

CHAPTER-1

INTRODUCTION

1.1 ORIGIN OF THE RESEARCH PROBLEM:

The economy of Assam continues to be predominantly agrarian and thereby agriculture stands as the backbone of the economy of the state. Agricultural sector continues to support more than 75 percent population of the state directly or indirectly providing employment of more than 53 percent of the total workforce. The net cultivated area of the state is 28.11 lakh hectares (2010-11) which is about 88 percent of the total land available for agricultural cultivation in the state. According to the Agricultural census, Assam, 2010-11, the average operational holding is 1.10 hectares only and more than 85 percent of the total farmer family is small and marginal farmers.

Rice being the staple food of Assam and hence concentration of agriculture machinery on Paddy production is high. The Paddy cultivation during the year 2012-13 occupies 88.5 percent of the net cropped area and 59.8 percent of the gross cropped area in the state compared to 90.6 percent and 61.2 percent of the net cropped area and the gross cropped area respectively during the year 2011-12. As per Final estimates, the average area covered for normal paddy cultivation during the year 2012-13 was

24.88 lakh hectares or about 92.4 percent of the total area under foodgrains in the state of Assam.

Depending upon the rice growing seasons in the state of Assam, rice is classified as Sali or Winter rice, Ahu or Autumn rice and Boro or Summer rice. The Winter rice or Sali is sown in the month June- July and harvested in the month November and December in each year. Ahu or Autumn rice is sown in the month March-April and gathered in the month June-July. The period of Boro or Summer rice is November-December to May-June in each year. In respect of Autumn rice, the final forecast estimates show that the area under cultivation recorded 45.4 percent decline during the period from 2004-05 to 2012-13. The area under the winter rice, the principal Kharif crop of the state, has also recorded marginal fall by the amount of 1.01 percent or 0.19 lakh hectare during the year 2012-13 compared to the area under the crop during 2011-12.

The area under the Summer rice or Boro was 3.51 lakh hectare in the state in 2011-12. Although this apparently indicates that Boro rice is relatively unimportant in the state. But in reality Boro rice assumes significant importance in the economy of Assam because, unlike the Ahu or Sali seasons, which are affected by flood, the Boro rice seasons is relatively risk-free, which means that improved rice production techniques could be adopted totally, and there is ample scope for area expansion by bringing the chronically flood-affected and deep water rice areas under Boro rice cultivation by creating irrigation facilities.

The present study finds out some of the problems related to Boro rice production in the state of Assam are lack of sufficient irrigation facilities,

defficiency of mechanization, use of low yield seeds, insufficient agricultural research, inefficient policy support for the delivery of agricultural services, poverty of the people, lack of agricultural loan, inadequate agricultural marketing facilities etc. If these problems are to be solved , there will be ample scope for the increase in both area and productivity of Boro rice in the state. The economies of rice production reveals that the rainfed local Summer rice is relatively less costly to produce than Autumn and Winter rice on the marginal and small farmers.

Realizing the importance of the Boro rice , the Government of Assam had initiated a major drive to increase the irrigation potentiality to augment the summer crop production in the state. Shallow Tube Well(STW) irrigation is proving to be a successful method of irrigation in the state for various reasons.

- i. By and large Assam has a shallow water table because of the alluvial deposited soil.
- ii. Shallow tube well irrigation facilities recycling of the ground water.
- iii. It involves very low operational cost.
- iv. Chances of increasing soil salinity is rare.
- v. Installation cost of the shallow Tube Well is nominal
- vi. No chances of water logging
- vii. Ground water table is replenish by the rainwater
- viii. To run a Shallow Tube Well no electrification is needed.

1.2 OBJECTIVES:

The broad objectives of the study are laid down as follows:

- i. To examine the position of Boro paddy in the economy of the state of Assam
- ii. To examine the availability of the infrastructural facilities for Boro Paddy cultivation in the study area.
- iii. To examine technical efficacy of the Shallow Tube Well irrigation programme in Assam.
- iv. To investigate the ability of the Shallow Tube Well irrigation programme to enhance the livelihood status of the deprived and marginalized section of the community.
- v. To examine sustainability issues in terms of utilization and management of resources.
- vi. To identify the present problems associated with the Boro paddy cultivation.
- vii. To examine the credit facilities to finance the Boro paddy cultivation
- viii. To find out the present problems of agricultural marketing in the study area.
- ix. To bring out some suggestions so as to remove the problems associated with the Boro paddy cultivation for raising the income levels of the farmers
- x. To stimulate further research on the subject.

1.3. HYPOTHESES

Keeping in view the objectives of the study the following hypotheses have been tested.

- i. The socio-economic conditions of different farmers are not uniform.
- ii. The degree of productivity of Boro rice is higher than Winter or Autumn rice due to massive public investment on Shallow Tube Wells, especially in the non-traditional areas.
- iii. The area under Boro rice has been increasing whereas the area under Sali or Ahu have been decreasing due to the high productivity of Boro rice.
- iv. The productivity of Boro rice per hectare is higher because of application of High Yielding Variety Seeds and chemical fertilizers.
- v. Some rainfed areas still remain barren due to unawareness of the procedure of Boro rice cultivation.
- vi. Non-traditional areas also remain barren due to lack of irrigation facilities.
- vii. The marketing of agricultural procedure is not sufficient as required.
- viii. Credit facilities are also not sufficient to small and marginal farmers.

1.4 RESEARCH DESIGN AND METHODOLOGY:

The study is a combination of three research designs. These research designers are:

1. Exploratory research design.
2. Experimental research design.
3. Descriptive research design.

1. Exploratory research design :

Exploratory research design is the primary stage of research. Hypotheses are formulated with the help of secondary data. The three methods for exploratory research are- i) review of literature , ii) experienced persons and iii) case study.

i) Review of literature :

The present research study is related to the problems and prospects of Boro paddy cultivation in Mayang in the district of Morigaon is Assam. The methods and season of Boro paddy is different from that of Ahu and Sali. Costs and productivity are also different. The socio-economic change has been taking place among the farmers since 1960s due to economic factors. So accordingly we have selected sources of materials from the various publications. We have briefly reviewed over a few selected books, articles and papers by eminent economists, sociologists, educationists and research scholars which will be given in the bibliography of our project report. After a close perusal of these we are in a position to formulate the hypothesis or to clarify the basic concepts related to the study.

ii) Experienced persons :

Besides our sample households we have met some of the experienced persons of the study area having knowledge of the related subject so as to gether information as well as to put some subjective questions to them about different aspects of the problems and prospects of Boro paddy cultivation in Mayang area of Morigaon district of Assam.

iii) Case study :

Case study refers to the intensive investigation of a particular unit. Our unit of study consists of 16 paddy fields of nearby villages. The method of exploring and analyzing the procedure and productivity of arable land is known as the case study method. This method of our study is both qualitative and quantitative in nature. In this method both inductive as well as deductive methods are used.

2. Experimental research design :

The experimental research design shows the causal relationship between the two variables like level of education and opinion of the respondents regarding the different aspects of the problems and prospects of Boro paddy cultivation under study. The hypotheses that we made on the basis of exploratory research design are supposed to be proved by using some statistical test in terms of experimental research design.

3. Descriptive research :

The research design which describes the status and characteristics of an individual or a group, or a community such as age, sex, educational level, occupation, income etc. is known as descriptive research design. The objective of this method of research design is to answer the who, what, when, where and how of the subject under study. The required data for this method of study are collected through questionnaire and checklist.

The descriptive research design involves the following steps.

A) Selection of sample from population or universe

Universe of the study :

The universe of the present study is the areas under Boro Paddy in Mayang Community Development Block of Morigaon District of the State of Assam.

B) Sampling frame:

Selection of the Boro paddy fields of the area of study:

For the purpose of the study the researcher has selected only one district out of 27 districts of Assam, that is Morigaon district. The district has been selected as the area of our study because (i) it is well known district of Assam for practice of Boro paddy and also flood affected and hence practice of Sali paddy is negligible and (ii) there are many saucer shaped marshy areas where traditionally Boro rice has been practiced.

But for an intensive study of various parameters of them, the district is restricted to one C.D. Block namely, Mayang Community Development Block of Morigaon District of Assam. Out of 5 C.D. Blocks of Morigaon district, this block is selected for the following reasons for our study.

Mayang Community Development Block is mainly agrarian in nature. Boro paddy cultivation is the main occupation of the 85 percent people of the Block. The whole area of the Block is flood-prone. The farmers of this flood-prone areas are in search of alternative cropping pattern for producing staple grains.

C) Sampling size and sample procedure :

i) Sample field :

Out of the total area under Mayang Community Development Block, the researcher has decided to select 16 Boro paddy fields purposively which would be regarded as representative of the universe. The Boro paddy fields are different in size. The sample Boro paddy fields of the Myanag Community Development Block are Changmari, Giamari , Bordia, Hatimuria, Tamuli Dobha, Boha, Barjhari, Kuloi, Barpak, Diprang, Bherbheri, Thengbhanga, Buraburi , Jhargaon, Monaha and Chanaka.

ii) Sample Households :

There have been altogether as many as 160 heads of the households of all the sample Boro paddy fields collected through the first point survey , have been seriously listed and stratified into four landholding classes according to the size of holding under their possession. These classes are landless households (0-.05 hectare of land); marginal land holding households(.05-1 hectare of land); small land holders(1-2 hectare of land); big landholdings households (2 hectare and above).

Methodology : Case Study Method :

The researcher has collected both primary and secondary data for the purpose of our study. The secondary data have been collected form documentary evidence revenue documents, reports, printed form, catalogues, bulletins, articles, research papers etc. The secondary data have also been collected from government

publications, news papers, relevant books and journals, specialized institutions of the state and of the country.

The researcher has collected primary data through (a two –point survey) a case study methods. First a continuous survey has been made both at the village and household level and second, a conducted at the household level. The ‘continuous survey’ means complete enumeration or survey over the sample villages/ fields purposively selected for our study. This first point survey has been completed in two stages. In the first stage point survey, the primary data relating to the methods of cultivation have been collected. However in the second stage of this survey, house to house survey has been conducted to collect all relevant data like names of the heads of all households of the sample fields, their caste, identity, size of the landholdings, methods of cultivation, marketing of agricultural produces, irrigation type, use of fertilizers and other necessary information etc. The data collected through first point survey were necessary for second point survey.

In the second point survey, the sample households have been canvassed with a special set of household scheduled for gathering requisite data. For collecting information, the case study method makes use of various techniques like interviews, investigations, fields visit, etc. The sources of data under this method are direct and indirect observation and measurement.

Over and above, the researcher has also adopted the historical method for the collection of relevant data for our study. The sources of data collection of this method are direct observation through documents and eyewitness.

1.5 TOOLS AND TECHNIQUES TO BE USED FOR DATA COLLECTION :

The researcher has used the following tools for data collection :

- i. Households or interview schedule.
- ii. Interview.
- iii. Observation.
- iv. Documentary evidence.

By using a special set of household schedule , we have collected our necessary data. And then the collected data have been transformed from the households schedule to the data sheets.

1.6 DATA PROCESSING AND ANALYSIS OF DATA:

After field survey, we have aggregated the quantitative data in a meaningful manner and prepared a number of meaningful tables to bring out the main characteristics of the data or information.

In order to derive meaningful results, the tabulated data have been arranged for interpretation as well as analysis by using statistical tools like ratio, percentage, co-relation co-efficient and χ^2 test etc. The analysis of data have been made according a chapter scheme to be developed. The report has been completed within one and a half years from 01-02-2014 to 31-07-2015 .

1.7 SIGNIFICANCE OF THE STUDY:

The present study which contributes a lot towards finding out the root factors hiding behind the all-round backwardness of the Boro paddy cultivation of the state of Assam, is considered to be highly significant not only to the farmers, but

also to the society as a whole. The findings and conclusion drawn from the study will also be useful to the government policy makers, future researchers and readers engaged in higher studies in the field of the agricultural development. The study is also immense significance in the sense that it helps in giving suggestions for the development of the Boro paddy cultivation and its marketing. The findings and conclusions derived from the study are also relevant for the theoretical framework of economics for study and speedy development of Boro paddy cultivation, particularly methods of production in non-traditional areas and development of transport by constructing roads by panchayats through the paddy fields. Although the problem of agriculture is a big one, the solution thereof is hardly so and case-specific remedial measures are to be devised to remove the problem. The present study is, therefore, very significant.