PART ONE: INTRODUCTION
CHAPTER I
INTRODUCTION TO THE WORK

1.1 THE PROBLEM

Agriculture is the principal source of livelihood for a majority of the people in the rural state of Assam. Agricultural sector is so important to the state's economy that it alone contributed 56 per cent to the state's total income at current prices in 1975-76 as compared with 45 per cent for India as a whole1. It plays the most important role as the main absorber of working population by engaging as high as 77 per cent of the total workers in the state2. Two types of agricultural farming has been prevailing in Assam, viz., Peasant Agriculture and Capitalist (Tea Plantation) Agriculture. Between the two types, the peasant agriculture is more important in the sense that it contributed 47 per cent of the state's total income, and engaged 56 per cent of the state's total workers, while the tea plantation's respective shares were only 7 per cent and 10 per cent. Besides, the peasant agriculture is more problem-stricken and enigmatic than the tea plantation. The manifold problems of peasant agriculture may be summarised as follows: The cultivable land is highly limited

2 Census of India, 1971, General Population Tables, Series 3 - Assam, Part II-A.
by the peculiar physiographic conditions of the state; the intensity of cropping as also yield per hectare is very low; and agricultural production is affected not only by the monsoon and other natural calamities like flood, drought, etc., but also by the technological and socio-economic factors. As a result, the growth rate of peasant agriculture has been very low and erratic. The Green Revolution as ushered in some states of India like Punjab and Haryana has so far little impact on peasant agriculture in Assam. The peasants of this state are the victims of variegated ills like poverty, illiteracy, indebtedness, speculative markets, rack-renting and so on.

It is observed that in spite of various efforts undertaken by the Government during the Five Year Plan periods after Independence, agricultural production has not been able to keep pace with the increasing demand of the market and raise the living standard of the peasants. This is presumed to be mainly because of the peasant mode of production. Thus the peasant agriculture in Assam is handicapped by all types of constraints — natural, technological and socio-economic. In order to remove all types of constraints for the full realisation of the technologically possible maximum growth rate of production, there must be structural change of the peasant mode of agriculture according to which 'agriculture is a livelihood and a way of life, not a
business for profit.

Various problems crop up in agricultural sector as a result of the non-recognition of the peasant's attitude towards economy in general and agriculture in particular. Peasants' operation of agriculture is the subject of social constraint and taboos. Their decision to raise a particular crop is not determined by the demand in the market. With a sense of family obligation, a peasant produces food mainly to satisfy the family's immediate needs. Generically, peasant farming is a subsistence one. "Although the extended family provides a form of social insurance for its members, its obligations minimize the inducement for economic improvement and discourage innovation." This situation is associated with primitive technology and outdated social values. The innovation suggested and superficially executed to some extent so far has failed to bring about any positive change and instead, created many kinds of complexity. The basic problem of peasant agriculture in Assam is, therefore, the structural inertia of the peasant mode of production with a strong pulling back effect of its socio-economic base.

3 Redfield, R., 1956.
4 Morgan, W.B. and Munton, R.J.C., 1971.
It is, therefore, considered that an analysis of the structural basis of the peasant agriculture in Assam is imperative before embarking on any kind of innovation scheme. If it is sincerely desired to have optimum growth rate of production with full utilisation of human and other resources relating to agriculture, then a crucial controversy must be resolved. The controversy is: whether agriculture should remain in the hands of the individual peasants, or it be organised as a socialist farming, or as a capitalist farming, in order to make it more efficient as a business proposition. Another point that needs consideration is whether it is possible to modernise peasant agriculture by modernising peasantry. Such problems can be solved only by actual research works based on complete system analysis including both endogenous and exogenous variables.

The author, therefore, thinks it pertinent to attempt an analytical study of the structure of peasant agriculture in Assam from the socio-economic-geographical points of view. It is with this intention that the present topic has been selected.

1.2 REVIEW OF RELEVANT WORKS

Methodical and scientific study of Agricultural Geography is of recent origin. Real works in this branch of

5 Hunter, Guy, 1969.
Geography started only in the beginning of the second half of this century. During the inter-war period, pioneer works in this field had been done by such eminent geographers as O. E. Baker, Olaf Jonasson, Clarence P. Jones, Samuel Van Valkenburg and Griffith Taylor. Their contributions in the reputed journal, 'Economic Geography' have been considered as significant in the field of Agricultural Geography. Most of these pioneer works were devoted mainly to agricultural regionalisation in order to establish the broad spatial pattern of this activity. Besides, similar works of Derwent Whittlesey, and Hartshorne and Dicken are worth mentioning in this respect.

These works were followed by numerous empirical papers with ideographic approach to the study of the causes of patterns within a specific area. There was little advance in Agricultural Geography so far application of scientific and systematic methods and in-depth study were concerned during the period of forty years since Baker's paper of 1926. In 1964, Beads commented 'Agricultural Geography has not yet advanced beyond a primitive stage of development simply because many studies have been superficial investigation of extensive areas'. All of these works were not based on any conceptual or structured models and


theories and none of them dealt with the intrinsic problems of the peasant type of agriculture. Their works were also limited by a shortage of published data.

In recent years, works in theoretical Agricultural Geography by W. Bunge, Buchanan, Blunt, Brookfield, Franklin, Harvey, Halburn, Reeds, and Redfield have influenced the conceptual approach to agricultural problems. This new conceptual approach has three major aspects: (1) a more theoretical approach and less concern with the uniqueness of geographical distributions; (2) a retreat from the deterministic interpretation of phenomena to a probabilistic and behaviourist one; and (3) the micro-geographic study assuming a greater importance.

The methods of Agricultural Geography have benefited from the 'quantitative revolution' of the fifties, and computerisation of large amount of data has opened up a new vista of research possibilities.

Another line of scientific approach of model building to the study of agricultural activity was initiated by Von Thünen as early as in 1826. His model of agricultural location was based on the decline of economic rent or land rent with

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10 Henshall, J.D., 1967.
11 Thünen, J.H. von, 1826.
distance from the market. He applied marginal economics to the problem of cost substitution with increasing distance. Based on this theory, Von Thünen predicted a concentric series of agricultural zones around a central market. This classical model was originally descriptive. It was only from 1935 that the Thünen’s model drew the attention of some scholars like Hoover, Lösch and Dunn\(^{12}\) who used the framework of it as a basis for a normative model. Of the other outstanding models of agricultural geography, the important ones are: Firstly, the Weaver’s\(^{13}\) model which attempted first to set up a quantitative technique for the classification of agricultural regions. Secondly, the input-output model originally devised by Leontieff as a method of analysing national economics and later used for the analysis of agricultural activity by Peterson and Heady, and Carter and Heady\(^{14}\). Thirdly, the spatial equilibrium models originally outlined by Fox and Tauber as the operational technique for examining the spatial equilibrium of agricultural production patterns in linear programming, and later followed by many workers especially in the United States, the most notable work done in this line being that of Egbert.

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\(^{12}\) Hoover, B.M., 1936; Lösch, A., 1954; Dunn, E.S., 1954.

\(^{13}\) Weaver, J.C., 1954.

and Heady\textsuperscript{15} who made a study of interregional competition and the optimal spatial allocation of crop production in the United States. Fourthly, the diffusion model of Hägerstrand developed to describe the diffusion of an innovation over space\textsuperscript{16}. Lastly, the game-theoretical model developed on the basis of the game-theory of Von Neumann and Morgenstern to deal with the problem of optimizing decisions in the face of imperfect knowledge\textsuperscript{17}.

Apart from the models, sophisticated techniques came to be used by the modern geographers. In the field of agricultural geography, M.G. Kendall used the technique of factor analysis\textsuperscript{18} to derive a production index for crops in England. It was applied by M.J. Hagood for defining regions based on agriculture and population. Using this technique Henshall and King tried to classify peasant agriculture in Barbados\textsuperscript{19}.

\textsuperscript{15} Fox, K. and Tamber, R., 1955; Egbert, A.C. and Heady, E.O., 1964.
\textsuperscript{16} Hägerstrand, T., 1953.
\textsuperscript{17} Neumann, J. Von and Morgenstern, O., 1944.
\textsuperscript{18} Factor analysis is a means by which basic dimensions of a seemingly complex domain can be identified. With the help of the computer, it can analyze the relationships between a large number of attributes or variables for many observations within a short space of time.
Advanced techniques and conceptual models had further been developed for specialised studies in plantation and peasant agriculture. Being aware of the limitations of the traditional models of non-geographers, the modern geographers have defined new models at their own in order to solve the contemporary agricultural problems. The work of H.F. Gregor on plantation agriculture and that of S.H. Franklin on peasant agriculture are noteworthy in this context. Coming to the specialised studies in peasant agriculture, two distinct approaches are discernible: (1) 'The way of life' approach set up by the anthropologists, and (2) 'The way of earning a living' approach of the economists. Among the advocates of the first approach, the names of R. Firth, Robert Redfield, E.R. Wolf and Elena Padilla can be mentioned. Wolf differentiates a peasant from a farmer who looks upon his land as initial capital, while Padilla points out that a peasant may raise small quantity of cash crop also in addition to subsistence crops. Economists like D. Edwards and Rees apart from defining peasant agriculture pointed out that the use of traditional techniques, a strongly conservative attitude towards innovation, and a significant concentration on production for home consumption are

the important characteristics of peasant agriculture. Among the geographers, S.H. Franklin for the first time points out that the commonly accepted view of peasant life is full of paradoxes. For example, it is the common idea that the peasant is a good and careful farmer, yet in reality it is found that as a result of low yields, his condition remains often poor; though peasant family life is extolled for its virtues, yet it is known that many peasants are ready to sacrifice their own lives to educate their children to leave the system. Opposing the romantic view that peasants have in general a conservative and stable existence, Franklin observes that it is only 'the archaic elements that are more likely to survive within a peasant groups and remain integral parts of its culture'. He further observes that during the last 150 years many peasant societies have experienced important and perhaps significant changes. Therefore the study of a peasant society of today must include the study of its contemporary changes. The process responsible for much of this change is called 'agriculturisation' made by the partial incorporation of market economy within the peasantry. He uses labour as the basic differentiator in building up a model of the peasant system as against capitalist and

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socialist systems. Regional variations and mixtures of these systems can be studied on the basis of labour commitment in the various sectors of economy. A model for the geographical study of peasant agriculture is provided by the concept of the peasant production system of Franklin. His model shows that in enterprise the institutional basis is family in case of the peasantry, while in case of the other two systems it is not entirely so. In the means of distribution while barter-market prevails in peasantry, it is sophisticated market in case of capitalist system, and prescription market in case of socialist system. In case of ownership, the head of the family plays the role of chef d' enterprise in peasantry as opposed to the managerial management in the other two systems. The ownership is rigid in peasantry and alienation is hereditary, while in the capitalist system alienation is permitted and in the socialist system it is constitutionally prohibited. The fourth dimension of Franklin's model is the regulatory agency. It is labour supply in case of peasantry, market in case of capitalist system, and the state in case of socialist system.

Another line of approach to the study of Agricultural Geography by the most recent geographers is to search for the most logical and meaningful structure which helps categorize and represent variations of agricultural practice on a global
Gregor has reviewed and commented on a large number of important contributions to this general theme and Grigg has reviewed many of the concepts dealing with agricultural regionalisation. The International Geographical Union suggested uniform and acceptable bases for spatial comparison of various attributes of agriculture on a global scale. Commissions, established to map world agriculture according to a standard legend, to standardise agricultural nomenclature and to construct a typology for world agriculture, are working towards common objectives. Spencer and Stewart have attempted to recognise generic forms and kinds of agriculture and their potential value as a basis for differentiation of world agricultural systems. They have listed 13 agricultural systems in the world in a hierarchical order.

Coming to a review of works in agricultural geography done in India, it may be mentioned that works based on models and theories have so far not been intensively done in spite of

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25 The three commissions of the International Geographical Union are: (i) Commission on World Land Use Survey, No. 3, Hans Boesch, Chairman; (ii) Commission on International Geographical Terminology, No. 5, Emil Menen, Chairman; (iii) Commission on Agricultural Typology, No. 15, Jerzy Kostrowicki, Chairman.
Its crying necessity. It is discouraging to observe that serious attempt has not been made by the Indian geographers to distinguish peasant agriculture and to deal with its intrinsic problems.

M. Shafi has divided the works of the Indian geographers in the field of agriculture under the following heads:

1. Regional Agriculture,
2. Food and Commercial crops,
3. Agricultural Problems and Planning,

In the above classification there is no mention of any work on either peasant and plantation agriculture or socialist and capitalist agriculture. However, prior to Independence, the Journal of Madras Geographical Association took a lead in creating at least some writers in the field of agricultural geography who worked on the distribution of the principal crops and their correlation with the physical conditions and agricultural practices.

Works on the agricultural regionalization were done by B.N. Mukherjee and P. Dayal. A.B. Mukherjee, however, undertook a micro-level study selecting four villages of the Meerut district and assessed carefully the importance of food crops, commercial

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27 Shafi, M., 1972
28 Ramakrishnan, K.C., 1930; Souriranjan, V.K., 1931; Srinivasan, M.V., 1935.
29 Mukherjee, B.N., 1942; Dayal, P., 1950.
crops and land tenure system. Methodical work of P.S. Sharma on agricultural regionalisation of India with the help of selected indicators is also an interesting study. B.K. Roy attempted to find out crop-complex regions with the application of Kendall's factorial coefficient analysis. With this quantitative technique he was first able to differentiate peasant agriculture from plantation farming in India. Recently, he attempted to test the proposals of the recommendations of Agricultural Typology Commission of International Geographical Union in the context of Indian agriculture.

Chaturvedi and Reddi attempted to show the influence of an urban centre on the decision and motivation of peasants for the change of agricultural landuse in Hyderabad district.

Some interesting papers on agricultural problems and planning were brought out by S.P. Chatterjee, M. Shafi, S.S. Bhatia and B. Banerjee. Chatterjee suggested measures to plan agriculture in North-Eastern India mainly on geographical basis. Shafi and Bhatia attempted to study agriculture from the view point of

30 Mukherjee, A.B., 1956.
32 Roy, B.K., 1971.
33 ______, 1976.
agricultural efficiency. The former correlated agricultural production in Uttar Pradesh at district level in different years with the level of agricultural efficiency. Bhatia worked out an index of agricultural efficiency, showed spatial variation, changes and trends of it in Uttar Pradesh. Banerjee made an assessment of the gains of the Green Revolution in India.

Books and monographs written by the Indian geographers on agriculture are only a few in number. S.N. Mukherjee's 'Agricultural Geography of West Bengal', Venkateswara's 'Agriculture in South India', Randhawa's 'Farmers of India', and Jasbir Singh's 'An Agricultural Atlas of India' and 'An Agricultural Geography of Haryana', are some of the important books and monographs that throw light on various aspects of agriculture in the country. Randhawa's treatment of the farming villages and communities in each of the states of India gives a valuable insight into the problems of Indian peasants. Mamoria's doctoral thesis entitled 'Agricultural Problems of India' with its comprehensive study of agricultural problems and suggestions for development of peasant agriculture is a work of merit.

The above survey shows that the study of agricultural geography in India is still in its formative stage. Very little

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has been done so far in Assam on agricultural geography. P.C. Goswami in his published doctoral thesis, 'The Economic Development of Assam' discussed the agrarian structure, development of agriculture and land systems in Assam in detail. K.C. Mahanta and A.K. Neog have incorporated many information on agriculture and animal husbandry in Assam in a single volume and discussed various problems of the peasants in Assam. H.P. Das, in his book 'Geography of Assam', provides a generalised account of agriculture of the state. The author of the present study attempted to build a normative model for reorganisation of peasant agriculture in Assam on the basis of a micro-study of a peasant village in the state. M.K. Sharma tried to find out agricultural regions of Assam. M. Taher established the physical basis for agricultural planning in the Brahmaputra valley.

Not a single book or monograph nor a thesis on Agricultural Geography of Assam has so far been published. Research work on the topics relevant to that of the author of this thesis has not been done by any geographer. On the basis of a few works done so far, and in the absence of reliable micro-level data,

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38 Goswami, P.C., 1963.
43 Taher, M., 1975.
It is really an arduous task to embark on a research work in the field of Agricultural Geography in Assam. The work has been rendered more difficult by the absence of any scientific methodology and model of peasant agriculture in the Indian context. Therefore, either one must follow the method and model built up for other countries or evolve one's own method and model in the context of Assam's or India's peasant agriculture.

1.3 SIGNIFICANCE OF THE TOPIC

Peasant agriculture is the most dominant sector of economy and peasantry form the socio-economic basis in Assam. In spite of its pivotal position in the state's economy and various efforts of the Government, the peasant agriculture has been continuing to be tradition-bound and inefficient, and, therefore, as an occupation remained an unattractive one. In reality, peasants are the 'unwilling mass' bound to the dirty soil having no other alternative for their livelihood. Although 'low living standards, low incomes, personal frustration, absence of hope and prospects, unmitigated routine and drudgery, conflict of the generations, and sense of inferiority have been amongst the factors pushing the young and hired hands off the land, a group of other factors has restrained the chefs and the
prospective chefs d' entreprise.45.

In view of the above problems inherent in the very fabric of peasantry, no innovation or scientific planning of agriculture in Assam is possible without a thorough and scientific structural analysis. An in-depth research of the problems associated with peasantry is, therefore, highly essential in order to arrive at a scientific and rationalized decision as to whether peasant type of agricultural production should be retained, removed or renovated. It is noticed that Assam has made the least stride among the states of India in the field of agriculture during the post-Independence period. Hence it is thought necessary to take up this problem for the purpose of thorough investigation and research. The problem is not only geographical, but also of inter-disciplinary nature calling forth the knowledge of other social sciences, especially economics and sociology for the solution of many aspects of it.

It is hoped that the study will be of great significance in the field of the most important but complicated and unorganised sector of the economy in Assam. Therefore, it may be of great utility not only to the geographers and other academicians, but also to the planners and Government in the formulation of agricultural policy of the state.

1.4 OBJECTIVE AND HYPOTHESIS
OF THE STUDY

The following are the principal objectives of this study.

1. Analysis of the socio-economic structure of peasantry and the spatial pattern of peasant agriculture in Assam.
2. Finding out of the basic causes for the continuation of the peasant mode of production.
3. Analysis of the various organic problems of peasantry.
4. Analysis of the innovation measures so far taken and the problems that have arisen and are likely to arise in the course of innovation.
5. Synthesis of the problems and prospects of peasant agriculture.
6. Suggesting measures for a rational transition of the peasant agriculture in Assam.

In order to achieve the above objectives, the following hypotheses are proposed and attempt will be made to test these hypotheses in the course of this research.

(1) The basic elements of physical environment have been continuing to exercise controlling influence on the general pattern
of agricultural landuse of the peasants.

(2) Agricultural land of the peasant has been increasingly used for foodgrains to cater the demand of the rapidly increasing population.

(3) There is a positive correlation between the number of crops in a crop-combination and the intensity of cropping in peasant agriculture.

(4) There is a positive correlation between population pressure and intensity of cropping in peasant agriculture of Assam.

(5) Improvement in agricultural efficiency has been insignificant in Assam during the past several years.

(6) Because of non-use of modern technology and lack of scientific knowledge of farming, the peasants of Assam have been adversely affected by natural calamities.

(7) The concentration of the peasant is higher in those areas where tea plantation is not extensive, industrialisation is negligible, and where there is a concentration of the immigrant peasants.

(8) The traditional Socio-Cultural - Institutional Complex in the rural society acts as the main deterrent to the modernisation of the peasant mode of agricultural production.
(9) The legacy of the colonial type of class structure created by the British rulers has been still persisting in Assam, relegating the peasantry into the bottom stratum of the society.

(10) Assam is a land of small peasants mostly with small uneconomic holdings and with little capacity for extension of their operational holdings.

(11) The Raiyatwari System of land tenure in Assam has facilitated the creation of economically antagonistic classes within the peasant society.

(12) There is a significant concentration of operational landholdings in the hands of a minority of landowners and the concentration is higher in those areas where the average size of holding is also higher.

(13) The farm size acts as a critical limiting factor for agricultural growth in Assam.

(14) There is a great surplus of farm workers in Assam creating the problems of agricultural unemployment and underemployment.

(15) There is a positive correlation between the rural density and over-population in agriculture.

(16) Farms of small size are responsible for a serious underutilization of family workers.
(17) The peasant mode of production as such is anti-progressive and agricultural innovation cannot be materialised without any change in the traditional agrarian structure built up essentially by the true peasants having a tendency to hug to the soil at a very low level of living.

(18) As the small peasantry with the traditional socio-cultural structure are incapable of any kind of farm organisation and management, the capital investment is very meagre in peasant agriculture.

(19) In spite of a gigantic organisational set-up of the Government machinery and a huge amount of money spent during the Five Year Plans, very little development of peasant agriculture has been made so far.

(20) Development of irrigation is extremely low in Assam and whatever little is there, helps neither the intensity of cropping nor the increase of agricultural productivity.

(21) As the agricultural credit offered by the Government agencies is too meagre, the private money-lenders have been continuing to be a dire necessity of the poor peasants.

(22) There being an overall deficiency of cereals in Assam with little marketable surplus, a substantial proportion of the marketed cereals comprises only the 'distress sale' of a
major section of the peasantry.

(23) The response of the small and big peasants to the varying market prices differs in respect of allocation of hectarage to food crops and cash crops.

(24) Farm size is the determining factor for differentiating agriculture as subsistence or commercial.

1.5 METHODOLOGY

The problem is studied in the context of the state of Assam by the empirical-analytical method. As the agricultural data and information are not easily available at the level lower than that of a district, the latter is adopted as the primary unit of area for the study of regional variations of the different factors and elements of peasant agriculture. However, wherever the factual information and data have been found at the subdivision level, the sub-division has been adopted as the primary unit. For such a meso-level study, field work data collection is not possible for a single researcher. Therefore, data and information are collected from various official reports, records, documents and publications relating to agriculture. For spatial and temporal analysis of the structure of peasant agriculture, data mostly for the period 1965 - 1975 are used. These data are collected from the Directorate of Economics and Statistics, and
The hypotheses are tested by the inductive-empirical method. Quantitative techniques are used only when it is found to be necessary. In certain cases, when a large number of data has to be used, the statistical processing of the data are made by the help of the BOL Computer at the Physics Department of Guwahati University.

Cartographic technique has been used in order to reveal the spatial and temporal pattern of the characteristics of peasant agriculture in Assam. For better understanding, assessment and analysis of the problems, information are collected through field work in four peasant villages with the help of a schedule, personal interviews and observations, and discussion with those involved actively in peasant agriculture. One of the villages selected is situated within the boundary of Greater Guwahati, the second village at a distance of 16 km from Guwahati, the third one in one of the most densely populated rural areas of Assam at a distance of about 65 km from Guwahati, and the fourth one is an immigrant Muslim village more than 140 km away from Guwahati.

1.6 ORGANISATION OF THE STUDY

The main format of the study is divided broadly into
three parts—introduction, analysis of the problem, and synthesis.
The introduction is divided into two chapters—the introduction
to the work and the introduction to the study region.

The second part is the main text of the thesis. In
this part, the problem is analysed in two sections—Spatial
Pattern of Peasant Agriculture and Socio-Economic Structure of
the Peasantry—each section containing five chapters.

The third part consists of the synthesis and is
divided into two chapters titled Summary and Conclusion. The
Conclusion comprises findings of the research as also sugges-
tions and prognosis.

1.7 DEFINITIONS OF SPECIAL TERMS USED

Since some available terms have different meanings in
different contexts, it is necessary to spell out clearly the mean-
ings and definitions of such special terms in which sense these
are being used in this work. Some of the local terms used also
need explanation.

Agriculturalization. A process of the peasant being exclusively
absorbed in agricultural operation under the impact of the
expansion of capitalist economy in the countryside by which the
original self-subsistence economy of the peasantry associated
with the rural-based industries are destroyed and the peasants
are left only with agriculture as their only means of livelihood. Under such circumstances, the peasant has to depend on the market for his daily necessities including agricultural produces if he cannot produce himself these sufficiently.

Agricultural Labourer. A person who works in another person's land merely for wages in money, kind or share with no direct stake in the cultivation.

Au. Autumn and Summer rice.

Amen or Sali. Winter rice.

Ambubasi. A week long period beginning with the first day of the Assamese month of 'Ashara' (third week of June), the last three days of which are observed with rites and rituals by the Assamese peasants. This coincides with the bursting of the monsoon and people believe that the Mother Earth attains menstruation during these days. It is significant that brisk agricultural activities follow this period.

Bap. Lowland winter rice. Standing in the field for about ten months from the time of its broadcast in the months of February and March.

Bathen. A camp of flock of buffaloes located in a grazing area away from home. Such camps are generally owned by a rich family for milk production.

Beel. A small lakelet.
Bhabar. Boulders-strewn dry tract along the foothills of the Himalayas.

Bhangar (Bangar). Old alluvium in the plains.

Boro. Spring rice.

Capitalist Agriculture. Highly organized type of farming of an individual capitalist or a company without any obligation to a family or the society. It is based on capitalist mode of production like that of a factory with salaried labourers and managerial and technical staff. Tea plantation in Assam is an example of such type of farming.

Chapari. Flood plains of the Brahmaputra river.

Chef d' Enterprise. The 'chief of the enterprise' who in the peasant mode of production is the central figure directing the management of the family enterprise. The chef may not always be a proprietor of the land or owner occupier, but essentially directs the agricultural work either in the capacity of a full-time operator or as a part-time factory worker or a farm worker.

Cultivator. A person engaged in cultivation directly, or by supervision or direction in one's capacity as an owner or as a lessee of land held from others.
**Green Revolution.** The phenomenon of revolutionary achievement in agricultural production as a result of the change of agricultural technology. In the context of India, it is generally ushered in by the greater use of high-yielding varieties of seeds, irrigation, chemical fertilisers, pesticides and improved implements.

**Household.** A household is a group of persons who commonly live under the same roof and take their meals from a common kitchen.

**Jhum.** A method of shifting cultivation traditionally practised by the hill tribes of North-East India. In 'Jhum' a patch of forest in the hill slope is slashed and burnt down. The soil is hoed and the seeds are dibbled in. The same plot is never cropped more than two or three years in succession as the fertility exhausts very soon. Another patch is then searched out and put under similar operation. An abandoned area requires seven to fifteen years to recoup its fertility and be covered with young vegetation.

**Kankan.** Very hard soil containing a high proportion of calcareous nodules.

**Khaddar.** New alluvium.

**Kharif.** Summer crops harvested in September, October and November.
Literate. A person who can both read and write in any language with understanding.

Operational Holding. The land-holding used wholly or partly for agricultural production and under operation as a single technical unit without regard to title, legal form and size. Such an operational holding might consist of one or more parcels of land situated in the same village or in other villages within the same Revenue Circle (in the plains) and Community Development Block (in the hills).

Peasant. The self-employed agricultural worker who is largely dependent on his own labour and that of his family members, for whom the contribution of such labour is more important than that of the capital. More specifically, a cultivator as classified by the Census of India is assumed to be a peasant for the purpose of this work. Such a peasant possesses an operational holding, whatever be its type of tenure. Neither a landless agricultural wage-labourer nor a plantation labourer (organised in the line of industrial factory labourer) is considered to be a peasant.

Peasant Agriculture. Family-farming operated by the peasant with the help of family labour within the socio-economic milieu of the peasantry. Land and labour are the two important factors
of production in this type of agriculture.

**Rabi.** Winter crops, harvested in February, March and April.

**Tarai.** Wet zone or tract below the bhabar plains in the northern part of the Brahmaputra valley.

**Town.** A settlement with a Municipal Corporation or Cantonment and a notified town area, or a place which has a minimum population of 5,000, with at least 75 per cent of the male working population being non-agricultural, and with a density of population of at least 400 per km².

**Village.** A rural unit of settlement with a distinct name. Villages are predominated with agricultural population. In the plains, such a rural settlement along with the land around it, forms a cadastral or revenue village. In the hills where no cadastral survey has been done, a village is demarcated with a traditionally recognised boundary.

**Abbreviations**

- K.A. for Karbi Anglong
- N.C. for North Cachar
- P.M.S. for Studies in the Farm Management