

PARTICIPATION OF THE SAOTAL FARMERS IN AGRICULTURAL ACTIVITIES OF CARITAS IN DINAJPUR DISTRICT

**A Thesis
By**



Hossen Md. Abu Sufian

Student No. 1105085

Session: 2011-2012

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**MASTER OF SCIENCE
IN
AGRICULTURAL EXTENSION**

**Department of Agricultural Extension
Hajee Mohammad Danesh Science and Technology University, Dinajpur**

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ABSTRACT

PARTICIPATION OF THE SAOTAL FARMERS IN AGRICULTURAL ACTIVITIES OF CARITAS IN DINAJPUR DISTRICT

The main purpose of this study was to describe 10 selected characteristics of the Saotal farmers, to determine the extent of participation of the Saotal farmers, to explore the relationship between the selected characteristics of Saotal farmers and their participation in agricultural activities of CARITAS and to identify the problems faced by the Saotal farmers in agricultural activities of CARITAS. Data were collected using interview schedule from a sample of 96 Saotal farmers selected by multistage random sampling procedure from 10 villages of Birol and Chirirbandar upazila of Dinajpur district during 01 September to 15 October 2012. Ten selected characteristics namely age, educational qualification, farm size, agricultural training received, annual income, credit received, cosmopolitaness, NGO participation, extension communication exposure and attitude towards NGOs of the Saotal farmers were considered as independent variables while their participation in agricultural activities of CARITAS constituted dependent variable. The dependent variable was measured based on three aspects of agriculture namely crop cultivation, livestock rearing and homestead plantation and finally overall agricultural participation was determined by summing up these aspects. Among the 21 (seven from each) selected activities of crop cultivation, livestock rearing and homestead plantation the top participation of the Saotal farmers were use of modern seeds, cleaning cowshed and preparation of ideal pit respectively. In case of overall participation, highest proportion (60.42 percent) of the Saotal farmers had medium participation compared to 34.38 percent low and only 5.20 percent high. Among the 10 selected characteristics of the Saotal farmers, six namely educational qualification, farm size, agricultural training received, annual income, credit received and extension communication exposure showed positive relationships with their participation in agricultural activities of CARITAS while other four namely age, cosmopolitaness, NGO participation and attitude towards NGO were not correlated. The top three problems faced by the respondents in participating agricultural activities were application of insecticides, problem in training and pruning, and regular feeding of cattle, while the least problem was preparation of ideal pit.

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CHAPTER 1

INTRODUCTION

1.1 General Background

Bangladesh is a very densely populated country with a population of about 150 million of which 1.2 million are tribal (BBS, 2010). The overall economy of Bangladesh is not satisfactory. It is a low-income country, with per capita income of \$848 in Fiscal Year 2012. Poverty persists at a very high level. About 40 percent of total population lives below national poverty line (World Bank, 2010) and 25 percent of those are classified by governments as 'extremely poor' who cannot afford an adequate diet. However, the ethnic minorities of the country are also living in poverty. The economic condition, political freedom, and the state of human rights are sharply different case of the Saotal people. There are about 45 tribes in Bangladesh among them Chakma, Saotal, Mog, Murung, Tipra, Kuki, Luci, Khashia, Garo, Hajong, Koach, Monipuri are important. Among the tribes in Bangladesh Saotals are lived at northern part of Bangladesh especially at Dinajpur district. The tribes are occupying one percent of the total number of households of Bangladesh. In ancient times the tribal people who lived in hilly areas used to practice 'Jum' cultivation but who lived in flat areas they did as like as general people do. The tribes of Bangladesh have significant contribution in the national economy especially in crop cultivation, livestock rearing and forestry. Bangladesh is agricultural based country. The agricultural development can improve the condition of the tribal people and can solve the economic problem of them. For this purpose GOs and many NGOs introduced various agricultural development projects on crop cultivation, livestock rearing and homestead plantation etc.

CARITAS is one of the leading NGO in Bangladesh. It is a national level non-profit development organization established by the Catholic Bishops' Conference of Bangladesh to conduct activities of integrated social welfare and development. CARITAS was founded in 1967 and then the name was Christian Organization for Relief and Rehabilitation (CORR). During the liberation war of 1971, the relief and rehabilitation became indispensable through the countrywide, and after liberation, CARITAS had implemented 55 different projects. Later, it took up an ambitious reconstruction program for war victims. CORR was renamed as CARITAS in 1976.

The Integrated Community Development Projects (ICDP) of CARITAS aims to motivate and organize ethnic communities of greater Mymensingh, Dinajpur, Dhaka, Sylhet and Chittagong district for socio-economic development by means of human development through training, income generating activities, health and education. Other programs of CARITAS are rural infrastructure development programs, formation of credit unions, underprivileged children preparatory education programs, formation of children in orphanages, Formal Education Program (FEP), Training, Evaluation, Resources and Counseling (TERC), rehabilitation of drug addicts, and literacy & health care programs.

One of the major projects of CARITAS after 1976 was the Development Extension Education Services (DEES) for promoting non-formal education. Three other projects, the Integrated Women Development Program (IWDP), Integrated Human Development Project (IHDP), and Integrated Community Development Project (ICDP) were started later for different beneficiary groups. All these projects together form the core of CARITAS development activities. Meanwhile CARITAS had a significant contribution by introducing mini-irrigation in Bangladesh by using 'rower' and 'tara' hand tubewells and low-lift pumps as well as in social forestry, employment creation through sericulture, fisheries development, and sustainable environment management.

In the recent time CARITAS is operating several agricultural envelopment programs such as:

- i) Increasing production of crop
- ii) Increasing production of vegetables
- iii) Livestock and poultry rearing
- iv) Maintaining soil fertility
- v) Increasing fish production
- vi) Practicing bio-intensive gardening
- vii) Increasing forestland
- viii) Arranging training on compost making and manuring and setting up demonstration, and
- ix) Providing loans.

1.2 Statement of the Problem

In view of above facts, it is essential to have an understanding of participation in agricultural activities along with problem confrontation of ancient Saotal farmers in modern farming activities with the assistance of any organizational monitoring and supervision. Now-a-days, in Bangladesh there are many NGOs are involved in extension work along with DAE, and CARITAS is one of them especially in the study area. The researcher, therefore, decided to undertake a study entitled, "Participation of the Saotal farmers in agricultural activities of CARITAS in Dinajpur district".

The extent of agricultural participation and problem confrontation of ancient Saotal farmers might not be similar. As usual, it varies from one to another due to influence by one's characteristic. It is therefore, likely that the participation in agricultural activities of ancient Saotal farmers might be influenced by their personal, economical, social and psychological characteristics. An understanding of the participation in agricultural activities of ancient Saotal farmers and the relationship with various characteristics would be greatly helpful in planning and execution of programs scientifically.

The researcher gave an attentive observation on the life of Saotal farmers in the study area and their agricultural activities. Numerous visits were made for interacting with farmers, leasers and extension officials. Ten selected characteristics of Saotal farmers were selected as predictors. The relationship between selected characteristics of Saotal farmers and their participation in agricultural activities of CARITAS were explored.

1.3 Objectives of the Study

In view of the problems, stated above, the following objectives have been put forward for giving proper direction to the study:

1. To describe selected characteristics of the Saotal farmers. The selected characteristics included: i) age, ii) educational qualification, iii) farm size, iv) agricultural training received, v) annual income, vi) credit received, vii) cosmopolitaness, viii) NGO participation, ix) extension communication exposure and x) attitude towards NGOs.

2. To determine the extent of participation of the Saotal farmers in agricultural activities of CARITAS. The agricultural activities includes: i) crop cultivation, ii) livestock rearing and iii) homestead plantation.
3. To explore the relationship between the selected characteristics of Saotal farmer and their participation in agricultural activities of CARITAS.
4. To identify the problems faced by the Saotal farmers in agricultural activities of CARITAS.

1.4 Justification of the Study

The Saotal have been being significantly represented among the poor and landless, and their opportunities are limited. In Bangladesh, most of the Saotal farmers live in the remote areas. Lack of communication facilities, low level of skills and literacy contributes to low productivity. The government plays a leading role in their development due to centralized mode of operation and constricted resources. Since 1970, a remarkable emergence of NGOs contributing effectively to participatory and grass root development have occurred.

Systematic studies regarding the impact of NGOs on the well being of their larger groups in terms of employments, income generation and improving living conditions in respect to CARITAS participants are low in Bangladesh. This study was on the participation of the Saotal people dealing with the details of agricultural activities of CARITAS. Though the tribal people have been living along with the civilized people, they have some own culture in the participation of agricultural activities of the CARITAS. This study had a modest attempt to find out the suitable agricultural development activities so that they could adopt them quickly. The findings from the study may be helpful for NGOs, governments and policy makers to design their agricultural activities in the development of tribal people of the country. This study may also facilitate to take up further studies on the tribal people.

1.5 Scope and Limitations of the Study

The investigator believes that the findings of the research have explained the phenomena related to the different innovators. In other words the findings were

expected to be helpful to the CARITAS authority and different nation building departments to improve their strategy of action for meaningful agricultural development activities with the Saotal farmer. However, in order to conduct the research in a meaningful and manageable way it was necessary to impose certain limitations with regard to certain aspect of the study.

1. The study area covered a small area of Bisnopur, Borhanagor, Haljoy, Ragudevpur and Bahbaldhighi from Ranipukur union; Khozapur and Maguraban from Farrakaband union; Baul and Majina from Aulia pukur union; Durgadanga from Bhiail union. Data were collected directly from the Saotal farmer, as they are low literate it was very difficult to obtained needed information.
2. Considering the same social background, this study was not done on the basis of farm-category.
3. There are many NGOs working with the tribes in Bangladesh but the researcher had selected CARITAS as the working NGO.

1.6 Assumptions of the Study

According to Goode (1945), "an assumption is the supposition that an apparent fact or principle is true in the light of available evidence". The following assumptions were undertaken for the study:

1. Data provided by the respondents were reliable.
2. The respondents selected for the study were capable of furnishing proper responses to the questions included to the interview schedule.
3. The researcher was well adjusted to the social environment of the study area. Hence, the respondents furnished their correct opinions without any hesitation and biasness.
4. Views and opinions furnished by the CARITAS members were the representative views and opinions of the whole population of the study area.
5. The dependent and independent variables of the study were normally distributed towards their respective means and standard deviations.

1.7 Definition of the Key Terms

Certain terms were used throughout the study, are being defined and interpreted for ease of understanding as follows:

Age of a Saotal farmer referred to the period of time spent by him starting from birth to the time of interview.

Educational qualification refers to the development of desirable knowledge, skill and attitude of a respondent through the experience of reading, writing and observation of related matters.

Farm size of the individuals means the total area of land on which a farmer carries on farming operations.

Agricultural training receive was defined as participating days in training on various aspects of activities organized by the extension agencies till to interviewing.

Annual income refers to the cumulative earnings of respondent and family members debited from farming, business, services etc in a year.

Credit received of a respondent referred to the amount of money as loan actually received by the respondent from other sources during the previous year.

Cosmopolitaness refers to the degree to which a Saotal farmers' orientation is external to his own social system.

NGO participation refers to the involvement of an individual in different groups or organizations of the locality as an ordinary member and team leader.

Extension communication exposure refers to the individual exposure to or contact with information sources and personalities used for technology dissemination among Saotal farmers.

Attitude towards NGO refers to the belief, feeling and action tendencies of the farmer towards NGO.

Participation in agricultural activities refers to active involvement of people to develop work plans, crop calendar and cropping system.

Tribe (Saotal) according to oxford dictionary a racial group, especially one united by language and customs, living as a community under one or more chiefs.

Farmer means the principal decision maker involve in the management of a farm, not always be the head of the farm-household.

Participation refers to the extent of performing the development activities including crop development, livestock and poultry fish development, fish development, cottage industry etc.

Television is an audio-visual medium for telecasting information belongs to the mass of communication. Along with news, various educational and recreational programmers are diffused through television. It is a cost effective means of conveying key extension message and can support the effects of the extension staff in creating awareness, giving information etc.

Result demonstration is a method of providing the value of a new technology comparison is being made between the prevalent old technologies and the new technology followed so as to judge and see the worth of new technology.

CHAPTER 2

REVIEW OF LITERATURE

The main purpose of this study was to have understanding of the participation of ancient Saotal farmers in respect of agricultural activities of CARITAS. An effort was made to review the related literatures in this Chapter.

2.1 Concept of Participation

The term participation originated from the Latin word 'participare' which means 'tacking part'. In encyclopedia of psychology, participation has been described as a greater involvement of personnel in policy decisions, which affect them directly.

In general, participation is a comprehensive concept embracing all facets and phases of development beginning with people's initiative and up to sustaining the activities. Participation as a sense of individual and group worth creates awareness of right duties and obligations on the part of the members in the community. In other words, participation is a learning process that transfers knowledge and skills to the people. It is a non-formal education of educating people through activities. Participation is democratic that provides equal opportunities to the citizens involved and makes democracy stronger. It makes group members active by creating morale, motivation and congenial atmosphere.

It is essential for the people to participate in the development programs and projects, which are going to benefit them. People's participation is much more significant for agricultural and community particularly in relation to the measures which are aimed at changing lot of the Saotal people.

Birgegared (1980) defined participation as 'direct involvement of rural inhabitants through grass root level organization in the decision making and implementation of development activities'. Pretty (1994) mentioned the following levels of participation:

- a) **Passive participation:** People participate by being told what is going to happen or has already happened. It is a unilateral announcement by an administration or project management without listening the participant's responses. The information being shared belongs only to external professions.
- b) **Participation in information giving:** People participate by answering questions posed by extractive researches using questionnaire surveys or similar approaches. People do not have the opportunity to influence proceeding, as the findings of the researches are neither shared nor checked for accuracy.
- c) **Participation by consultation:** People participate by being consulted and external agents listen to views. These external agents define both problems and solutions may modify these in the light of people's responses. Such a consultative process does not concede any share in decision making and professionals are under no obligation to accept people's views.
- d) **Participation for material incentive:** People participate by providing some on-farm facilities like land, labor, irrigation etc. in lieu of certain external inputs like seeds, fertilizer, pesticides, cash incentives etc. if these are for on-farm trials, there are lose of involvement and sharing of knowledge by the people. The people may not prolong the activities when the incentives end.
- e) **Functional participation:** If the above mentioned arrangement is for conducting on-farm demonstrations, there is more of functional involvement and more of sharing knowledge by the people with the external agency. People may also participate by forming groups to meet predetermined objectives, related to a project, which can involve the development or promotion of externally initiated social organization. The instructions tend to be dependent on external initiators and facilitators, but the groups may gradually become self-dependent.

- f) **Interactive participation:** People participate in joint analysis, which leads to action, plan and the formation of new local institutions or strengthening of existing one. It tends to involve interdisciplinary methodologies that seek multiple perspectives make use of systemic and structured learning process. These groups take control over local decisions and so people have stake in maintaining structures.
- g) **Self mobilization:** People participate by taking initiative independent of external institution to change system. They develop contact with external institutions for resources and technical advice they need, but retain control over how resources are used. Such self initiated mobilization and collective action may or may not challenge existing inequitable distribution of wealth and power (Ray, 1991).

Saotal people's participation is a popular concern for the government and subsequently most of the NGOs over the last three decades. Now-a-days, Saotal people's participation has emerged as an umbrella term for a new approach in development intervention. Participation is also partnership.

The people's participation referring to preceding discussions have different dimensions and phases in various ways. In these study people's participation means active involvement of the Saotal farmers relating crop cultivation, livestock and home forestry in the farm.

2.2 Review Relating to Participation on Different Aspects

Fakir (2008) revealed that most (62 percent) of the women had medium, 21 percent had low and 17 percent had high functional participation in agricultural IGAs and all of them participated in non-agricultural IGAs to a low extent.

Rashid (2006) found that 63 percent of Garo farmers had medium participation and 20 percent high participation on agricultural activities.

Hossain (2002) found that nearly 38 percent had medium and only 16 percent high participation of Garo farmers on agricultural activities.

Kabir (2002) observed that majority of Garo youth (80 percent) had medium to high participation in income generating activities such as raising seedling, preparation of paddy field, transplanting, selection of seeds.

Farouque (1997) revealed that about one-half (49 percent) female rural youth were medium and 36 percent high participation in homestead agricultural activities like harvesting fruits and vegetables, weeding and pruning trees.

2.3 Relationship between Selected Characteristics with Participation in Agricultural Activities

This section focuses on the linkage of farmer's characteristics to participation. Characteristics of farmer usually vary from one person to another and those as variables play vital role in making difference with their participation in agricultural development activities. The previous relationship between farmer's characteristics and participation in farm activities are discussed below:

2.3.1 Age and participation in agricultural activities

Fakir (2008) found that relationship between age and participation on agricultural activities was non-significant.

Rashid (2006) found that relationship between age and participation in agricultural activities was non-significant.

Akter (2003) found that non-significant relationship between age and participation in community and income generating activities. Islam (2003) and Sarkar (1997) also found similar findings.

2.3.2 Educational qualification and participation of agricultural activities

Rashid (2006) found that the level of education of primitive Saotal farmers had a significant relationship with participation in selected modern agricultural activities.

The education of rural female youth respondents had negatively significant relationship with participation in i) homestead farming activities (Farouque, 1997 and Alam, 2001) and ii) income generating activities (Akter, 2003) of Subalmbay Unnayan Samity (SUS).

The level of education of Garo farmers had significant positive relationship with participation in selected modern agricultural activities (Hossain, 2002 and Rashid, 2003) but Kabir (2002) found a negative response.

2.3.3 Farm size and participation of agricultural activities

Fakir (2008) found that the relationship between farm size and participation of primitive Saotal farmers was significant.

Rashid (2006) found that the farm size of primitive Saotal women had significant relationship with participation in homestead vegetable production program and had no relationship with modern agricultural activities.

The farm size of Saotal women had significant positive relationship with participation in homestead vegetable production programs (Mahmud, 2001) and had no relationship with modern agricultural activities (Hossain, 2002).

Farm size of farmers had a significant positive relationship with i) Farm and community activities (Khan, 2004) and ii) BAUEC extension activities (Alam, 2001).

2.3.4 Agricultural training received and participation of agricultural activities

Fakir (2008) observed from his study that agricultural training of Saotal people had a significant relationship with their participation on agricultural activities.

Rashid (2006) conducted a study regarding "Participation of the Garo farmers of Madhupur Garh forest in agricultural activities". The study revealed that the relationship between agricultural training and participation of agricultural activities was significant.

The training of Saotal women had significant positive relationship in homestead vegetable gardening (Mahmud, 2001).

2.3.5 Annual income and participation of agricultural activities

Rashid (2006) found positive significant relationship between annual income and participation on agricultural activities.

Annual income of farmer had significant relationship with BAUEC extension activities (Alam, 2001 and Yasmin, 2002).

Hossain (2001) mentioned a positive relationship of annual income of garo farmers with participation in modern farming activities but Kabir (2002) found no relationship.

2.3.6 Credit received and participation of agricultural activities

Rashid (2006) revealed that credit received by farmers had a non-significant relationship with participation on agricultural activities.

Islam (2003) found no relationship between credit received and participation of rural women in goat rearing.

2.3.7 Cosmopoliteness and participation of agricultural activities

Rashid (2006) revealed that the relationship between cosmopoliteness and participation on agricultural activities was significant.

Cosmopoliteness male farmers had a positive contribution in farm and community activities (Khan, 2004) and negative effect on modern agricultural practices (Reza, 2004).

Cosmopoliteness of rural women had positive relationship with i. participation in development activities (Akter, 2002,) and ii. participation in homestead vegetable production programs (Naher, 2000).

2.3.8 NGO participation and participation of agricultural activities

Alam (2004) mentioned that there was significant and positive relationship between organizational participation of farmers and their participation in selected modern agricultural activities.

Khan (2004) observed significant and positive relationship between organizational participation of farmers and their participation in farm and community level activities.

2.3.9 Extension communication exposure and participation of agricultural activities

Rashid (2006) exposed that the relationship between extension communication exposure and participation was significant.

The use of mass media sources of information or communication were positively and significantly associated with participation in agricultural activities (Alam, 2004).

The media exposure had significant influence upon opinion, knowledge and adoption of practices by rural women and had significant positive relationship with participation in homestead vegetable cultivation (Naher, 2000).

2.3.10 Attitude towards NGOs and participation of agricultural activities

Fakir (2008) concluded that there was significant relationship between attitudes of Saotal farmers towards NGOs and their participation of benefits on involvement in agricultural activities.

Tiwari and Pankaj (2002), in their study found that the attitude of Saotal farmer had low to medium relationship with modern agricultural practices.

2.4 The Conceptual Framework of the Study

The assessment of participation of Saotal farmers in agricultural activities requires a sound and symmetric conceptual model. Peoples' participation as basic human right is essential for effective rural development programs (Casrillo, 1982) and that developing programs must benefit all sections of the society (Singh and Singh, 2002). Most cases, the development strategies ignore local people as recipients or objects as partners of total process. Concepts and theories of human participation ascertain that certain conditions or forces are to be satisfied for stimulation of local participation.

Social and psychological forces influence the Saotal farmers towards participation. Rural development efforts are thus reflection of values, attitudes and motivations of various stakeholders. The capabilities and ability of agencies to provide incentives, resources and other supportive services greatly condition the willingness of people taking part and sustain participation in various income-generating activities.

Considering concepts and people's participation, this study has been designed for assessing participation of the Saotal farmers in agricultural activities of CARITAS. In this regard, the extent of participation of the Saotal farmers need to be emphasized in planning and execution of a conceptual Saotal agricultural extension programs for their socio-economic upliftment in respect to rural agriculture.

The Saotal farmer belongs to an important sub-system of the Saotal ethnic society. This community should be paid adequate attention and given opportunity to involve Saotal in activities of various process of new agricultural extension approach suitable for them.*The model focuses major areas of participation in agricultural activities of the Saotal farmer in agricultural activities under the study area.

Individual personality could comprise various interrelated characteristics those of an individual can be considered to have influence on participation in activities of agriculture. After careful consideration of rural settings, 10 relevant factors of the Saotal were selected for investigation. The present study was exclusively concentrated on empirical phase of the Saotal farmer dealing with individual characteristics as independent variables which includes age, educational qualification, agricultural training received, farm size, annual income, credit received, cosmopolitaness, NGO participation, extension communication exposure and attitude towards NGOs. The participation of the Saotal farmers in agricultural activities of CARITS was considered as the dependent variables. The dependent variable consist of three major aspects of agriculture namely crop cultivation, livestock rearing and homestead plantation. On the other hand, seven activities

under each of the aspects of agriculture were included for determining the dependent variable.

The characteristics of an individual determine the extent how he faces a challenge and what does when participates in the agricultural activities. The problem is an obstacle in performing activities to reach a goal. Problem investigation is necessary for finding out the means of solving those and hence attempts have been made to redress problems of Saotal farmers in selected crop cultivation, livestock rearing and homestead plantation relating activities. In the present study 15 problem were considered regarding the participation in agricultural activities of CARITAS which covers the above three aspects of agriculture.

The implementation phase mainly concerns the agencies and policy makers to find out strategies, ways and means for executing outcomes of present study. It is postulated that the findings would provide with information needed for designing a new model of long awaiting the Saotal agricultural extension program.

In the light of the forgoing discussion, a conceptual model has been developed for this study as shown in the Figure 2.1. Solid arrows indicate the associations which have been investigated and broken arrows indicate the associations which have not been investigated in the present study.

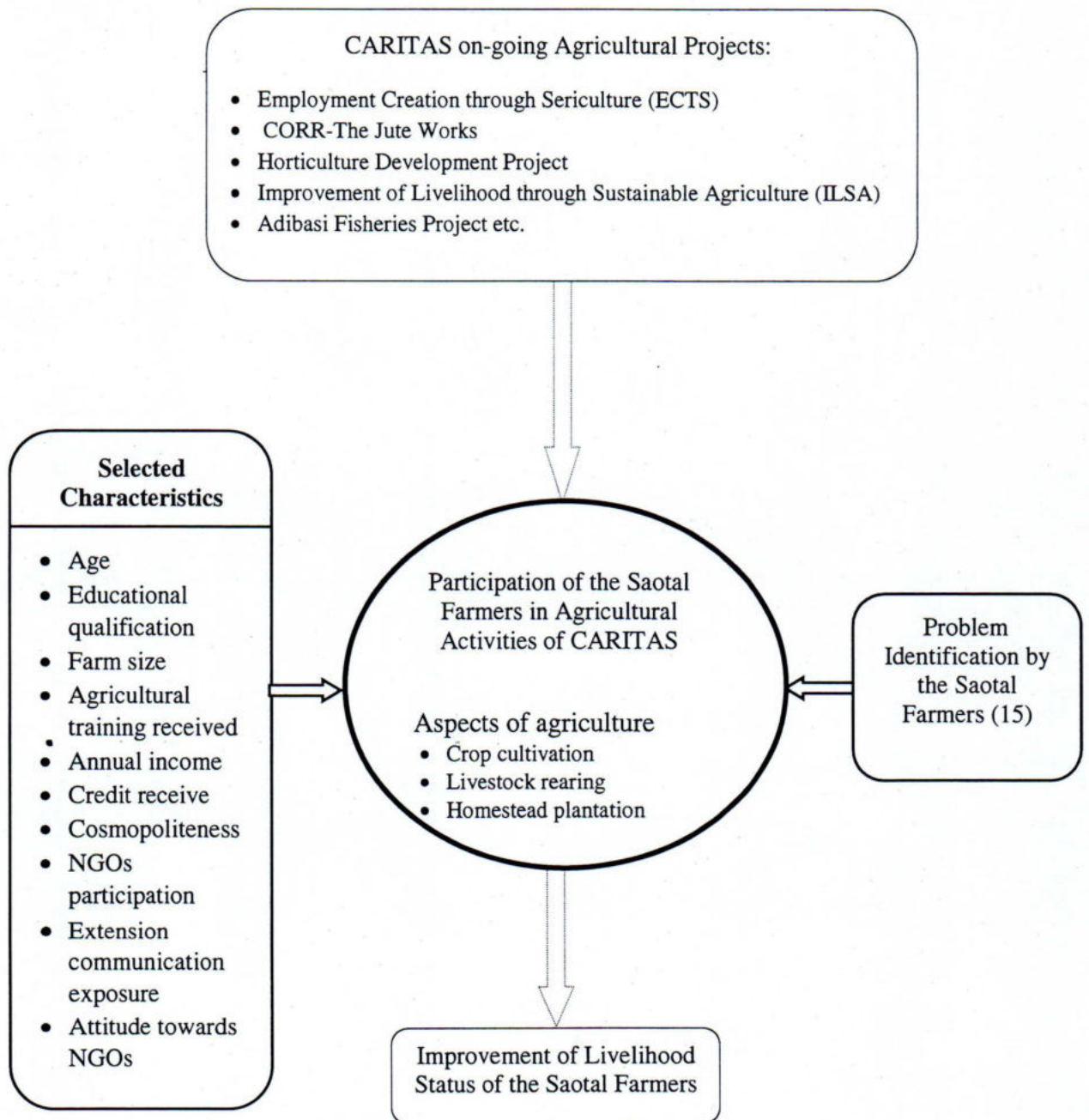


Figure 2.1 Conceptual framework of the study

CHAPTER 3

METHODOLOGY

Methodology deserves a very careful consideration in any scientific research. Importance of methodology in considering any research cannot be neglected. Keeping this point in view, the researcher took utmost care for using proper methods in all aspects of this investigation. A chronological description of the methods and procedure has been presented in following sections in this Chapter.

3.1 Locale of the Study

Considering comprehensive participation of the Saotal farmers in agricultural activities of CARITAS, Biral upazila and Chirirbandar upazila under Dinajpur district were selected as locale of the study. Five villages namely Bisnopur, Borhanagor, Haljoy, Ragudevpur, and Bahbaldhighi of Ranipukur union and two villages namely Khozapur and Maguraban of Farrakaband union of Biral upazila, and two villages namely Baul and Mazina of Auliapukur union and one village namely durgadanga of Bhiaail union of Chirirbandar upazila were selected where the Saotal farmers live as well as involved in the CARITAS agricultural activities. The geographical location of the study area is at 25°45' N and 89°14' E and 25°45' N and 89°14' E . A map of Dinajpur district including its upazilas as well as Bangladesh (inset) and map of Biral upazila and Chirirbandar upazila show the sampling area (Figure 3.1, and Figure 3.2 respectively).

In the selected areas crop cultivation, livestock rearing and homestead plantation were the most important activities of CARITAS. Most of the Saotal farmers were organized under different agricultural activities like paddy cultivation, poultry farming and homestead agriculture. Among the list of prescribed works, crop production appears to be an important aspect reflecting the significant role of CARITAS members. The other reasons behind the selection of these areas were easy transportation facilities, a relatively homogeneous physiographic condition and the access to an acquaintance of the researcher to the area.

3.2 Population and Sampling

Multistage random sampling procedure was followed in this study. Dinajpur district was at first purposively selected. In the second stage four unions two from Biral upazila and two unions from Chirirbandar upazila which were Ranipukur, Farrakaband, Aulia pukur and Bhiaail were selected as purposive sampling, where Saotal farmers are lived and involved in the CARITAS agricultural activities. An updated list of 192 Saotal farmers of the study area was collected from CARITAS office record. The listed 192 Saotal farmers considered as population for the present study.

The selected Saotal farmers situated in ten villages which were Bisnopur, Borhanagor, Haljoy, Ragudevpur and Bahbaldhighi from Ranipukur union; Khozapur and Maguraban from Farrakaband union; Baul and Majina from Aulia pukur union; Durgadanga from Talpukur union. In the final stage a total of 96 Saotal farmers (50 percent of the sampling population) were selected as the sample of the present study following random sampling method. Due to the possibility of unavailability of the selected respondent, a reserve list 13 Saotal farmers was made to substitute the missing respondent in the original list (Table 3.1).

Table 3.1 Distribution of population and sample of Saotal farmers of the selected unions in the Biral and Chirirbandar upazila

Upazila : Biral				
Union	Name of Village	Population	Sample size	Reserve list
Ranipukur	Bisnopur	21	10	1
	Borhanagor	17	8	1
	Haljoy	20	10	1
	Ragudevpur	23	12	2
	Bahbaldhighi	34	17	2
Farrakaband	Khozapur	18	9	1
	Maguraban	10	5	1
Upazila : Chirirbandar				
Aulia pukur	Baul	15	8	1
	Majina	22	11	2
Bhiaail	Durgadanga	12	6	1
Total		192	96	13

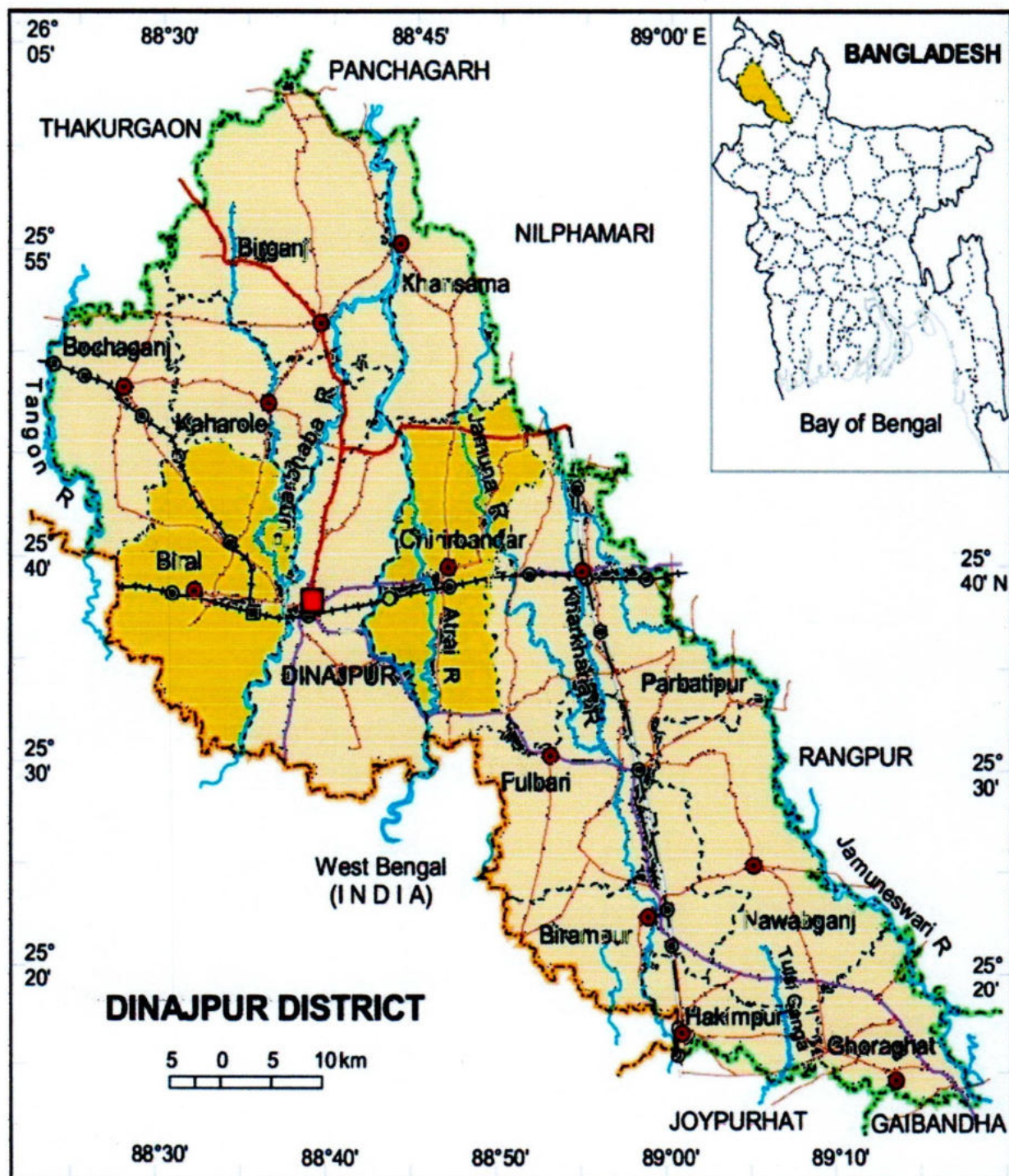


Figure 3.1 Map of Dinajpur district showing the study area (Bangladesh inset)

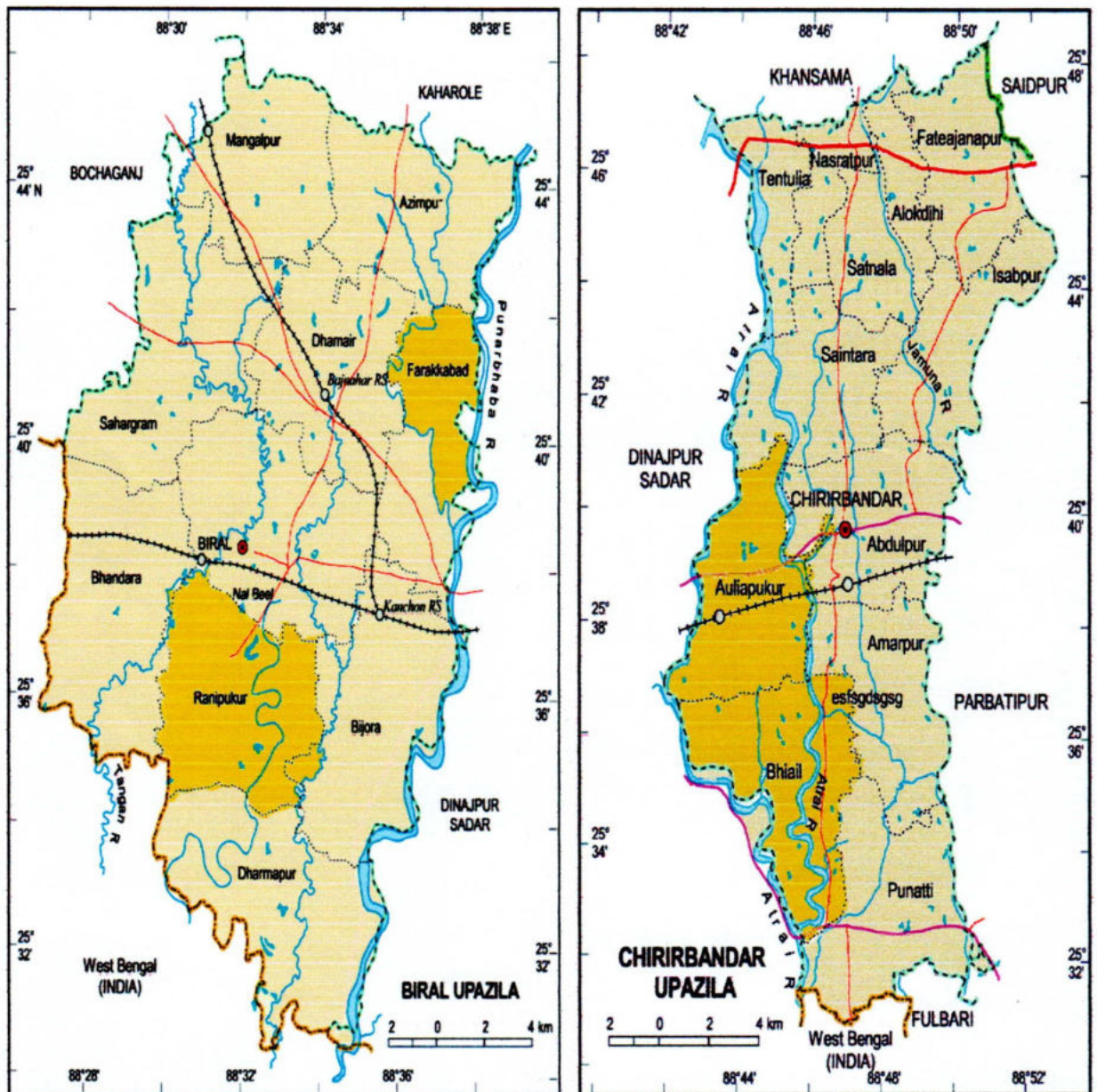


Figure 3.2 Map of Biral and Chirirbandar upazila showing the study areas

3.3 Variables of the Study and their Measurement

An independent variable is that factor which is manipulated by the researcher in his attempt to ascertain its relationships to an observed phenomenon. A dependent variable is that factor which appears, disappears or varies as the researcher introduces, removes or varies the independent variables (Townsend, 1953). In any scientific research, the selection and measurement of variables constitutes a significant task. In this connection, the researcher reviewed the literature to widen his understanding about the nature and scope of the variables relevant to this piece of research.

3.3.1 Measurement of Independent Variables

Ten characteristics of the Saotal farmers were selected as independent variables. The characteristics were age, educational qualification, farm size, agricultural training received, annual income, credit received, cosmopolitaness, NGO participation, extension communication exposure and attitude towards NGOs and these variables have been operationalized as follows.

3.3.1.1 Age

Age of a respondent referred to the period from his birth to the time of interview. Age was measured in terms of years on the basis, of his response. This variable has been shown in item no. 1 of the interview schedule (Appendix-A).

3.3.1.2 Educational qualification

Educational qualification was measured in terms of class passed by a Saotal farmer. If a person received education outside the school, his education was assessed in terms of educational standard of the school. For example, if a respondent passed the final examination of class five, his education score was taken as 5. If a respondent had, education outside school and the level of education was equivalent to that of class three of the school then his education score was taken as 3. Each illiterate person was given a score of zero. This variable has been presented in item no. 2 of the interview schedule (Appendix-A).

3.3.1.3 Farm size

Farm size of a respondent refers to the total land on which his family carried out by operations by benefit. It was measured in terms of full benefit to him and was expressed in decimal. This variable has been presented in question no. 3 of the interview schedule (Appendix-A). It was computed in decimal by using this formula.

$$FS = A_1 + A_2 + A_3 + \frac{1}{2}(A_4 + A_5) + A_6$$

Where,

FS = Farm size

A_1 = Homestead

A_2 = Own land under own cultivation

A_3 = Land taken from others on mortgage.

A_4 = Land given to others on barga

A_5 = Land taken from others on barga

A_6 = Others

3.3.1.4 Agricultural training received

Agricultural training received was measured by the number of days that a respondent had received any agricultural training in previous three years. It was indicated by the total number of days of training received by a respondent under different training programs. If the respondents get one week training then his agricultural training received score will be 7. This variable has been presented in item no. 4 of the interview schedule (Appendix-A).

3.3.1.5 Annual income

Annual income was measured on the basis of his (as well as the member of the family) total yearly income in thousand taka from different sources like field crop cultivation (e. g. rice, wheat, maize, Potato), milk, domestic animals, poultry, fruits, land given to others on mortgage/lease, business, and other sources. Income from a respondent and other members of his family together to obtain his total family income. If income of an individual is Tk. 1,000 the score was given 1, if income is Tk. 8,000 then the score was 8. This variable has been presented in item no. 5 of the interview schedule (Appendix-A).

3.3.1.6 Credit received

Credit received of a respondent was measured in terms of the amount of money received by him as loan from Rajshahi Krishi Unnayan Bank, NGO, local moneylender and others under its specialized terms and conditions. It was also expressed taka in thousand and the score was given as the way of annual income. This variable has been presented in item no. 6 of the interview schedule (Appendix-A).

3.3.1.7 Cosmopoliteness

Behavior of a Saotal farmer was measured by computing a cosmopoliteness score based on his frequency of visits to five different places external from his social system. Each farmer was asked to indicate the number of his visits to the five different types of places. Weight assigned to his responses was 0, 1, 2, 3 or more according to the number of visits. The possible range of scores could vary from 0 to 15, where 0 indicates no cosmopoliteness and 15 indicates very high cosmopoliteness. This variable has been presented in question no. 7 of the interview schedule (Appendix-A).

3.3.1.8 NGO participation

The NGO participation of a respondent was measured on the basis of the extent of participation by a respondent with NGOs individually. Selected NGOs were CARITAS, BRAC, ASA and others. Weights assigned to the type of responses were 0, 1 and 2 for no participation, member and team leader respectively. Scores obtained by respondent on each of the NGO which indicated extent of participation, were summed-up to get the NGO participation score. This variable has been presented in item no. 8 of the interview schedule (Appendix-A).

3.3.1.9 Extension communication exposure

Extension communication exposure of a Saotal farmer was measured by computing scores based on his frequency of communication with ten different media. These are, Sub-Assistant Agriculture Office (SAAO) per month, input dealer per month, CARITAS's worker per month, neighbor per day, Union Parishad member per month, Upazila Agriculture Officer(UAO) per year, Upazila

Livestock Officer(ULO) per year, village meeting per year, result demonstration meeting per year, and watching agricultural TV program per month. This variable has been presented in item no. 9 of the interview schedule (Appendix-A). Weight assigned as followed:

Contact	Name of media	Extent of contact	Weight
Individual contact	- SAAO/Month - Input dealer/Month - Caritas worker/Month	Not even once	0
		1-2 times	1
		3-4 times	2
		5 or more times	3
	-Neighbor /Day	Not even once	0
		1-2 times	1
		3-4 times	2
		5 or more times	3
	-Union Parisad Member/Month	Not even once	0
		1-2 times	1
		3-4 times	2
		5 or more times	3
	-UAO/Year -ULO/Year	Not even once	0
		Only 1 time	1
		2 times	2
		3 or more	3
Group contact	-Village meeting/Year	Not even once	0
		Only 1 time	1
		2 times	2
		3 or more	3
	-Result demonstration meeting/Year	Not even once	0
		Only 1 time	1
		2 times	2
		3 or more	3
Mass contact	-Watching Agricultural TV program/Month	Not even once	0
		Only 1 time	1
		2 times	2
		3 or more	3

The possible range of scores could vary from 0 to 30, where 0 indicates no Extension communication exposure and 30 indicates high Extension communication exposure.

3.3.1.10 Attitude towards NGOs

Attitude towards NGOs may be defined as predisposition to act towards an object in a certain manner. Attitude of a respondent towards NGO activities was used to

refer his felling and action tendency towards the various aspects of NGO activities. Likert type attitude scale was used to determine the attitude towards NGO activities. The variable was measured by constructing an attitude scale of six statements (three were positives and three were negatives). A statement was considered as positive if it possessed an idea favorable towards the NGO activities. On the other hand, a statement was considered as negative if it was unfavorable towards the NGO activities. The respondents were asked to express their opinions in the forms of strongly agree, agree, undecided, disagree and strongly disagree. The statements were given scores for 'strongly agree'=5, 'agree'=4, 'undecided'=3, 'disagree'=2 and 'strongly disagree'=1 (Giri, 2002). A reverse scoring method was followed in case of statements considered negative. Attitude towards NGO activities score of a respondent was determined by summing the scores obtained by him for all the items in the scale. The attitude scale of a respondent could be ranged from 0 to 30, showing higher scores for favorable attitude and lower score for unfavorable attitude. This variable has been presented in item no. 10 of the interview schedule (Appendix-A).

3.3.2 Measurement of dependent variable

Participation of the Saotal farmers in agricultural activities of CARITAS was the dependent variable of this study. A total of 21 selected items were constructed to measure each farmer's participation in the agricultural activities performed by CARITAS. A four-point scale was used to measure the opinion of the respondent against each item with responses namely not at all, seldom, often and regular.

The dependent variable consist of three major aspects of agriculture namely crop cultivation, livestock rearing and homestead plantation. Seven activities such as use of seed preservation, preparation of ideal seedbed, application of organic manure, application of balanced fertilizer, follow up irrigation in paddy, control of insects pest in paddy and use of modern seeds were included under crop cultivation.

Under livestock rearing seven activities namely artificial insemination, feeding granular feed, cleaning cowshed, washing cattle, vaccination of poultry, vaccination of cattle and feeding balance died to poultry were also included.

There were also seven activities included under homestead plantation namely preparation of ideal pit, application of manures in pit, timely plantation of saplings, timely irrigation, application of fertilizer, application of insecticide, and training and pruning.

The scale used for computing extent of participation of the Saotal farmers in agricultural activities of CARITAS were 0, 1, 2 and 3 for not at all, seldom, often and regular respectively. The score obtained by the Saotal farmer on a particular agricultural activity participation score, which could range from 0 to 63. Again, Agricultural Participation Index (API) was calculated by using the following formula:

$$API = N_{NP} \times 0 + N_{SP} \times 1 + N_{OP} \times 2 + N_{RP} \times 3$$

Where,

N_{NP} = Total number of respondents expressed not at all participation for an activity

N_{SP} = Total number of respondents expressed seldom participation for an activity

N_{OP} = Total number of respondents expressed often participation for an activity

N_{RP} = Total number of respondents expressed regular participation for an activity

Thus, API could be ranged from 0 to 288 while 0 indicating no participation and 288 indicating regular participation. API on seven activities on each of the three aspects of participation and rank order were computed for each selected agricultural participation activity.

3.4 Measurement of Problem

Problems confrontation of the farmers in the participation of agricultural activities were measured by using closed form questions as shown in the item no.12 of the interview schedule (Appendix-A). The farmers were asked to give their opinion on 15 selected problems regarding the participation in agricultural activities of

CARITAS. A four-point scale was used for computing the problem score of a respondent. For each problem, score of 0, 1, 2, and 3 was assigned to indicate extent of problem confrontation such as not at all, low, medium and high problem respectively. The possible range scores of problems could be 0 to 45 while 0 indicating no problem and 45 indicating high problem faced by the Saotal farmers in participating agricultural activities of CARITAS. To ascertain the comparison among the problems, Problem Confrontation Index (PCI) was computed by using the following formula:

$$PCI = (F_n \times 0) + (F_l \times 1) + (F_m \times 2) + (F_h \times 3)$$

Where,

F_n = Frequency of the farmers having not at all problem

F_l = Frequency of the farmers having low problem

F_m = Frequency of the farmers having medium problem

F_h = Frequency of the farmers having high problem

3.5 Hypothesis of the Study

The following null hypothesis was formulated to explore the relationship between the selected characteristics of the Saotal farmers' and their participation in agricultural activities of CARITAS. "There is no relationship between participation of the Saotal farmers in agricultural activities of CARITAS and their 10 selected characteristics".

3.6 Instrument for Data Collection

In order to collect relevant data an interview schedule was carefully prepared, keeping the objectives of the research in view and following the procedure of measurement of variables as described above. Direct questions, close-ended questions and different scales were used to obtain data. Direct questions were used to obtain data like age, educational qualification, farm size, training received, annual income, credit received and NGOs participation. Scales were used to

determine attitude towards NGOs and extent of participation of the Saotal farmers in the agricultural activities of CARITAS. The interview schedule was pre-tested before finalizing the interview schedule for data collection. Based on the pre-test result, necessary addition, deletion and corrections were made in the interview schedule. At first, the schedule was prepared in English, which was finally transferred to Bengali version for clear understanding of the respondents (an English version of the interview schedule is enclosed in Appendix- A).

3.7 Data Collection

Data were collected by the researcher himself using structured interview schedule through face-to-face contact. Before data collection, the selected respondents were well informed by the CARITAS personnel. Researcher established desired rapport with the respondents before explaining the purpose of the research and collection of data. If any respondent failed to understand any questions, utmost care was taken to explain it as far as possible. In order to minimize error, the information of the respondent was carefully recorded and duly checked. Collection of data was started on 1 September 2012 and completed on 15 October 2012.

3.8 Data Processing and Analysis

The collected data was compiled, tabulated, coded and analyzed for statistical analysis according to the objectives of the research. Descriptive statistic such as range, mean, number, percentage, standard deviation and rank order was used wherever necessary in describing the selected variables. Pearson's Product Moment Correlation Co-efficient (r) was used to examine the relationships of independent variables of the Saotal farmer with their participation in agricultural activities of CARITAS (dependent variable). The soft-wares: Excels and SPSS were used to analyze the data.

CHAPTER 4

RESULT AND DISCUSSION

The results of the present study are presented in this chapter with the help of proper statistical analysis along with their logical interpretations. This study has been conveniently presented in four sections according to the objectives. The first section deals with the selected characteristics of the Saotal farmers. The second section deals with the extent of participation of the Saotal farmers in agricultural activities of CARITAS. The third section deals with the relationship between the selected characteristics of Saotal farmer and their participation in agricultural activities of CARITAS and the last section deals with the problem faced by the Saotal farmers in agricultural activities of CARITAS.

4.1 Selected Characteristics of the Saotal Farmers

Participation of the Saotal farmers in agricultural activities of CARITAS was determined largely by their characteristics. Many characteristics of Saotal farmers may influence to their Participation in agricultural activities of CARITAS. However, only 10 characteristics namely age, educational qualification, farm size, agricultural training received, annual income, credit received, cosmopolitaness, NGO participation, extension communication exposure and attitude towards NGOs are included in this study. It was assumed that participation of the Saotal farmers in agricultural activities of CARITAS would vary according to their various characteristics. The salient features of different characteristics have been presented in Table 4.1.

4.1.1 Age

According to Smith and Zope (1970) an individual's age is one of the most important factors pertaining to his personality makeup, since his need and the way in which he thinks and behaves are all closely related to the number of years she has lived.

Age of the Saotal farmers ranged from 21 to 65 years, with a mean of 37.90 years and standard deviation of 10.56. For the purpose of analysis, respondents were classified into three categories (Table 4.1).

Data contained in Table 4.1 indicate that about fifty percent (47.9) of the Saotal farmers are young, 40.6 percent are middle and 11.5 percent are old aged. The results indicate that the young and middle-aged farmers are dominant in participation in agricultural activities than that of old aged farmers.

4.1.2 Educational qualification

Exposure to formal education is very important for shaping-up the behavior of an individual. Education compels an individual to seek, accumulate as well as assimilate knowledge for appropriate uses. Education always plays an important role for participation in decision-making process (Rahman, 2008). Moreover, educational qualification of the Saotal farmers influences in participation in agricultural activities.

The level of education of the Saotal farmers ranged from 0 to 8 years of schooling having an the average of 1.54 and standard deviation 1.86. On the basis of their level of education, the Saotal farmer were also classified into three categories viz. illiterate, primary and secondary are presented in Table no 4.1.

More than four-fifths (85.4 percent) of the respondents had primary education, 11.5 percent were illiterate and only 3.1 percent had secondary education. The findings indicate the literacy rate of the Saotal farmers is greater than the national average (56.7 percent, BBS, 2011) literacy. It may be due to the participation of the farmers in CARITAS activities. Therefore, it can say that, the NGOs that working in our country done well for education. It will help the Saotal farmer to explore new ideas and to solve problems in agricultural activities.

4.1.3 Farm size

The most important production factor of a farmer is the land. It is a scarce resource in Bangladesh. The farm size is the main indicator of holding farming status by the farmers.

The farm size of the respondents varied from 0.02 to 0.56 decimal. The average farm size is 0.065 with a standard deviation of 0.073. Based on farm size, the respondents were classified into two categories as landless and marginal (Table 4.1).

Data indicates that the 97.9 percent of Saotal farmers belonged to the landless category and a negligible portion 2.1 percent had marginal farm. The result indicates that most of the respondents were in the landless category. It may be due to the reason that the Saotal people in Bangladesh hold a small amount of cultivable land. On the other hand, it is a general trend of Bangladesh that farm size of the people decreased day by day to land fragmentation through generation to generation.

4.1.4 Agricultural training received

Training refers to the activities imparted by various GOs and NGOs to improve the knowledge and skill of an individual for doing a particular job. On the other hand, agricultural training received means participation of the respondent in different training programs by which they get an opportunity to gather knowledge and skills on various aspects of modern farming activities.

The training received score of the Saotal farmers ranged from 0 to 15, the average being 1.68 and standard deviation of 3.53. Based on agricultural training received score, the respondents were classified into three categories: no training (0), short duration training (1-10) and medium duration training (≥ 11) as shown in (Table 4.1).

Data contained in Table 4.1 shows that about four-fifths (78.1 percent) of Saotal farmer had no training, 17.7 percent had short duration training and only 4.2 percent had medium duration training. It may be due to the reason that CARITAS as well as other agencies does not provide sufficient training for the Saotal farmers.

4.1.5 Annual income

Annual income of a Saotal farmer means the amount of money earned by him from crops, livestock and other accessible sources.

Table 4.1 Distribution of the Saotal farmers according to their selected characteristics

Characteristics	Scoring method	Range		Categories	Respondents		Mean	SD
		Possible	Observed		No.	%		
Age	No. of year	Unknown	21-65	Young(up to 35)	46	47.9	37.90	10.56
				Middle aged (36-50)	39	40.6		
				Old(>50)	11	11.5		
Educational qualification	Year of schooling	Unknown	0-8	Illiterate (0)	11	11.5	1.54	1.86
				Primary (1-5)	82	85.4		
				Secondary (≥6)	3	3.1		
Farm size	Decimal	Unknown	.02-.56	Landless (up to 0.50)	94	97.9	0.065	.073
				Marginal (>0.50)	2	2.1		
Agricultural training received	Day	Unknown	0-15	No training (0)	75	78.1	1.68	3.53
				Short duration training (1-10)	17	17.7		
				Medium duration training (≥11)	4	4.2		
Annual income	('000' Tk.)	Unknown	20-110	Low income (up to 33)	27	28.1	39.74	12.49
				Medium income (34-50)	56	58.3		
				High income (>50)	13	13.6		
Credit received	('000' Tk.)	Unknown	0-16	No amount recipient (0)	54	56.2	3.79	4.76
				Medium amount recipient (2-6)	11	11.5		
				High amount recipient (>6)	31	32.3		
Cosmopolitaness	Scores	Unknown	2-12	Low (up to 5)	29	30.2	6.45	2.36
				Medium (6-8)	46	47.9		
				High (>8)	21	21.9		
NGO participation	Scores	Unknown	1-5	Low (up to 1)	85	88.5	1.26	0.84
				Medium (2-3)	7	7.3		
				High (>3)	4	4.2		
Extension communication exposure	Scores	Unknown	2-18	Low (up to 6)	34	35.4	8.41	3.69
				Medium (7-10)	38	39.6		
				High (>10)	24	25.0		
Attitude towards NGOs	Scores	6-30	10-20	Less favorable (upto 15)	29	30.2	16.72	2.51
				Moderately favorable (16-18)	40	41.7		
				Highly favorable (>18)	27	28.1		

Annual income score of respondents ranged from 20 to 110 thousand Taka with an average of 39.74 and standard deviation of 12.49. Based on the annual income, the respondents were classified into three categories such as low income (up to 33), medium income (34-50) and high income (>50) (Table 4.1).

Computed data indicate that 58.3 percent of respondent had medium income, 28.1 percent had low income and 13.6 percent had high income. The findings indicate that majority (86.4 percent) of the respondents had low to medium income.

This may be due to the reason that the Saotal farmers very small farm size. As a result, the family income of the majority respondents had medium level in the study.

4.1.6 Credit received

Credit received of a respondent referred to the amount of money as loan actually received by the respondent from other sources during the previous year. Credit received of the Saotal farmers may influences their participation in agricultural activities. Credit program of NGO have been started in the decade of 1971. Rural people received credit from the money leader before starting this program.

The credit received score by the Saotal farmers under this study ranged from 0 to 16 with the mean of 3.79 and standard deviation of 4.76. Based on the credit received the respondents were classified into three categories viz. no amount recipient (0), medium amount recipient (2-6) and high amount recipient (>6) are presented in Table 4.1.

Data contained in Table 4.1 show that more than half (56.2 percent) of the Saotal farmer had no credit received, 32.3 percent had taken high credit, and only 11.5 percent had taken medium credit from different source. Analysis of data indicates about two-fifths (43.8 percent) of the respondents were credit recipient. The Saotal farmers do not get credit according to their need, but hopefully it is being increased gradually.

4.1.7 Cosmopoliteness

People differ in their traveling behaviors; some enjoy traveling to different places while others confine themselves within a narrow boundary. Those peoples who are

outward going by nature come into contact with different people, see new things, get new experiences and ideas. These people liberate themselves from narrow attitudes and develop within themselves a pliant attitude. These people exhibit different attitude and behavior in many aspects of everyday life compared to the others.

Cosmopolitanism scores of the Saotal farmers ranged from 2 to 12 with a mean of 6.45 and standard deviation of 2.36. On the basis of overall scores of cosmopolitanism, the respondents were classified into three categories such as low (up to 5), medium (6-8) and high (>8) as shown in Table 4.1.

It is observed from the in Table 4.1 indicates that about half of the Saotal farmers (47.9 percent) of had medium cosmopolitanism while 30.2 percent having low and 21.9 percent having high cosmopolitanism. The finding indicates that about four-fifths (78.1 percent) of the farmers had low to medium cosmopolitanism. Similar finding was also reflected in the study of Muttaleb (2006).

The main reasons of the high cosmopolitanism of the farmers in the study area might be because in recent years the road transport and the communication network in Bangladesh has considerably been developed. Communication system even in the rural areas has improved much now-a-days which enables the people to keep them in close contact with the upazila, district headquarters and other places. At present vehicles like bus, tempo, baby taxi, rickshaw, van, bi-cycle etc. are almost always available in a rural areas as a transport media.

4.1.8 NGO Participation

Participation refers to the extent of performing the development activities including crop development, livestock development, fish development etc.

NGO participation scores of the Saotal farmers ranged from 1 to 5. The mean and standard deviation was 1.26 and 0.84 respectively. Based on NGO participation, the respondents were classified into three categories such as low (up to 1), medium (2-3) and high (>3) as shown in Table 4.1.

Computed data indicate that the highest proportion (88.5 percent) of the respondent had low participation, while 7.3 percent having medium participation and only (4.2 percent) had high participation. The finding may be due to the reason that the Saotal farmers are very conservative in participation of different agricultural programs.

4.1.9 Extension communication exposure

Extension communication exposure refers to aim an individual's contact with different extension communication channels for receiving modern agricultural information.

The extension communication exposure scores of the Saotal farmers ranged from 2 to 18, with the average being 8.41 and standard deviation 3.69. The respondents were classified into three categories based on their extension communication exposure as low (up to 6), medium (7-10) and high (>10) as shown in Table 4.1.

Data presented in Table 4.1 shows that 39.6 percent of the Saotal farmers had medium communication exposure, 35.4 percent had low communication exposure and 25.0 percent had high extension communication exposure. The findings indicate that three-fourths(75.0 percent) of the Saotal farmers had low to medium communication exposure. This may be due to the reason that the Saotal farmers contact only those channels which are available and close to them.

4.1.10 Attitude towards NGOs

The term attitude towards NGO is used to refer the feelings, belief and action tendency of the respondent towards the various aspects of NGOs activities.

The scores of attitude towards NGOs of the Saotal farmers could range from 6 to 30, while the observe score ranged form 10 to 20. The average score was 16.72 and standard deviation of 2.51. Based on their score the respondents were classified into three categories such as less favorable (up to 15), moderately favorable (16-18) and highly favorable (>18) as shown in (Table 4.1).

Data presented in Table 4.1 show that highest proportion (41.7 percent) of the Saotal farmers were moderately favorable attitude, 30.2 percent were less favorable

and 28.1 percent highly favorable attitude towards NGO. Analysis of data indicates about three-fourth (71.9 percent) of the Saotal farmers moderately to less favorable attitude towards NGOs. As the Saotal farmers had favorable attitude towards NGOs, they are participate in agricultural activities of CARITAS as well as other development activities also.

4.2 Participation of Saotal Farmer's in Agricultural Activities of CARITAS

The findings in each of three selected aspects mentioned earlier have been presented in this section. The ways and means adopted for describing the findings on participation of Saotal farmers were frequency distribution of all activities for statistical measures and Agricultural Participation Index (API) in participants of the seven selected activities of individual aspects.

4.2.1 Participation in crop cultivation activities

This subsection deals with the findings of participation of Saotal farmers in seven selected activities of crop cultivation.

Table 4.2 Distribution of the Saotal farmers in participating crop cultivation activities of CARITAS

Sl. No.	Crop cultivation activities	Frequency of farmers				API	Rank order
		Not at all	Seldom	Often	Regular		
1.	Seed preservation	90	2	3	1	11	7 th
2.	Preparation of ideal seedbed	68	0	11	17	73	3 rd
3.	Application of organic manure	67	4	13	12	66	5 th
4.	Application of balanced fertilizer	69	10	15	2	46	6 th
5.	Follow up irrigation in paddy field	68	0	10	18	74	2 nd
6.	Control of insect pest in paddy field	66	3	16	11	68	4 th
7.	Use of modern seeds	68	0	5	23	79	1 st

The API values of each of the crop cultivation activities ranged from 11 to 79 against the possible range of 0 to 288. The findings show that the participation in crop cultivation activities of the Saotal farmers varied largely. The highest portion of the Saotal farmers' participated activities was use of modern seeds followed by follow up irrigation in paddy field, preparation of ideal seedbed and so on. The least participated activity was seed preservation.

The extension planner and organizer of CARITAS must render a close investigation for Saotal farmers of Dinajpur district as to what extent the crop cultivation would be suitable for the farmers. As the crop cultivation is one of the major aspect of agriculture among the Saotal farmers, agricultural extension planning, execution of programs and activities by the extension personnel and workers of CARITAS for the Saotal farmers in their social system should develop a special extension approach.

4.2.2 Participation in livestock rearing activities

This subsection deals with the findings of participation of Saotal farmers in seven selected activities of livestock rearing. The Saotal farmers had participation with the seven selected activities with varying degrees for seeking their information. The farmers were classified into four categories such as not at all, seldom, often and regular. In order to obtain rank order API index were computed against each of the livestock rearing activities. The API values of each of the livestock rearing activities ranged from 62 to 183 against the possible range of 0 to 288 (Table 4.2).

Table 4.2 Distribution of Saotal farmers in participating livestock rearing activities of CARITAS

Sl. No.	Livestock rearing activities	Percentage of farmers				API	Rank order
		Not at all	Seldom	Often	Regular		
1.	Artificial insemination	47	37	9	3	64	5 th
2.	Feeding granular feed	29	14	44	9	129	3 rd
3.	Cleaning cowshed	29	4	10	53	183	1 st
4.	Washing cattle	29	7	20	40	167	2 nd
5.	Vaccination of poultry	65	13	5	13	62	7 th
6.	Vaccination of cattle	37	24	24	11	105	4 th
7.	Feeding balanced diet to the poultry	42	45	9	0	63	6 th

The findings show that the participation of the Saotal farmers with the seven selected livestock rearing activities varied to a great extent. The Saotal farmers had highest participation in cleaning cowshed followed by washing cattle, feeding granular feed and so forth. The least participated activities was vaccination of poultry.

The Saotal farmer hardly keep contact with outside agencies and remain confined themselves without much mobility. Unless the farmers visit and meet, it is difficult to get any kind of service from the livestock officials working at upazila. Therefore, the DLS should provide special attention in livestock rearing of Saotal farmers.

4.2.3 Participation in homestead plantation activities

This subsection deals with the findings of participation of Saotal farmers in seven selected activities of homestead plantation activities. The respondents had participation with the selected homestead plantation activities with varying degrees. The farmers were also categorize into four and API index were calculated just like livestock rearing. The API values of each of the homestead plantation activities ranged from 52 to 252 against the possible range of 0 to 288 (Table 4.4).

Table 4.4 Distribution of Saotal farmers in participating homestead plantation activities of CARITAS

Sl. No.	Homestead plantation	Frequency of farmers				API	Rank order
		Not at all	Seldom	Often	Regular		
1.	Preparation of ideal pit	2	6	18	70	252	1 st
2.	Application of manures in pit	4	15	34	43	212	3 rd
3.	Timely plantation of saplings	4	4	55	33	213	2 nd
4.	Timely irrigation	6	22	44	24	182	4 th
5.	Application of fertilizer	14	66	16	0	98	5 th
6.	Application of insecticides	58	27	8	3	52	7 th
7.	Training and pruning	40	43	12	1	70	6 th

The findings indicated that the respondents had highest participation on preparation of ideal pit followed by timely plantation of sapling, application of manures in pit and so on. The least participated activities was application of insecticide.

4.2.5 Overall agricultural participation of Saotal farmers

Participation of the Saotal farmers in agricultural activities was also examined on the basis of their overall participation in agricultural activities scores. The scores of participation of the Saotal farmers in agricultural activities ranged from 0 to 49,

against a possible score of 0 to 63. The mean and standard deviation were 22.48 and 12.20 respectively. Based on total scores, the Saotal farmers were classified into three categories namely low participation (up to 16), medium participation (17-29) and high participation (>29).

Table 4.5 Distribution of the respondents according to their participation of agricultural activities of CARITAS

Categories	Respondents		Observed range	Mean	SD
	Number	Percent			
Low participation (up to 16)	33	34.38	0-49	22.48	12.20
Medium participation (17-29)	58	60.42			
High participation (>29)	5	5.20			
Total	96	100.00			

The highest proportion (60.42percent) of the Saotal farmers had medium participation compared to 34.38 percent low and only 5.20 percent high. The findings revealed that 94.80 percent of the Saotal farmers had medium to low participation.

The probable reason was the orientation of modern technology in agricultural activities by CARITAS and other extension service providers. Therefore, it can be said that the agricultural activities of CARITAS were satisfactory. Saotal farmers are active, physically able to do agricultural activities. But these potential farmers have little extension advisors and hence updated technology remain unavailable to them. Activities and crop yields would increase significantly at adoption of the modern technology in crop cultivation, livestock rearing and homestead plantation.

4.3 Relationship between Selected Characteristics of the Saotal Farmers' and their Participation in Agricultural activities of CARITAS

This section is deal with mainly with 'participation of the Saotal farmers in agricultural activities of CARITAS. It has been opined that participation of an individual is dependent on his personal characteristics. In the present study ten personal characteristics of the Saotal, farmers' have been considered to explore the

relationship between dependent and independent variables and correlation coefficient (r) was used for this purpose (Table 4.6).

Table 4.6 Relationships between the dependent and independent variables

Dependent variable	Independent variables	Computed values of 'r' with 94 df.	Tabulated value of 'r'	
			0.05 level	0.01 level
Participation of the Saotal farmers in agricultural activities of CARITAS	Age	-0.013	± 1.986	±2.630
	Educational qualification	0.346**		
	Farm size	0.217*		
	Agricultural training received	0.288**		
	Annual income	0.352**		
	Credit received	0.435**		
	Cosmopoliteness	-0.018		
	NGO participation	0.172		
	Extension communication exposure	0.570**		
	Attitude towards NGO	0.006		

*Correlation is significant at the 0.05 level and ** Correlation is significant at the 0.01 level

4.3.1 Age and participation of the Saotal farmers in agricultural activities of CARITAS

The correlation coefficient between age of the Saotal farmers and their participation of agricultural activities was -0.013 (Table 4.6). Based on the computed 'r' value the relationship between age and participation of agricultural activities was non-significant and followed a negative trend. Hence, the concerned null hypothesis could be rejected. Thus, it could be said that the age of the respondents had no significant role on their extent of participation in agricultural activities of CARITAS.

4.3.2 Educational qualification and participation of the Saotal farmers in agricultural activities of CARITAS

The correlation coefficient between educational qualification of the Saotal farmers and their participation in agricultural activities was 0.346 (Table 4.6). Based on the computed 'r' value the relationship between educational qualification and participation of agricultural activities was significant at 0.01 level of significance

with 94 df. and followed a positive trend. Hence, the concerned null hypothesis could be rejected. Thus it could be said that the educational qualification of the respondents play a significant role on their extent of participation in agricultural activities of CARITAS.

4.3.3 Farm Size and participation of the Saotal farmers in agricultural activities of CARITAS

The computed value of correlation coefficient (r) between farm size of the Saotal farmers and their participation of agricultural activities was 0.217 as shown in Table 4.6. Based on the computed ' r ' value the relationship between farm size and participation of agricultural activities was significant at 0.05 level of significance with 94 df. and followed a positive trend. Hence, the concerned null hypothesis could be rejected. Thus, it could be said that the farm size of the respondents play a significant role on their extent of participation towards agricultural activities of CARITAS.

4.3.4 Agricultural training received and participation of the Saotal farmers in agricultural activities of CARITAS

The correlation coefficient between agricultural training received of the Saotal farmers and their participation of agricultural activities was 0.288 (Table 4.6). Based on the computed ' r ' value, the relationship between agricultural training received and participation of agricultural activities was significant at 0.01 level of significance with 94 df. and followed a positive trend. Hence, the concerned null hypothesis could be rejected. Thus it could be said that the agricultural training received of the respondents played a significant positive role on their extent of participation in agricultural activities of CARITAS.

4.3.5 Annual income and participation of the Saotal farmers in agricultural activities of CARITAS

The computed correlation coefficient (r) between annual income of the Saotal farmers and their participation of agricultural activities was 0.352 (Table 4.6). Based on the computed ' r ' value the relationship between annual income and

participation of agricultural activities was significant at 0.01 level of significance with 94 df and followed a positive trend. Hence, the concerned null hypothesis could be rejected. Thus it could be said that the annual income of the respondents was an important indicator for the extent of participation in agricultural activities of CARITAS.

4.3.6 Credit received and participation of the Saotal farmers in agricultural activities of CARITAS

The correlation coefficient between credit received of the Saotal farmers and their participation of agricultural activities was 0.435 as shown in Table 4.6. Based on the computed 'r' value the relationship between credit received and participation of agricultural activities was significant at 0.01 level of significance with 94 df. and followed a positive trend. Hence, the concerned null hypothesis could be rejected. Thus, it could be said that the credit received of the respondents played a significant role on their extent of participation in agricultural activities of CARITAS.

4.3.7 Cosmopoliteness and participation of the Saotal farmers in agricultural activities of CARITAS

The correlation coefficient between cosmopoliteness of the Saotal farmers and their participation of agricultural activities was -0.018 (Table 4.6). Based on the computed 'r' value the relationship between cosmopoliteness and participation of agricultural activities was insignificant and followed a negative trend. Hence, the concerned null hypothesis could not be rejected. Thus, it could be said that the cosmopoliteness of the respondents had no effect on their extent of participation in agricultural activities of CARITAS.

4.3.8 NGO participation and participation of the Saotal farmers in agricultural activities of CARITAS

The correlation coefficient between NGO participation of the Saotal farmers and their participation of agricultural activities was 0.172 (Table 4.6). Based on the computed 'r' value the relationship between NGO participation and participation of agricultural activities was non-significant and followed a positive trend. Hence, the

concerned null hypothesis could not be rejected. Thus, it could be said that the NGO participation of the respondents was not an important indicator for the extent of participation in agricultural activities of CARITAS.

4.3.9 Extension communication exposure and participation of the Saotal farmers in agricultural activities of CARITAS

The computed correlation coefficient (r) between extension communication exposure of the Saotal farmers and their participation of agricultural activities was 0.570 (Table 4.6). Based on the computed ' r ' value, the relationship between extension communication exposure and participation of agricultural activities was significant at 0.01 level of significance with 94 df and followed a positive trend. Hence, the concerned null hypothesis could be rejected. Thus, it could be said that the extension communication exposure of the respondents played a significant role on their extent of participation in agricultural activities of CARITAS.

4.3.10 Attitude towards NGOs and participation of the Saotal farmers in agricultural activities of CARITAS

The correlation coefficient between attitude towards NGOs of the Saotal farmers and their participation of agricultural activities was 0.006 (Table 4.6). Based on the computed ' r ' value the relationship between attitude towards NGOs and participation of agricultural activities was insignificant and followed a positive trend. Hence, the concerned null hypothesis could not be rejected. Thus, it could be said that the attitude towards NGOs of the respondents does not played any significant role on their extent of participation in agricultural activities of CARITAS.

4.4 Problems Confrontation by Saotal farmer in implementing of CARITAS program

This subsection deals with the findings of problem confrontation of Saotal farmers on 15 selected problems. The Problem Confrontation Index (PCI) of total 15 problems was developed related to field crop, livestock rearing and homestead plantation.

Table 4.7 Rank order of problem faced by the Saotal farmers in agricultural activities of CARITAS

Sl. No.	Problems	Extent of the problem citation				PCI	Rank
		Not at all	Low	Medium	Extreme		
1.	Lack of extension facilities	69	9	17	1	46	7
2.	Lack of agricultural training	73	9	11	3	40	9
3.	Attack of insect in crop field	70	20	6	0	32	11
4.	Unavailability of credit in time	73	17	4	2	31	12
5.	Insufficient knowledge about balanced fertilizer	71	17	7	1	34	10
6.	Lack of modern seeds	92	3	1	0	5	13
7.	Lack of knowledge about ideal seedbed	91	3	1	1	8	14
8.	Lack of regular vaccination of cattle	53	36	6	0	48	6
9.	Lack of granular feed for cattle	45	39	11	1	64	4
10.	Lack of seeds for artificial breeding	50	36	10	0	56	5
11.	Problem in regular feeding of cattle	35	41	19	1	82	3
12.	Application of insecticide	12	59	24	1	110	1
13.	Problem in training and pruning	34	43	16	3	84	2
14.	Lack of vigor sapling	53	42	1	0	44	8
15.	Preparation of ideal pit	93	3	0	0	3	15

The total PCI ranged from 3 to 110 with possible range of 0 to 288. The top five problems were application of insecticide, problem in training and pruning, problem in regular feeding of cattle, lack of granular feed for cattle and lack of seeds for artificial breeding. The least problem was preparation of ideal pit

The ingredients of future agricultural extension programs and activities of CARITAS must have to be based on solving the current agricultural problems and activities of Saotal farmers. The Saotal farmers face many problems with their life as well as agricultural activities. The Saotal farmers need various problem solving services from agro service providing GOs and NGOs. CARITAS was a key

resource of income and survival for the Saotal farmers. Therefore, there had been an urgent need to organize a special philanthropic approach for crop cultivation. For upgrading and increasing livestock activities, there is a need for undertaking much extension program. The livestock officials must have a care for such program to be launched among the new client group who badly need economic and social upliftment.

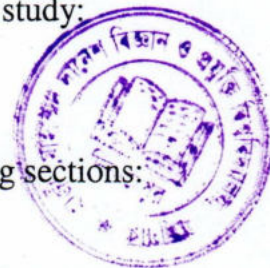
CHAPTER 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The study was undertaken to determine the participation of the Saotal farmers in agricultural activities of CARITAS. The study was conducted in Biral and Chirirbandar upazilas of Dinajpur district. Data were collected from 96 Saotal farmers by using multistage random sampling procedure. This chapter presented the summary of the findings, conclusion and recommendations for the study:

5.1 Summary of the Findings

The major findings of the study have been summarized in the following sections:



5.1.1 Selected characteristics of the Saotal farmer

Age of the Saotal farmers ranged from 21 to 65, the average age being 37.90 years and standard deviation of 10.56. It revealed from the findings that the highest proportions (47.9 percent) were young aged, 40.6 percent were middle and only 11.5 percent were old aged.

Educational qualification of the Saotal farmers ranged from 0 to 8 years of schooling, the average being 1.54 years of schooling and standard deviation of 1.86. Data indicate that maximum (45.4 percent) of the Saotal farmers had primary education, 11.5 percent had no education and only 3.1 percent farmers had secondary level education.

Farm size of the Saotal farmers ranged from 0.02 to 0.56, the average being 0.065 decimal and standard deviation of 0.073. Data reveal that 97.9 percent were landless, and 2.1 percent were marginal landholder.

Agricultural training received by the Saotal farmers ranged from 0 to 15, the average being 1.68 with a standard deviation of 3.53. Data reveal that about four-fifths (78.1 percent) of the respondents had no training, 17.7 percent respondents had low training and 4.2 percent had moderate training.

Annual income of the Saotal farmers ranged from Tk. 20 thousand to Tk. 110 thousand, the average being Tk. 39.74 and standard deviation of 12.49. Data reveal that 58.3 percent of respondents had medium income, 28.1 percent of respondents had low income and 13.7 percent of respondents had high line income.

Credit received by the Saotal farmers ranged from 0 to 16, the average being 3.79 and standard deviation of 4.76. The maximum (56.2 percent) respondents had received no credit, 32.3 percent were high credit receiver, 11.5 percent had medium credit received.

Cosmopoliteness scores of the Saotal farmers ranged from 2 to 12 with a mean of 6.45 and standard deviation of 2.36. Data reveal that 47.9 percent had medium cosmopoliteness, 30.2 percent respondents were low cosmopolite, and only 21.9 percent had high cosmopoliteness.

NGO participation scores of the Saotal farmers ranged from 1 to 5 with a mean of 1.26 and standard deviation of 0.84. 88.5 percent had low participation, 7.3 percent had medium participation and 4.2 percent had high participation in the NGO operations.

Extension communication exposure scores of the Saotal farmers ranged from 2 to 18 with a mean of 8.41 and standard deviation of 3.69. Data showed that 39.6 percent had medium extension communication exposure, 35.4 percent had low communication exposure and only 25.0 percent had high extension communication exposure.

Attitude towards NGOs scores of the Saotal farmers ranged from 10 to 20 with a mean of 16.72 and standard deviation of 2.51. 41.7 percent respondents were moderately favorable, 30.2 percent respondents were less favorable and 28.1 percent respondents were highly favorable.

5.1.2 Participation of the Saotal farmers in agricultural activities of CARITAS

The findings in each three selected aspects of agricultural development activities of CARITAS have been presented in this section.

5.1.3 Relationship between Saotal farmer's selected characteristics and participation in agricultural activities of CARITAS

According to the computed value of 'r' among the 10 selected characteristics of Saotal farmers, six namely educational qualification, farm size, agricultural training received, annual income, credit received and extension communication exposure showed significant and positive relationships with participation of Saotal farmers in agricultural activities of CARITAS while other four characters namely age, cosmopolitaness, NGO participation and attitude towards NGOs had no relationship with participation of Saotal farmers in agricultural activities of CARITAS.

5.1.4 Problems confrontation by the Saotal farmer in the program implementation of CARITAS

This subsection deals with the findings of problem confrontation of the Saotal farmers on 15 selected problems. The Problem Confrontation Index (PCI) of total 15 problems ranged from 3 to 110 with possible range of 0 to 288. The top five problems were application of insecticides (110), problem in training and pruning (84), problem in regular feeding of cattle (82) lack of granular feed for cattle and lack of seed for artificial breeding. Lack of modern seed, lack of modern ideal seedbed and preparation of ideal pit had ranked last three positions.

5.2 Conclusions

The conclusion on findings and their interpretation in the light of objectives are presented below:

1. The extension communication exposure scores of the Saotal farmers ranged from 2 to 18, with the average being 8.41 and standard deviation 3.69. The findings indicate that 39.6 percent of the Saotal farmers had medium communication exposure, 35.4 percent had low communication exposure and 25 percent had high extension communication exposure. Therefore, it may be concluded that increase the efficiency of the available and close communication channels by providing training for dissemination of agricultural information of the Saotal farmers.
2. The highest proportion (60.42percent) of the Saotal farmers had medium participation compared to 34.38 percent low and only 5.20 percent high. The

probable reason was the orientation of modern technology in agricultural activities by CARITAS. Therefore, it may be concluded that there is further scope to increase participation of Saotal farmers in agricultural development activities of CARITAS.

3. Among the 10 selected characteristics of the Saotal farmers, 6 characteristics namely educational qualification, farm size, agricultural training received, annual income, credit received and extension communication exposure had significant correlation with participation of the Saotal farmers in the agricultural activities of CARITAS. The findings promote the researcher to conclude that certain characteristics of the Saotal farmers play an important role in their application in agricultural activities.

The relationship between credit received and extension communication exposure of the respondents and their participation of agricultural activities of CARITAS was significant. Therefore, CARITAS had to give facilities of receiving credits by Saotal farmer at low cost and special attention need to be given in particular group for the communication exposure.

4. Problem Confrontation Index (PCI) computed for 15 items of problem confrontation in three aspects of agricultural activities of CARITAS ranged from 3 to 110 with possible range of 0 to 288. The Saotal farmers provided different types of ranking against the 15 selected problems. Therefore, it may be concluded that the Saotal farmers will continue to face considerable problems in agricultural activities unless steps are taken to identify different kinds of problems in various aspects and action taken to remove or minimize them.

5.3 Recommendations

5.3.1 Recommendations for CARITAS

On the basis of findings and conclusions of the present study, the following recommendations are made for the CARITAS.

1. It has been found that there were many limitations of CARITAS to involve all their beneficiaries in all kinds of agricultural activities. There were several

agricultural activities but rather in a sporadic manner. Therefore, it may be recommended that CARITAS need to organize the agricultural development activities in a systematic manner and to involve the maximum beneficiaries in the profitable and sustainable agricultural development activities.

2. In view of the unavailability of reasonable amount of homestead area for homestead production, a special plan for optional utilization of the limited amount of homestead area should be designed. Saotal farmer having small homestead size need to be motivated and to be skilled so that they could solve their problems and increase productivity.
3. The Saotal beneficiaries are less literate. They face problem in understanding the soil fertility management, management of home economy and vaccination. There is a need for gearing up training program to bridge up the literacy gap.
4. It is observed that most of the Saotal beneficiaries are landless and marginal farmers and they do livestock rearing, homestead agriculture and crop cultivation. Hence, concerned authority should explore the agricultural activities, which would be suitable and more profitable. In this context sericulture, pig rearing could be a viable supplement enterprise for economic development.

5.3.2 Recommendations for policy makers

Some suggestions have been made in respect of policy perspective for Saotal farmer's development. The following suggestions refer mainly to the program and implementations aspects.

1. Government should co-operate with the voluntary agencies who are genuinely interested and have experience in working with the Saotal at levels where a basic rapport and human relationship element is concerned.
2. Mutual respect and faith alone can pave the way for a fruitful partnership with these poor but resilient Saotal communities who are past masters in survival techniques.

5.3.3 Recommendations for future study

The present study does not represent the general picture of all Saotal community. It made an effort to show feature of a group of Saotal farmer who are already under development. Saotal farmer are different according to the geographical territory, socially, culturally, economically and linguistically. There are distinct differences based on land ownership, education, access to and utilization of institutional resources, and so on. Hence, small piece of study conducted by the researcher cannot provide all information for proper understanding the participation of the Saotal farmer. Therefore, the following suggestions are put forward for future research.

1. Participation of the agricultural activities of CARITAS may be determined by using other ways and methods, which may be used in conducting future research.
2. Relationships of ten characteristics of the Saotal farmer with their participation of the agricultural development activities have been investigated in this study. Future research should be conducted to investigate other characteristics of the Saotal farmer's participation in some other aspects.
3. This study was conducted in seven villages of Biral upazila and three villages of Chirirbandar upazila under Dinajpur district. Findings of the study to be verified by similar research in other Saotal community where the CARITAS is operating agricultural development activities.
4. In this study agricultural activities of CARITAS have been investigated. But there are so many NGOs as well as GOs which are working for agricultural development in the other Saotal community of this country. Those organizations should be included in future.
5. Findings in respect of education indicate that there is no significant relationship between educational qualification and participation, which is not logical. More research is necessary to find out the causes.

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APPENDIX- A
English Version of the Interview Schedule

Department of Agricultural Extension
Hajee Mohammad Danesh Science and Technology University, Dinajpur

**PARTICIPATION OF THE SAOTAL FARMERS IN AGRICULTURAL
ACTIVITIES OF CARITAS IN DINAJPUR DISTRICT**

Date: -----

Serial No.

Name of Respondent ----- Father's Name -----

Village: ----- Union: ----- Upazila: -----

(Please answer the following questions)

1. **Age:** How old are you? Years

2. **Educational qualification:** What is the extent of your education?

- Do not know reading and writing
- Can sign only
- Passed class _____

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

Sl. No.	Nature of use	Area	
		Decimal	Bigha
1.	Homestead		
2.	Own land under own cultivation		
3.	Land taken from others on mortgage		
4.	Land given to others on barga		
5.	Land taken from others on barga		
6.	Others		
Total			

4. Agricultural training received: Have you received any training during the last three years? Yes ☐ No ☐

If yes, please furnish the following information

Sl. No.	Name of Organization(s)	Topics	Duration (Days)
1.			
2.			
3.			

5. Annual income: Please indicate the production and income of your family has earned last year (2011) from different sources.

Sl. No.	Source of income	Production (local unit)	Seasonally (Taka)	Yearly (Taka)
1.	Rice			
2.	Wheat			
3.	Maize			
4.	Potato			
5.	Milk			
6.	Domestic animals			
7.	Poultry			
8.	Fruits			
9.	Land given to others on mortgage/lease			
10.	Business			
11.	Others (if any)			
Total income				

6. Credit received: Did you require any credit during the last year? Yes ☐ No ☐

If yes, please indicate the total amount of credit actually you received from the following sources.

Sl. No.	Source of credit	Amount received (Tk)	Purpose of credit
1.	Rajshahi Krishi Unnayan Bank		
2.	NGO		
3.	Local money leader		
4.	Others		

7. Cosmopoliteness: State the extent of visit outside of your own locality.

Sl. No.	Places of visit	Extent of visit (times)
1.	Visit to local market or UP office / month	
2.	Upazila head quarter or market / month	
3.	Visit to houses of friends or relatives / year	
4.	Visit to own district town / year	
5.	Visit to other district town / year	

8. NGO Participation: Please mention the nature and duration of your participation in the programs of the following NGOs.

Sl. No.	Name of the NGOs	No participation	Member	Team leader
1.	CARITAS			
2.	BRAC			
3.	ASA			
4.	Others			

9. Extension communication exposure: Please mention your extent of contact with the following media during the last year.

Contact	Name of media	Extent of contact (times)
Individual contact	Sub-Assistant Agriculture Officer/Month	
	Input dealer/Month	
	CARITAS worker/Month	
	Neighbour/Day	
	Union Parisad Member/Month	
	Upazila Agriculture Officer/Year	
	Upazila Livestock Officer/Year	
Group contact	Village meeting/Year	
	Result demonstration meeting/Year	
Mass contact	Watching agricultural TV program/Month	

10. Attitude towards NGOs: Please indicate your opinion about the following statements.

Sl. No.	Statements	Level of agreement				
		SA	A	U	D	SD
- 1.	The NGOs have an evil target behind assisting us. So, we should aware before accepting their help					
- 2.	In the disguise of development of NGOs are making as more dependent. So, we should avoid them					
+ 3.	NGOs have made us more conscious about human right as a result now we are making movement to achieve civic privilege					
+ 4.	I am participating in NGO programs because they are better than those of GO					
+ 5.	We have change our daily life due to the knowledge of heath and sanitation given by NGOs					
- 6.	We are losing our cultural heritage due to the NGOs activities					

SA= Strongly agree, A=Agree, U=Undecided, D=Disagree and SD= Strongly disagree

11. Participation in agricultural activities: Please indicate the extent of your participation in the following activities by putting tick (✓) marks:

Sl. No.	Activities	Extent of participation			
		Not at all	Seldom	Often	Regular
	i) Crop cultivation				
1.	Seed preservation				
2.	Preparation of ideal seedbed				
3.	Application of organic manure				
4.	Application of balanced fertilizer				
5.	Follow up irrigation in paddy field				
6.	Control of insect pest in paddy field				
7.	Use of modern seeds				

Contd.

Sl. No.	Activities	Extent of participation			
		Not at all	Seldom	Often	Regular
	ii) Livestock rearing				
1.	Artificial insemination				
2.	Feeding granular feed				
3.	Cleaning cowshed				
4.	Washing cattle				
5.	Vaccination of poultry				
6.	Vaccination of cattle				
7.	Feeding balance diet to poultry				
	iii) Homestead plantation				
•1.	Preparation of ideal pit				
2.	Application of manures in pit				
3.	Timely plantation of saplings				
4.	Timely irrigation				
5.	Application of fertilizer				
6.	Application of insecticides				
7.	Training and pruning				

12. Problem: Please mention your extent of problem in implementing of CARITAS program

Sl. No.	List of problems	Extent of Problem			
		Not at all	Low	Medium	Extreme
1.	Lack of extension facilities				
2.	Lack of agricultural training				
3.	Attack of insect in crop field				
4.	Unavailability of credit in time				
5.	Insufficient knowledge about balanced fertilizer				
6.	Lack of modern seeds				
7.	Lack of knowledge about ideal seedbed				
8.	Lack of regular vaccination of cattle				
9.	Lack of granular feed for cattle				
10.	Lack of seeds for artificial breeding				
11.	Problem in regular feeding of cattle				
12.	Attack of insect in trees				
13.	Problem in training and pruning				
14.	Lack of vigor sapling				
15.	Preparation of ideal pit				

Thanks for your help and giving me your time.

Signature of the Enumerator

Date:.....

APPENDIX-B

Correlation matrix of the dependent and independent variables

	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	Y
X ₁	1										
X ₂	-.322**	1									
X ₃	.018	-.096	1								
X ₄	-.038	.187	-.094	1							
X ₅	-.022	.146	.272**	.124	1						
X ₆	.021	.224*	-.002	.318**	.274**	1					
X ₇	.006	.031	-.042	-.149	.066	.068	1				
X ₈	.094	-.005	.107	.207*	.044	.273**	.028	1			
X ₉	-.021	.211*	.032	.387**	.413**	.452**	.026	.187	1		
X ₁₀	-.197	.094	-.171	.107	.198	.178	.057	-.101	-.082	1	
Y	-.013	.346**	.217*	.288**	.352**	.435**	-.018	.172	.570**	.006	1

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

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

X₁ = Age

X₂ = Educational qualification

X₃ = Farm size

X₄ = Agricultural training received

X₅ = Annual income

X₆ = Credit received

X₇ = Cosmopoliteness

X₈ = NGO participation

X₉ = Extension communication exposure

X₁₀ = Attitude towards NGO

Y = Participation of the Saotal farmers in agricultural activities of CARITAS