times/ year ( )	3-4 times/ year ( )	1-2 times/ year ( )	

7. Training Exposure

A. Have you received any agriculture related training?

Yes ☐ No ☐

B. Please provide information relating to your participation in training program:

Sl. No.	Name of the Training Course/ Topic of the Subject Matter	Concerned Organization	Duration (Days)
1.			
2.			
3.			
4.			
5.			

8. Organizational Participation

Please indicate the nature of participation in the following organizations:

Sl No.	Name of Organizations	No Participation (0)	Nature of Involvement		
			As ordinary member (1)	As Executive Member (2)	President/ Secretary (3)
1.	NGO co-operative society				
2.	krishak Samabay Somity				
3.	Village Development Committee				
4.	Irrigation Committee				
5.	Mosque/ Madrasa committee				
6.	Union Parishad committee				
7.	Youth Club				
8	Bazar Committee				
9	School committee				
10	Others (if any)				

9. Cosmopoliteness

Please mention the frequency of communication of the following places. (Please tick mark in right place)

Sl No.	Visiting Place	Frequency of visit			
		Regularly (3)	**Occasionally (2)**	**Rarely (1)**	**Not at all (0)**
1.	Other farmer's successful farm in own village	>5 times/ month( )	4-5times/ month ( )	1-3 times/ month ( )	
2.	Result demonstration & field days of neighboring villages	>3 times/ year ( )	2-3times/ year ( )	1 time/ year ( )	
3.	Motivation tour to neighboring unions	>5 times/ year ( )	4-5times/ year ( )	1-3 times/ year ( )	
4.	Farmers field School	>4 times/ month ( )	3-4times/ month ( )	1-2 times/ month ( )	
5.	Local leader house	> 4 times/ month( )	3-4times/ month ( )	1-2 times/ month ( )	
6.	Upazila Agricultural office and BRDB office	>4times/ year ( )	3-4 times/ year ( )	1-2times/ year ( )	
7.	Method demonstration's place conducted by SAAO in own upazila	>4 times/ year ( )	3-4 times/ year ( )	1-2 times/ year ( )	
8.	Agricultural fair of neighboring upazila	>5-6 times/ year ( )	3-4 times/ year ( )	1-2 times/ year ( )	
9.	Office of the Deputy Director of DAE	>3times/ year ( )	2-3 times/ year ( )	1-2 times/ year ( )	
10.	Regional agril. research institute	1 time/ year ( )	1 time/ 2years ( )	1 time/ ≥3years ( )	

10. Innovativeness

Please give your information about the use of following production technologies:

Sl. No.	Name of Technologies	Adoption Period				
		Within 1 yr after hearing (4)	Within 2 yrs after hearing (3)	Within 3 yrs after hearing (2)	Within More than 3 yrs after hearing (1)	No Adoption (0)
1.	Use of hybid rice					
2.	Use of Urea Super Granule(USG)					
3.	Use of Leaf Color Chart (LCC)					
4.	Use of rotavator					
5.	Use of mixed fertilizers					
6.	Application of AWD (Alternate Wet & Dry Method) irrigation method					
7.	Use of light trap					
8.	Use of drum seeder					
9.	Recommended crop rotation					
10.	Water management by planting at appropriate distance					
11.	Poultry vaccination					
12.	Use of Perching in rice field					
13.	Use of pedal thresher					
14.	Use of Sweeping net					
15.	Use of Beneficial insects (lady bird beetle, Wasp, Dragon fly etc)					

11. Personality

Please mention your extent of personality against the following personality performance:

Sl. No.	Items	Extent of Personality			
		Very good (4)	Good (3)	Medium (2)	Poor (1)
1.	Problem Solving efficiency				
2.	Communication Skill				
3.	Ability to perform assigned duties according to extension approach				
4.	Leadership behavior				
5.	Mentality to accept new challenge				
6.	Social interaction				
7.	Understanding capacity				
8.	Ability to work hard				
9.	Knowledge seeking tendency				
10.	Group participation				

12. Motivation

Please express the degree of motivation against the following motivation items:

Sl. No.	Motivation item	Degree of Motivation			
		High (4)	Medium (3)	Low (2)	Very Low (1)
1.	Grew more interest towards BRRI dhan50				
2.	Allotted land for BRRI dhan50 cultivation				
3.	Seeking more information to confirm adoption decision				
4.	Observing others farmers successful farming				
5.	Participation in field day/ crop cutting day				
6.	Getting access to test the suitability of variety in specific area				

13. Knowledge on BRRI dhan50

Please answer the following questions:

Sl. No.	Questions	Assigned Sore	Obtained Score
1.	Mention the name of one aromatic rice varieties released from BRRI.	2	
2.	Which aromatic rice variety's yield is higher in Bangladesh?	2	
3.	What is the growing season of BRRI dhan50?	2	
4.	Mention grain characteristics of BRRI dahn50.	2	
5	Mention the soil type for cultivation of BRRI dhan50.	2	
6.	Mention milling procedure of BRRI dhan50.	2	
7.	How looks field after maturing BRRI dhan50?	2	
8.	After 100% flowering of BRRI dhan50, how many days required for maturing?	2	
9.	Mention name of insects and diseases which attack BRRI dhan50.	2	
10.	What are difference between BRRI dhan28 and BRRI dhan50?	2	

14. Attitudes of Farmers towards BRRI dhan50

Please express the degree of agreement as a result of result demonstration:

SL No.	Statements	Extent of Agreement				
		Strongly agree	Agree	No Opinion	Disagree	Strongly disagree
		5(+) 1(-)	4(+) 2(-)	3(+) 3(-)	2(+) 4(-)	1(+) 5(-)
(+) 1.	BRRI dhan50 is relatively superior quality variety in term of taste & smell.					
(-) 2.	The seed of BRRI dhan50 is not sufficient.					
(+) 3.	Lodging does not occur in case of BRRI dhan50.					
(-) 4.	BRRI dhan50 is not suitable for low land and medium low land.					
(+) 5.	Yield performance is relatively double than other aromatic rice.					
(-) 6.	Life span of BRRI dhan50 is lengthier than BRRI dhan28.					
(+) 7.	Aromatic flavor of BRRI dhan50 attracts people easily in the rice field.					
(-) 8.	BRRI dhan50 needs more care during milling.					
(+) 9.	Cultivation of BRRI dhan50 is profitable than other rice varieties.					
(-) 10.	The seed's price of BRRI dhan50 is high					

14. Adoption of BRRI dhan50

Please provide your information about BRRI dhan50.

(a) For calculating Percentage of Area Coverage

No cultivable area for BRRI dhan50	Total amount of suitable area for BRRI dhan50 (A)	Total amount of allotted area for BRRI dhan50 (B)	$\frac{B}{A}$	% of area coverage = B/ A × 100

The range of area coverage percentages are given score as follows:

Percentage of Area Coverage	**Assigned Score**	**Obtained Score**
No cultivation of BRRI dhan50	0	
1-25	1	
26-50	2	
51-75	3	
76-100	4	

(b) For calculating time score

Please mention of length of time of using BRRI dhan50:

Length of Time using BRRI dhan50	**Assigned Score**	**Obtained Score**
No cultivation of BRRI dhan50	0	
Up to 1 year	1	
>1 to 2 years	2	
>2 to 3 years	3	
>3 years	4	

Adoption of BRRI dhan50 = Score of Area Coverage × Score of Time

Thank you for your kind co-operation in data collection.

Signature of the interviewer

Date:

APPENDIX II

কৃষি সম্প্রসারণ ও ইনফরমেশন সিস্টেম বিভাগ
শেরে বাংলা কৃষি বিশ্ববিদ্যালয়
ঢাকা-১২০৭
গবেষনা সাক্ষাৎকার অনুসূচী

ব্রি ধান ৫০ জাত হস্তান্তরে ফলাফল প্রদর্শনীর কার্যকারিতা
(Effectiveness of Result Demonstration Program in the Transfer of BRRI dhan50)

তারিখঃ ..... উত্তর দাতার ক্রমিক .....

উত্তর দাতার নাম :

গ্রামঃ

ইউনিয়নঃ

উপজেলাঃ

জেলাঃ

অনুগ্রহ পূর্বক নিচের প্রশ্নগুলোর উত্তর দিন–

১। বয়স

আপনার বয়স কত ? .....বছর।

২। শিক্ষাগত যোগ্যতা

(নিম্নের যথাযথ স্থানে টিক চিহ্ন দিন)

(ক) লিখতে ও পড়তে পারি না। (.....)

(খ) কেবল স্বাক্ষর করতে পারি। (.....)

(গ) আমি .....পর্যন্ত লেখা পড়া করেছি।

৩। খামারের বিবরণ

অনুগ্রহ পূর্বক ব্যবহার অনুযায়ী আপনার জমির বিবরণ দিন।

ক্রঃ নং	জমির প্রকৃতি	জমির পরিমান	
		স্থানীয়একক(শতক/বিঘা)	হেক্টর
ক.	বসতবাড়ি (পুকুরসহ)		
খ.	নিজ চাষে নিজ জমি		
গ.	অন্যের জমি বর্গা নেওয়া		
ঘ.	নিজ জমি অন্যকে বর্গা দেওয়া		
ঙ.	অন্যের জমি লিজ নেওয়া		
সর্বমোট = ক+খ+১/২(গ+ ঘ)+ঙ			

৪. বার্ষিক আয়ের বিবরণ

অনুগ্রহ পূর্বক বিভিন্ন উৎস হতে প্রাপ্ত আপনার গত বছরের বাৎসরিক আয়ের বিবরণ দিন ।

(ক) কৃষি উপকরণ থেকে আয়ঃ

ক্রঃ নং	ফসলের নাম	মোট আয়ের পরিমান (টাকা)
১.	ধান	
২.	গম	
৩.	পাট	
৪.	সরিষা	
৫.	ডাল	
৬.	শাক সব্জি	
৭.	ফল	
৮.	ফুল	
৯.	অন্যান্য (যদি থাকে)	
মোট=		

(খ) গৃহপালিত পশুপাখি ও মৎস্য খাত থেকে আয়

ক্রঃ নং	আয়ের উৎস	মোট আয়ের পরিমান (টাকা)
১.	গবাদি পশু পালন	
২.	হাঁস মুরগী পালন	
৩.	মাছ চাষ	
মোট=		

(গ) কৃষি বহির্ভূত উৎস থেকে আয়

ক্রঃ নং	আয়ের উৎস	মোট আয়ের পরিমান (টাকা)
১.	চাকুরী	
২.	ব্যবসা বাণিজ্য	
৩.	শ্রম/মজুরী	
৪.	পরিবারের অন্যান্য সদস্যদের আয়	
মোট =		

সর্বমোট আয় (ক+খ+গ)= টাকা ।

৫ । খামারের অভিজ্ঞতা

আপনি কত দিন যাবৎ ধানের চাষাবাদ করছেন? (..... বছর)

৬ । সম্প্রসারণ মাধ্যমের সাথে যোগাযোগের মাত্রা

নিম্ন লিখিত যোগাযোগ মাধ্যম গুলি থেকে আপনি কিরূপ পরিমান কৃষি বিষয়ক তথ্য নিয়ে থাকেন তা উল্লেখ করবেন ।

ক্রঃ নং	যোগাযোগের মাধ্যম	যোগাযোগের মাত্রা			
		নিয়মিত (৩)	মাঝেমাঝে (২)	কদাচিৎ (১)	মোটেই না (০)
(ক) ব্যক্তিগত যোগাযোগ					
১.	উপ সহকারী কৃষি কর্মকর্তা	*প্রতি মাসে ৪ বারের বেশি (.....)*	*প্রতি মাসে ৩- ৪ বার (.....)*	*প্রতি মাসে ১-২ বার (.....)*	
২.	কৃষি সম্প্রসারণ কর্মকর্তা	*প্রতি বছরে ৪ বারের বেশি (.....)*	*প্রতি বছরে ৩- ৪ বার (.....)*	*প্রতি বছরে ১-২ বার (.....)*	
৩.	স্থানীয় নেতা	*প্রতি মাসে ৪ বারের বেশি (.....)*	*প্রতি মাসে ৩- ৪ বার (.....)*	*প্রতি মাসে ১-২ বার (.....)*	
৪.	প্রতিবেশী	*প্রতি মাসে ১০ বারের বেশি (.....)*	*প্রতি মাসে ৬-১০ বার (.....)*	*প্রতি মাসে ১-৫ বার (.....)*	
৫.	এন জিও কর্মী	*প্রতি মাসে ৪ বারের বেশি (.....)*	*প্রতি মাসে ৩- ৪ বার (.....)*	*প্রতি মাসে ১-২ বার (.....)*	
৬.	সার,বীজ বা কীটনাশক বিক্রেতা	*প্রতি মাসে ৪ বারের বেশি (.....)*	*প্রতি মাসে ৩- ৪ বার (.....)*	*প্রতি মাসে ১-২ বার (.....)*	
(খ) দলীয় যোগাযোগ					
১.	দলীয় আলোচনা	*প্রতি বছরে ৪ বারের বেশি (.....)*	*প্রতি বছরে ৩- ৪ বার (.....)*	*প্রতি বছরে ১-২ বার (.....)*	
২.	ফলাফল প্রদর্শন	*জীবনে ৬ বারের বেশি (.....)*	*জীবনে ৪-৬ বার (.....)*	*জীবনে ১-৩ বার (.....)*	
৩.	মাঠ দিবস	*প্রতি বছরে ২ বারের বেশি (.....)*	*প্রতি বছরে ২ বার (.....)*	*প্রতি বছরে ১ বার (.....)*	
৪.	কৃষি সমাবেশ/কৃষক মাঠ বিদ্যালয়	*প্রতি বছরে ৪ বারের বেশি (.....)*	*প্রতি বছরে ৩- ৪ বার (.....)*	*প্রতি বছরে ১-২ বার (.....)*	
(গ) গণ যোগাযোগ					
১.	পত্রিকা পাঠ	*প্রতি সপ্তাহে ৪ বারের বেশি (.....)*	*প্রতি সপ্তাহে ৩- ৪ বার (.....)*	*প্রতি সপ্তাহে ১-২ বার (.....)*	
২.	রেডিওতে কৃষি অনুষ্ঠান শোনা	*প্রতি সপ্তাহে ৪ বারের বেশি (.....)*	*প্রতি সপ্তাহে ৩-৪ বার (.....)*	*প্রতি সপ্তাহে ১-২ বার (.....)*	
৩.	টেলিভিশনে কৃষি অনুষ্ঠান শোনা	*প্রতি মাসে ৪ বারের বেশি (.....)*	*প্রতি মাসে ৩-৪ বার (.....)*	*প্রতি মাসে ১-২ বার (.....)*	
৪.	পোষ্টার দেখা	*প্রতি বছরে ৪ বারের বেশি (.....)*	*প্রতি বছরে ৩- ৪ বার (.....)*	*প্রতি বছরে ১-২ বার (.....)*	
৫.	খামার প্রকাশনা(কৃষি কথা, কৃষি বার্তা ইত্যাদি পাঠ ।	*প্রতি বছরে ৫ বারের বেশি (.....)*	*প্রতি বছরে ৪-৫ বার (.....)*	*প্রতি বছরে ১-৩ বার (.....)*	
৬.	কৃষি মেলা দেখা	*প্রতি বছরে ৫-৬ বার (.....)*	*প্রতি বছরে ৩- ৪ বার (.....)*	*প্রতি বছরে ১-২ বার (.....)*	

৭। কৃষি সংক্রান্ত প্রশিক্ষণ গ্রহণের অভিজ্ঞতা

(ক)আপনি কি কৃষি সংক্রান্ত কোন প্রশিক্ষণ কর্মসূচীতে অংশ গ্রহণ করেছেন ?

টিক চিহ্ন দিনঃ হ্যাঁ (.....) না (.....) ।

(খ) যদি হ্যাঁ হয়ে থাকে তবে নিম্ন লিখিত তথ্য উল্লেখ করুন ।

ক্রঃনং	প্রশিক্ষণ কোর্সের নাম	সংশ্লিষ্ট প্রতিষ্ঠানের নাম	প্রশিক্ষণ মেয়াদ (দিন)
১.			
২.			
৩.			
৪.			
৫.			

৮। প্রাতিষ্ঠানিক অংশ গ্রহন
নিম্ন লিখিত প্রতিষ্ঠানসমূহে আপনার অংশ গ্রহন সম্পর্কে বলুন ।

ক্রঃনং	প্রতিষ্ঠানের নাম	জড়িত নহি (০)	অংশ গ্রহণের প্রকৃতি		
			সাধারণ সদস্য হিসাবে (১)	কার্যনির্বাহী কমিটির সদস্য হিসাবে (২)	প্রেসিডেন্ট/সচিব হিসাবে (৩)
১.	এনজিও সংগঠিত কমিটি				
২.	কৃষক সমবায় সমিতি				
৩.	গ্রাম উন্নয়ন কমিটি				
৪.	সেচ কমিটি				
৫.	মসজিদ/মাদ্রাসা কমিটি				
৬.	ইউনিয়ন পরিষদ কমিটি				
৭.	যুব সংঘ				
৮.	বাজার কমিটি				
৯.	স্কুল কমিটি				
১০.	অন্যান্য (যদি থাকে)				

৯। বহির্গমনতা

অনুগ্রহ পূর্বক নিজ গ্রামের বাইরে নিম্নলিখিত স্থানগুলোতে আপনার বহির্গমনের মাত্রা উল্লেখ করুন ।

ক্রঃনং	পরিদর্শনের স্থান	পরিদর্শনের মাত্রা			
		নিয়মিত (৩)	মাঝেমাঝে (২)	কদাচিৎ (১)	মোটেই না (০)
১.	নিজ গ্রামের অন্যান্য সফল কৃষকের খামার	*প্রতি মাসে ৫ বারের বেশি (.....)*	*প্রতি মাসে ৪-৫ বার (.....)*	*প্রতি মাসে ১-৩ বার (.....)*	
২.	পার্শ্ববর্তী গ্রামের ফলাফল প্রদর্শনী ও মাঠ দিবস	*প্রতি বছরে ৩ বারের বেশি (.....)*	*প্রতি বছরে ২-৩ বার (.....)*	*প্রতি বছরে ১ বার (.....)*	
৩.	পার্শ্ববর্তী ইউনিয়নে উদ্বুদ্ধকরণ ভ্রমন	*প্রতি বছরে ৫ বারের বেশি (.....)*	*প্রতি বছরে ৪-৫ বার (.....)*	*প্রতি বছরে ১-৩ বার (.....)*	
৪.	কৃষক মাঠ স্কুল	*প্রতি মাসে ৪ বারের বেশি (.....)*	*প্রতি মাসে ৩- ৪ বার (.....)*	*প্রতি মাসে ১-২ বার (.....)*	
৫.	স্থানীয় নেতার বাড়ি	*প্রতি মাসে ৪ বারের বশি (.....)*	*প্রতি মাসে ৩- ৪ বার (.....)*	*প্রতি মাসে ১-২ বার (.....)*	
৬.	উপজেলা কৃষি অফিস ও বিআরডিবি অফিস	*প্রতি বছরে ৪ বারের বেশি (.....)*	*প্রতি বছরে ৩- ৪ বার (.....)*	*প্রতি বছরে ১-২ বার (.....)*	
৭.	নিজ উপজেলাতে এসএএও কর্তৃক পরিচালিত পদ্ধতি প্রদর্শণী এলাকা	*প্রতি বছরে ৪ বারের বেশি (.....)*	*প্রতি বছরে ৩- ৪ বার (.....)*	*প্রতি বছরে ১-২ বার (.....)*	
৮.	পার্শ্ববর্তী উপজেলার কৃষি মেলা	*প্রতি বছরে ৫-৬ বার (.....)*	*প্রতি বছরে ৩- ৪ বার (.....)*	*প্রতি বছরে ১-২ বার (.....)*	
৯.	জেলা কৃষি সম্প্রসারণ অফিস	*প্রতি বছরে ৩ বারের বেশি (.....)*	*প্রতি বছরে ২-৩ বার (.....)*	*প্রতি বছরে ১ বার (.....)*	
১০.	আঞ্চলিক কৃষি গবেষণা প্রতিষ্ঠান	*প্রতি বছরে ১ বার (.....)*	*২ বছরে ১ বার (.....)*	*≥৩ বছরে ১ বার (.....)*	

১০। কলাকৌশলের ব্যবহারের অগ্রগামিতা

অনুগ্রহ পূর্বক নিম্নোক্ত উৎপাদন প্রযুক্তিগুলির ব্যবহার সম্পর্কে সময়ভিত্তিক তথ্যাদি প্রদান করুন।

ক্রঃন ং	প্রযুক্তির নাম	প্রযুক্তি গ্রহণের ব্যাপ্তি				
		শোনার ১ বছরের মধ্যে (৪)	শোনার ২ বছরের মধ্যে (৩)	শোনার ৩ বছরের মধ্যে (২)	শোনার ৩ বছরের বেশী বা তারও পর (১)	একেবারেই ব্যবহার করি না (০)
১.	হাইব্রিড ধানের ব্যবহার					
২.	গুটি ইউরিয়ার ব্যবহার					
৩.	লিফ কালার চার্টের ব্যবহার					
৪.	রোটাভেটরের ব্যবহার					
৫.	মিশ্র সারের ব্যবহার					
৬.	এডব্লিউডি সেচ পদ্ধতির ব্যবহার					
৭.	আলোক ফাঁদের ব্যবহার					
৮.	ড্রাম সিডারের ব্যবহার					
৯.	অনুকূল ফসল পর্যায়ের ব্যবহার					
১০.	সঠিক দূরত্বে রোপনের মাধ্যমে পানি ব্যবস্থাপনার ব্যবহার					
১১.	হাঁস মুরগির টিকার ব্যবহার					
১২.	ধান ক্ষেতে পার্চিং এর ব্যবহার					
১৩.	পেডাল থ্রেসারের ব্যবহার					
১৪.	সুইপিং নেট এর ব্যবহার					
১৫.	উপকারী পোকার ব্যবহার					

১১। ব্যাক্তিত্ব

অনুগ্রহ পূর্বক ব্যাক্তিত্বের নিম্ন লিখিত বিভিন্ন দিক থেকে আপনার দ্বারা সম্পাদিত ব্যাক্তিত্বের মাত্রা উল্লেখ করুন।

ক্রঃন ং	বিষয়	ব্যাক্তিত্বের মাত্রা			
		খুব ভাল (৪)	ভাল (৩)	মোটামুটি (২)	দূর্বল (১)
১.	সমস্যা সমাধানের দক্ষতা				
২.	যোগাযোগের দক্ষতা				
৩.	সম্প্রসারণ কর্মসূচী অনুযায়ী কাজ করার দক্ষতা				
৪.	নেতৃত্বদান ক্ষমতা				
৫.	নতুন চ্যালেঞ্জ গ্রহণের মানসিকতা				
৬.	সামাজিক সম্পর্ক				
৭.	উপলব্ধির ক্ষমতা				
৮.	কঠোর পরিশ্রমের সক্ষমতা				
৯.	জ্ঞান অন্বেষণের প্রবণতা				
১০.	দলগত অংশ গ্রহণ				

১২। উদ্বুদ্ধকরণঃ

অনুগ্রহ পূর্বক ব্রি ধান ৫০ এর প্রতি ফলাফল প্রদর্শণীর ফলে সৃষ্ট উদ্বুদ্ধকরণের মাত্রা উল্লেখ করুন।

ক্রঃনং	উদ্বুদ্ধকরণের বিষয়	উদ্বুদ্ধকরণের মাত্রা			
		বেশী (৩)	মধ্যম (২)	কম (১)	একেবারেই নেই (০)
১.	ব্রি ধান ৫০ এর প্রতি আগ্রহ সৃষ্টি				
২.	ব্রি ধান ৫০ চাষাবাদের জন্য বরাদ্দকৃত জমি				
৩.	ব্রি ধান ৫০ চাষাবাদেও জন্য অতিরিক্ত খোঁজখবর নেয়া				
৪.	অন্যান্য সফল কৃষকের খামার পর্যবেক্ষণ				
৫.	মাঠ দিবস / ফসল কর্তন দিবসে অংশ গ্রহন				
৬.	নির্দিষ্ট জমিতে জাতের উপযোগিতা পরীক্ষা করা				
৭.	উপ সহকারী কৃষি কর্মকর্তা এবং সম্প্রসারণ কর্মকর্তাদের সাথে ঘন ঘন সাক্ষাতের সুযোগ				

১৩। ব্রি ধান ৫০ এর চাষাবাদ সম্পর্কিত জ্ঞানঃ

অনুগ্রহ পূর্বক নিচের প্রশ্ন গুলির উত্তর দিন।

ক্রঃনং	প্রশ্ন সমূহ	বরাদ্দ নম্বর	প্রাপ্ত নম্বর
১.	ব্রি (**BRRI**)থেকে মুক্তি প্রাপ্ত একটি সুগন্ধি ধানের নাম উল্লেখ করুন।	২	
২.	বাংলাদেশে কোন্ সুগন্ধি ধানের জাতের ফলন সবচেয়ে বেশী?	২	
৩.	ব্রি ধান ৫০(বাংলা মতি) জাতের উৎপাদন সময় কখন ?	২	
৪.	ব্রি ধান ৫০(বাংলা মতি) জাতের দানার বৈশিষ্ট্য উল্লেখ করুন	২	
৫.	ব্রি ধান ৫০ চাষাবাদের জন্য কি ধরনের মাটি প্রয়োজন ?	২	
৬.	ব্রি ধান ৫০ জাতের মিলিং পদ্ধতি উল্লেখ করুন ।	২	
৭.	মাঠে ব্রি ধান ৫০ এর পরিপক্ক অবস্থায় কেমন দেখায়?	২	
৮.	ব্রি ধান ৫০ জাতে ১০০% ফুল আসার পর পরিপক্কতা আসতে কত দিন সময় লাগে ?	২	
৯.	ব্রি ধান ৫০ জাতে আক্রমণকারী পোকা ও রোগের নাম বলুন।	২	
১০.	ব্রি ধান ২৮ জাত ও ব্রি ধান ৫০ জাতের মধ্যকার পার্থক্য কি ?	২	

১৪। ব্রি ধান ৫০ এর প্রতি কৃষকের মনোভাব

অনুগ্রহ পূর্বক নিচের বিষয় সর্ম্পকে আপনার দৃষ্টিভঙ্গি উল্লেখ করুন।

ক্রঃনং	বিবরণ	মতামতের মাত্রা				
		পুরোপুরি একমত	এক মত	কোন মতামত নেই	একমত নয়	একদমই একমত নয়
		৫ (+) ১ (-)	৪ (+) ২ (-)	৩ (+) ৩ (-)	২ (+) ৪ (-)	১ (+) ৫ (-)
(+)১.	স্বাদ ও গন্ধের দিক থেকে ব্রি ধান ৫০ অধিকতর উন্নতমানের জাত					
(−)২.	ব্রি ধান ৫০জাতের বীজ পর্যাপ্ত নয়					
(+)৩.	ব্রি ধান ৫০জাতের ক্ষেত্রে গাছ হেলে পড়ে না					
(−)৪.	ব্রি ধান ৫০ জাত নীচু জমি ও মাঝারী নীচু জমির জন্য উপযোগী নয়					
(+)৫.	অন্যান্য সুগন্ধি ধানের চাইতে ব্রি ধান ৫০ এর ফলন প্রায় দ্বিগুন					
(−)৬.	ব্রি ধান ২৮ এর চেয়ে ব্রি ধান ৫০এর জীবন কাল দীর্ঘ					
(+)৭.	ব্রি ধান ৫০ এর আকর্ষণীয় সুগন্ধ সহজেই মানুষকে আকৃষ্ট করে					
(−)৮.	মিলিং এর সময়ে ব্রি ধান ৫০ জাতের জন্য অতিরিক্ত যত্নের প্রয়োজন হয়					
(+)৯.	ধানের অন্যান্য জাতের চাইতে ব্রি ধান ৫০ এর চাষাবাদ অধিক লাভজনক					
(−)১০.	ব্রি ধান ৫০ এর বীজের দাম অধিক					

১৫। ব্রি ধান ৫০ গ্রহণ **(Adoption of BRRI dhan50)**

অনুগ্রহ পূর্বক ব্রি ধান ৫০ গ্রহণ সম্পর্কিত নিচের তথ্যগুলো উল্লেখ করুন।

(ক) **% of area coverage** নির্ণয়ের জন্যঃ

ব্রি ধান ৫০ জাত চাষাবাদ করি নাই	ব্রি ধান ৫০ চাষাবাদ করা যায় এমন মোট জমির পরিমাণ **(A)**	শুধুমাত্র ব্রি ধান ৫০ জাত চাষ করার জন্য বরাদ্দকৃত জমির পরিমাণ **(B)**	মোট জমি ও ব্রি ধান ৫০ এর চাষকৃত জমির অনুপাত $\frac{B}{A}$	**% of area coverage** $\frac{B}{A} \times 100$

% of area coverage এর সীমা নিম্নলিখিত নম্বর বা স্কোর প্রদান করেঃ

% of area coverage	বরাদ্দকৃত নম্বর বা স্কোর	প্রাপ্ত নম্বর বা স্কোর
জাতের চাষাবাদ নাই	০	
১-২৫	১	
২৬-৫০	২	
৫১-৭৫	৩	
৭৬-১০০	৪	

(খ)টাইম স্কোর **(Score of Time)** নির্ণয়ের জন্যঃ

সময় সীমা	বরাদ্দকৃত নম্বর বা স্কোর	প্রাপ্ত নম্বর বা স্কোর
জাতের চাষাবাদ নাই	০	
১ বছর পর্যন্ত	১	
২-৩ বছর	২	
৩-৪ বছর	৩	
৪-৫ বছর	৪	

ব্রি ধান ৫০ গ্রহন **(Adoption of BRRI dhan50) = Score of Area Coverage × Score of Time**

তথ্য সংগ্রহের সময় আপনার সহযোগিতার জন্য ধন্যবাদ ।

সাক্ষাতকার গ্রহনকারীর স্বাক্ষর
তারিখঃ

	X1 (Age)	X2 (Level of Education	X3 (Farm Size)	X4 (Annual income)	X5 (Farming Experience)	X6 (Extension Media Contact)	X7 (Training Exposure)	X8 (Organizational Participation)	X9 (Cosmopoliteness)	X10 (Innovativeness)	X11 (Personality)	X12 (Motivation)	X13 (Knowledge)	X14 (Attitude)	X15 (Adoption)	Y (Effectiveness)
X1(Age)	1															
X2(Level of Education)	-.728**	1														
X3(Farm Size)	.123	.008	1													
X4 (Annual income)	.129	-.061	.878**	1												
X5(Farming Experience)	.917**	-.630**	.178	.144	1											
X6 (Extension Media Contact)	-.059	.234*	.157	.110	.007	1										
X7 (Training Exposure)	-.071	.248*	.662**	.637**	-.043	.160	1									
X8 (Organizational Participation)	-.213*	.473**	.042	-.062	-.179	.076	.110	1								
X9(Cosmopoliteness)	-.072	.043	-.053	-.085	-.111	.004	.124	.224*	1							
X10(Innovativeness)	-.143	.221*	.311**	.213*	-.138	.118	.556**	.268*	.595**	1						
X11 (Personality)	-.082	.252*	.397**	.292**	.008	.090	.558**	.006	.118	.537**	1					
X12 (Motivation)	-.032	.195	.638**	.611**	.028	.116	.737**	-.062	-.003	.381**	.636**	1				
X13 (Knowledge)	-.039	.176	.572**	.489**	.039	.148	.565**	.022	.076	.429**	.529**	.759**	1			
X14(Attitude)	-.033	.098	.511**	.462**	.021	.083	.504**	.138	.273**	.513**	.370**	.608**	.618**	1		
X15(Adoption)	.149	.004	.703**	.614**	.200	.113	.532**	.064	-.058	.164	.274**	.608**	.584**	.654**	1	
Y(Effectiveness)	.027	.106	.687**	.601**	.096	.132	.617**	.088	.113	.432**	.453**	.765**	.857**	.879**	.852**	1