

EMERGING PATTERNS OF AGRICULTURAL LAND USE IN KAMRUP DISTRICT

(1964-65 to 1974-75)

Abstract

**AN EMPIRICAL STUDY OF THE SPATIO TEMPORAL VARIATIONS
IN LAND USE PATTERNS**

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ABSTRACT

Agriculture is one of the most common and wide spread ways in which man gets his living, and the geographers are primarily concerned with man's varied impact on the earth's surface. A considerable amount of geographical research therefore needs to be devoted to the study of agriculture. In the case of Brahmaputra valley, it is even more pertinent, because still agricultural is most dominant sector in region's economy. It has claimed the best part of cultivators working hours. for centuries in the valley. The census of 1971 reveals that 85 per cent of the total rural population engaged primarily in the tilling of the soils yet the pace of development in agriculture has been a tardy one and inspite of the recent agricultural upheaval in an organised form during the last decades in all over the country, the agriculture in most of the valley is still essentially traditional bound. The agricultural operations, level of inputs, technology, tillage practices, mode of disposal and storing of crops are almost the same what they were about twenty years back. The agricultural landscape continues to be striking characteristic of the oriental view point, and it is the traditional peasant proprietorship that enjoys all significant control over the agricultural pattern along any cross section.

In true speaking a very little transformation could take place in the agrarian sector of Assam which suffers from insubstantive research and inadequate methodology.

The present study in which a modest attempt has been made to integrate the physical, social and economic variables will point out a reliable picture of the prevailing agricultural land use of the region. The main objective of the study is to find out the patterns of agricultural land use and to ascertain the changes which have taken place in the pre and post Green Revolution period in the district of Kamrup. Secondly it seeks an answer of the decision making processes of the farmers which ultimately shape the cropping structure of the region. Thirdly an attempt has also been made to identify the disparities within the region. Lastly an exhaustive enquiries have been made at the village and household levels to know the size of inequality in land holdings, the causes of unequal pace in the diffusion of innovations and disparity in the degree of cropping mosaic.

The study is divided into seven chapters. The study planned and designed within an environmental cum socio economic framework begins with an assessment of the physiographic background of the region. In chapter II a discussion has been made on the geographical background and the analysis of various complex problem. The basic logic of this chapter is how far the environmental factors are responsible for high

intensity of landuse in one region and low intensity in another region.

In Chapter III an attempt has been made on institutional framework of agriculture, only to know how far institutional development has improved the land use pattern and yield rate in the region. This chapter also includes a section on land reform policy in Assam. The chapter ends with a discussion on the size of land holdings and its distributional pattern.

In Chapter IV the general landuse pattern and land utilization under Kharif and Rabi season has been discussed with the help of percentage of blockwise data. The location quotient method has been applied to ascertain the spatial pattern of rice concentration, which is the main field crop of the district. This chapter also deals with the changes of general and agricultural landuse during the Green Revolution period. To measure the changes of cropping pattern of the district, resulted from Green Revolution, simple growth rate has been calculated and the inter-relationship of the general landuse variables have been tested through bivariate correlation co-efficients.

In Chapter V an analysis has been made to find out the agricultural efficiency of the district. Weaver's Standard Deviation method has been applied to delineate the crop combination and levels of agricultural development of

different community Development Blocks have been ascertained with the help of Kendalls composite indices.

The last two chapters are entirely based on field survey and deal with the study of land holdings and the extent of inequality and concentration among the several groups defined by the landsize classification in six sample villages of Kamrup district.

In the last chapter VII an attempt has been made to highlight the general and agricultural land utilization of the surveyed villages. It also analysis the distribution of land utilization under different land holdings, to ascertain the use and misuse of land in different size of farmers and the size of inter village inequality in a particular land-use pattern.

The study brings out several important findings, these are mainly;

- a) The geology and structure of the district has a great bearing on the patterns and problems of landuse.
- b) The region being an alluvial plain is characterised by an extremely flat surface except the northern and southern border and has given a wide opportunity to Kamrup farmers to extend their cultivable land
- c) Though the development of agriculture in this district largely depends on the optimum utilization of drainage system, no serious attempt has been made to utilise the water resources of Brahmaputra and its numerous tributaries. So instead of helping the farmers it brings sorrow by causing floods.
- d) Kamrup district falls within a zone of stable climatic limits which is of great significance to

reflect the intensity of landuse. A meteorological quantification with the data of annual precipitation and mean annual temperature change indicates that the water surplus in this region is much prominent than deficit.

- e) Genesis of the soil, which is an important factor to influence the land utilization of Kamrup district is purely alluvial, except the northern and southern fringe.
- f) Because of high pressure of population on land, several legislative measures in connection with the problem of land reforms have been enacted since 1947, so as to abolish the existence of intermediaries, to eliminate the fear of insecurity of tenancy, to consolidate the uneconomic fragmented holding and to distribute the surplus land among the landless cultivators and labourers.
- g) In Kamrup district, 75.90 percent of the total holdings are in wholly owned group, 15.5 per cent are wholly rented group and the remaining 8.53 per cent are partly owned and partly rented category. In 1960-61, about 40 per cent of the holdings were below one hectare which rose to 52 per cent in 1970-71.
- h) The temporal change occurred in the general land-use pattern in 1964-65 and 1974-75. The proportion of net sown area and double cropped area increased substantially at the cost of fallow and cultivable wasteland due to increasing pressure of population.
- i) A slow rate of change has been taking place, in the cropping pattern of the district. Wheat, the only Green Revolution's crop, recorded a simple growth rate of 88 per cent and rice 8.85 per cent in 1974-75 over the base year of 1964-65.
- j) Cropping intensity increases in the district due to high growth of rural population (7.39 per cent).
- k) The disparity in the spatial dimension of agricultural development is quite high.
- l) Still, subsistence traditional agriculture is prevailing in the agricultural mosaic of the district. The overwhelming position of rice as a mono crop, reveals the backwardness of the agriculture.

- m) Rapid urbanisation and/or intense urban influences bring forth an increased magnitude of inequality and poverty in the satellite points or in the rural fringes of these urban centres, as evidenced in the prevailing conditions of Sawkuchi and Kanaikuchi villages.
- n) The households and the land belonging to the medium size group are the most productive among other rural land based classes, because of intensive cropping pattern and the economy of land-size utilizations, which has been witnessed in the agriculturally developed villages - Bangalpara and Barkura.
- o) The pressure of land in the immigrant villages is commonly found to be very acute which results into the pre-dominance of the marginal and small size land-owning households in the total agrarian structure.
- p) Rice is the main field crop, grown in all the villages by all size of farmers irrespective of their holding sizes, socio-economic background and cultural variation.
- q) Jute is predominantly grown in those villages which are either exclusively occupied by the immigrants or coming in contact with the agriculturally development. The crop is totally absent in the indigenous Assamese villages.
- r) Vegetables appear to be the most specialized but uniformly grown crop in all the villages.

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