INTRODUCTION:

In many tea growing countries of the world, individuals farmers cultivate tea in small scale. Tea is cultivated extensively in small scale in some regions of India also, like south India and Himachal Pradesh. In Assam, the small tea cultivation is in an infant stage considering the 160 years old tea industry of the country. The small tea growers have come up in recent years to takes up tea cultivation in individuals holdings in Assam.

Various organization speaks about what is small tea cultivation. The “Tea Board of India” has defined small tea cultivation as those having plantation of 10.12 hectares or 25 acres. The government of Assam strictly declared that a small tea farmers should not have more than 4.28 hectares of tea cultivated land. According to ‘All Assam Small Tea Association’ those who have minimum area of 33.33 hectares of tea cultivated land are recognized as small tea farmers. Presently this has been changed to those farmers who are having 1.42 hectares of tea cultivated land is recognized as small tea farmers and cultivation is known as small tea cultivation.

It has been noticed that during the last decade small tea cultivation has started making in roads among the farmers of Assam. This has made a significant impact on the pattern of agricultural land use, creation of rural employment opportunities, occupational structure shift and economic benefit to the people in neighbouring areas. It has changed the surrounding environment in terms of natural as well as economic activities of the people directly or indirectly. In many places the traditional cultivation of bamboo forest, sugarcane, orange, pineapple, thatch, vegetable etc. have been replaced by small tea cultivation. It has occupied the areas under ceiling surplus, grazing lands and government fallow lands including their own lands. The virgin high land areas were normally un-
utilized for agricultural purposes due to lack of irrigation and accessibility, but for small
teacultivation, these lands are ideal. Thus area left fallow, waste land and grazing lands
and high lands etc. were converted to tea cultivation by small tea farmers. This has
gradually changed the existing cropping pattern in the area. The small tea cultivation has
also created a shift in occupational structure by practicing tea cultivation from only rice
and cereal crops. It has also greatly contributed in changing the socio-economic
development of the region.

**Area of the study:** The area for the present study covers the Sivasagar district of Assam.
This district is purposively selected because the Sivasagar form the traditional tea
growing tract of Assam. Small tea growers in this district constituted 11.08 percent of the
total number of small tea growers of Assam. Accordingly 243 no of sample small tea
gardens are selected from Sivasagar district.

**Significance of the study:** The small tea cultivation forms an interesting field in
Economic Geography. There are many intensive studies have been carried out on tea
industry in different disciplines in different parts of the world, but very little contributions
were available from the Geographers as well as Economists on the importance of small
teacultivations in Assam as well as in other parts of the country. The economic
contribution and employment opportunity generated by these small tea cultivators have
great significance in Assam. It has also greatly contributed in changing the socio-
economic development as well as land use pattern of the region. There fore it is an
interesting field of research how it has changed people’s attitude in their occupational
structure, providing better economic conditions and employment opportunity to unemployed youth of Assam in the form of farmers.

Objectives of the study:
The present study was carried out with following objectives:

a) To study the extension of small tea cultivations in Assam especially in Sivasagar district;
b) To study the changes of agricultural land use pattern in the district due to small scale tea plantation;
c) To study the occupational shift from crops to tea plantation among the people;
d) To study the changes in occupational structure and income changes of the farmers and
e) To study the employment opportunities generated by the small tea cultivations.

Research questions:
The following major research questions were placed before the study:

a) Has small scale tea cultivation in Assam replaced the existing cropping pattern to mono-cropping as tea?
b) Has small scale tea cultivation brought the changes in the pattern of agricultural land use especially high land agriculture of upper Assam?
c) Are these small tea gardens providing better employment opportunity to the people in the Sivasagar district?
d) Has this occupation shift brought significant economic changes among the small tea growers and the laborers?
Data base and Methodology: The study is based on data collected from primary and secondary sources. Prime emphasis is given on primary data. Data has been collected from small tea growers having less than 4.00 hectares area under tea cultivation.

Sampling procedure: A stratified random sampling procedure is followed for the present study. The selection of sample tea gardens are made at two stages by applying different criteria.

In the first stage the study area has been divided in to three zones according to their geographical location i.e. Cultivable high land, Hill slope land and Plain land. In the second stage sample small tea gardens have been divided in to four categories on the basis of their size – i) below 01 hectare, ii) 1.01 – 2.0 hectares, iii) 2.01 – 03 hectares and iv) above 03 hectares. There are 243 numbers small tea gardens of Sivasagar district has been selected on the basis of above criteria.

Data Base: For the purpose of this study both primary and secondary data have been used. To conduct a meaningful empirical study, data has been collected from different sources. Field data are collected up to 2006 covering the period 1993-94 to 2005-06.

Primary Data Base: Primary data are collected from the small tea growers. Specific information on the given theme is obtained from small tea growers through field study and questionnaires. Accordingly a schedule is prepared as tool for interviewing the small tea garden owner. The first part of the schedule is designed to collect the data on socio-economic information of small tea growers. Questionnaires on the socio-economic information of small tea growers is contained questions related to occupations, income and expenditure, properties owned family size, educational status, types of labour use,
The other part is designed to collect the information related to land use of small tea growers. Questionnaires relating to land use pattern is contained land use, land holding, size of the small tea gardens, type of land used by the small tea growers, soil type, location etc.

Secondary Data Base: Secondary information has been collected from various published documents and reports of government and semi-government agencies, as well as the bulletin and journals of small tea growers association. Some important sources of data and information are:

a) Social, economic and demographic information – Census publications.

b) Information relating to physical aspects of small tea gardens have been collected from Department of Tea Husbandry and Technology, AAU, Jorhat, Assam, Toklai Experimental Station, Jorhat, Assam.

c) Various statistical information from tea statistics published by Tea Board of India.

d) Various published and unpublished reports, official publications, unpublished thesis and other records.

**Data processing, analysis and presentation:** The collected data has been processed and analyzed with the help of suitable statistical techniques. The result obtained are being presented with the help of suitable cartographic technique. Table, maps, diagrams, groups and necessary photographs etc. been prepared for the purpose
Sample size of the small tea grower's gardens:

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Name of the villages</th>
<th>Group-I</th>
<th>Group-II</th>
<th>Group-III</th>
<th>Group-IV</th>
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<tr>
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**Summary:** The present work is associated with the small scale tea cultivation and its impact on land use and socio-economic condition of the people of Sivasagar district, Assam. The study has been carried out in seven chapters. Chapter one deals with the introduction, statement of the problem, significance of the study, objectives, area of the study, research questions and methodology adopted for the present study. A brief review of certain works connected with the problem also has been incorporated in this chapter.

An introduction to the study area has been given in the chapter II, which includes physical background, climates, soil and vegetations and socio-economic situation of the study area.

Chapter III devoted to the growth of small scale tea cultivation in Assam. During the seventies of the last century, tea has entered to the high land of common farmers of
Assam. Growth picked up abruptly from 1990 – 2005. The rate of growth was maximum during 1999, owing to sudden rise of price of green leaf. 90 percent of total tea growers are in five districts of Assam. 10 percent spread over the remaining 16 districts. At present there are 50,000 small tea gardens in Assam. During 12 years (1993 -2005) there was eight fold increase in the number of growers.

Small scale tea growers originally from sedentary cultivators, educated rural youth, educated urban youth, in service personal, and ex-tea garden workers. The average family size of the small tea growers was 6.58 and percentage of literacy rate was very high among the small tea growers which was observed 81.29%. The working force constituted about 55.63% of the total sample population. Small tea cultivation helps in utilization of human labours and provide ample avenue to self employment engaging family members directly and has created indirect employment in the field of manufacturing and supply of garden implements, transportation of green leaf and agro-chemicals.

The small tea estates are mainly producing green leaf. They don’t have their own factories. Out of the total area in the small sector, 10% is in the formative stage.

Chapter IV seek to study the land use pattern of the study region. The land use pattern has been discussed in to two phases – general land use pattern of the Sivasagar district and Land use pattern of sample small tea growers of the study region. Land under tea and rice are the most dominant forms of land use. A gradual increase in percentage area under tea cultivation and decrease in area under rice and other crops was observed. The small tea growers has used virgin land, crops replaced land, marginal land and
unsuitable land for tea cultivation. Tea and other field crops were the two groups of crops competing for available land as well as other resources of the sample small tea growers. Tea was relatively more important for the larger farm size group.

Chapter V deals with the small scale tea cultivation and land use change. Small scale tea cultivation when started in Assam was done on suitable high land only. But gradually it has been occupying all types of highland whether it belongs to their families or government land. Bulk of the present area under tea came from cultivable fallow land followed by land previously occupied by bamboo, sugarcane, trees and other plantation crops. Most of the rural farmers re-organized their highland crops field for small tea cultivation. Many hundred bighas of sugarcane field, pine apple garden, homestead garden and Bamboobari disappeared from this study area for mono cropping of tea. All these are elaborated in this chapter.

Chapter VI concerned with the change in occupational structure and income level. Small scale tea cultivation has brought changes in occupational pattern and has brought significant economic changes among the rural people of Sivasagar district. There has been a considerable shift of working population from other occupation to tea cultivation. The working participation rate in tea farms is more than others like other agricultural crops, Business and services. Among different sources in all the size groups of growers, agriculture and its allied activities have the highest share in the total income. Agriculture is the major and the most important sources of income. Again, among the agricultural income, tea has the highest share to the total income. Very few persons are engaged in salaried jobs.
The socio-economic changes has taken place among the small tea growers. Marked changes have been noticed in household and basic amenities among the growers. The urban style of seeking luxury and entertainment and fashion has been slowly developing among the rural people of the area depending on economic conditions and educational advancement.

A summery of the entire work is given in the chapter VII.

**Findings:**

1) The Small tea growers are mainly producing green leaf. They don’t have own factories. Total 503.16 hectares of land out of 1144.85 hectares are devoted to small tea cultivation in the study area. Small scale tea cultivation provides ample avenue to self employment engaging family member directly. 56.13% workers are engaged in small tea cultivation. It has stopped the migration of rural workers in to urban centers. Besides the direct employment it has created indirect employment in the field of manufacturing and supply of garden implements, transportation of green leaf and agro-chemicals.

2) Small tea growers are originally from sedentary cultivator, educated rural youth, educated urban youth, in service personal and ex-tea garden workers.

3) Small tea cultivation helps in utilization of human labour. It provide ample avenue to self employment engaging family members directly and has created indirect employment in the field of manufacturing and supply of garden implements, transportation of green leaf and agro-chemicals. It has stopped the migration of rural workers in to urban centre, specially in the Sivasagar district.
4) Percentage of literacy rate was very high among the small tea growers. It was observed 82.28%, which was found to be above state average of 64.28% (2001). The working force constituted about 55.63% of the total population. The remaining 44.37% were non workers. The work force constituted farming, services and business.

5) Sample small tea growers sold their green leaf to commission agents, sub-agents and to the tea processing units.

6) In the beginning small scale tea cultivation in Assam was done on suitable high lands only. But with the increase in numbers of growers, it has started occupying all type high lands, whether it belongs to their families or government lands. Bulk of the present area under tea have been brought from cultivable fallow lands, sugarcane fields and land under some plantation crops, bamboo forest etc. People are replacing the high land crops even rice also.

7) There are many small tea gardens in the area which were previously covered by bamboo forest. Most of the rural farmers converted their high land crops fields to small tea cultivations. More than 90% fallow lands of this area were brought under tea cultivation including government forestlands.

8) There has been a considerable shift of working population from business and other agricultural sector to small tea sector in rural area. The work participation rate in small tea sector are more than others, like other agricultural crops, business and services.

9) Small scale tea cultivation has brought significant economic changes among the rural people of upper Assam specially in Sivasagar district.
10) Among different income sources of growers, agriculture and its allied activities have the highest share to the total income. Again among the agricultural income sources tea has the highest share to total income. Very few persons engaged in salaried jobs.

11) Socio-economic changes have taken place among the rural people of Sivasagar district. Basic amenities like source of fuel cooking, source of lighting, housing conditions, source of drinking water etc. has been changed among the growers. The urban life style has been slowly developing among the rural people of the area depending on economic conditions and educational advancements. Improvement of economic condition combined with the increasing impact of urbanization and modernization has also brought a considerable change in the house hold amenities.

Conclusion: The concept of small scale tea cultivation by common farmers in Assam is not very old. During the last two decades, tea has became a popular crop among the farmers. Tea cultivation in small holdings ranging from 0.13 hectare to 3.0 hectares or even more spread over almost all districts of Assam, however highest concentration is in the five districts of upper Assam.

During the initial years, most of the small plantation were done on suitable high land. With the increasing number of growers, it has been occupying all types of high land whether it belongs to their families or to government. The discussion reveals that socio-economic changes has been taken place among the rural people of Sivasagar district, primarily in respect of urbanization, literacy and occupational behavior. Land use changes has also been taken place in the rural areas of Assam. It is clear that there has been considerable influence of the small tea cultivation in raising the socio-economic
status of the rural people. After all the introduction of small scale tea cultivation may be considered as a boon to the rural economy of upper Assam. To achieve long term benefits it would be worthwhile to develop strategies and implement them with right earnest.