INTRODUCTION

Women, in the emerging complex social scenarios, have a pivotal role to play. India has 16 percent of the world’s population, but only 2.4 per cent of its land, resulting in great pressures on its natural resources. Over 84 per cent of the economically active women of India derive their livelihood from land resources. In rural India, agriculture and allied industrial sectors employ as much as 89.5% of the total female labours.

The tribal population of India constitutes 8.08 per cent of the total population. The tribes in Assam, although seem to be living outside the mainstream of the general population but their villages are not exclusive. Traditionally they have their own socio-cultural life, which is male-dominated and patriarchal and are at varying stages of development. The constraints of more developed societies do not apply for the tribal societies. Due to assimilation with other societies, tribes have adopted Hindu religious practices, but their religious practices are also a mixture of animism and superstitious beliefs.

Agriculture is the dominant sector of the economy of Assam contributing about 56 per cent of the states income and crop production occupies the most important part of agriculture. Assam is a state with wide variation in its inhabitants as also in its physical, economical, cultural and historical conditions. For these reasons, there is no uniform pattern of agricultural practices among different tribes. Female work participation in this sector is also of varied nature and among tribal population, females perform a major role in all the work processes in agriculture.
Dhemaji is the eastern most district of Assam and is the homeland of a large number of tribes namely the Mishings, the Deoris, the Sonowal Kacharis, the Bodos and the Tiwas besides other ethnic groups like the Chutiyas, the Ahoms, the Koch and others. Agriculture is the main occupation of all these tribes where work participation of women is remarkable.
STATEMENT OF THE PROBLEM

Study of women issues assumed great importance in a global context. However, geographical research on participation of women in agriculture, especially in this region is still very limited. In rural economy, women have been playing an important role in the economic sustenance of the families. It is also recognized that the tribal women have significant contribution to the economic development of the family and the society.

Agriculture being a family activity, participation of all family members including the womenfolk is considered to be must so as to provide cheap labour force. In Assam, participation of female in agricultural activity is varied in different communities depending on their environment and ethnic variation. In tribal society, women constitute one of the main sources of agricultural labourers.

While economists and sociologists have evinced much interest in studying female participation in agriculture and their economic contribution, geographers have been late in addressing to such issues. Geographical approach considered the issue in a holistic frame and relates it to the agro-ecological parameters. The present research aims at understanding the female participation in agriculture from the agro-ecological point of view and intends to examine the impact of ethnic factor in differentiating female involvement in work. It is assumed that agro-ecological factors determine the volume of work required in agriculture while the ethnic factor determines the sexual division of labour and socially directed access to different types of work, which the women are permitted to do. This is why the case of tribal
women is addressed directly in this research as the tribal societies are known to be more egalitarian and do not nurture discrimination in the name of gender.

In light of the above facts the present study is conceived to explore the pattern of participation in agriculture by the Mishing, the Deoris and the Sonowal Kachari women in agriculture in Dhemaji district. An attempt was made to have a comparative study among the tribal and non-tribal villages of Dhemaji district. The attempt was directed to examine the extent of work participation, structure of work performed and the nature of sexual division of labour among the tribal women. The case of non-tribal component was also taken into consideration to find out the differences between the two segments of population. The participation rate was examined in different regions of the district so as to permit a meaningful conclusion on the nature and type of female participation in agricultural work among the tribal segment.
OBJECTIVES

The present study is conceived with the following objectives:

1. To undertake a study of the agro-ecological condition of the area that influences the total volume of work in agriculture and animal husbandry in Dhemaji district.

2. To make a comparative study of the participation rate of women in agricultural activities of the Mishings, the Deoris and the Sonowal Kacharis with the non-tribal women of the district.

3. To study the nature of sexual division of labour between the tribes and the non-tribes population living in the district.

4. To explain the variation in female work participation in agriculture, among the scheduled tribes and between the tribes and non-tribes.
HYPOTHESES

The present research proposes to test the following hypotheses:

1. Variation in agro-ecological condition influences the extent of variation in female participation in work among the tribes as well as the non-tribal segments of the population.

2. Intertribal variation in female work participation in agriculture will be minimal in similar agro-ecological units.

3. Sexual division of labour shall be more pronounced between the tribes and the non-tribes. However, the sexual division between the two segments will become insignificant within similar agro-ecological units.
DATA BASE AND METHODOLOGY

The study was undertaken in Dhemaji district of Assam. A total of 20 (twenty) villages were selected from the district considering five villages from the three scheduled tribes dominating and five non-tribal villages. The villages were selected on the basis of the following considerations:

a) Areas where the scheduled tribes constitute more than 80% of the population and are distributed in a contiguous belt.

b) Areas where traditional cultivations are dominant.

c) Areas where cash crops are cultivated.

d) Areas where irrigation facility is available to most farms.

From each village a minimum of 25 (twenty five) households was selected for personal interview to collect primary data with the help of household scheduled questionnaires for 690 households. The primary data thus collected was tabulated and used statistical analysis to determine the female participation rate, sexual division of works and occupational structure etc.

Necessary secondary data for the present study was taken from different Government reports, documents and other published reports. These documents was consulted to collect data on cropping pattern, sexual division of works, female rate of participation in the agricultural sector, female tribal and non-tribal occupational structure and population figures etc.
In the second stage, the validity of the findings was testified with secondary data by comparing the primary data collected through field survey. These were also used to examine the location specific factors responsible for occurrence of specific patterns and attributes.

Agro ecological information such as topography, soil type, climate, irrigation facility etc. was collected from different Government sources like Department of Agriculture, Govt. of Assam, Regional Remote Sensing Application Centre, Guwahati and other published sources.

The data obtained was processed, tabulated and analyzed with suitable and meaningful quantitative techniques. Interpretation and statistical analysis was made using $\chi^2$ tests and also with simple ratio of percentages, post diction method according to method described by Pal (1998) and Hammond and McCullagh (1991). These analyses was supplemented by a number of charts, maps and diagrams to give a clear vision on the patterns of work participation, gender division of labour and occupational structure etc. A conclusion of the study was drawn based on results derived from the study.
AGRO-ECOLOGICAL SETTING OF THE STUDY AREA

The Dhemaji district occupies a unique position amidst complex geologic and physiographic makeup of the state of Assam. The district falls under the upper Brahmaputra valley agro-climatic zone. Geographically situated between the 94° 12' 18" E and 95° 41' 32" E longitudes and 27° 05' 27" N and 27° 57' 16" N latitudes, the district covers an area of 3237 Sq. Km accounting for 3.36% of the state area and is a basically plain area lying at an altitude of 102 m above the Mean Sea Level. It is bounded on the east by Arunachal Pradesh and partly by Tinsukia district, on the west by Lakhimpur district, on the north by Arunachal Pradesh and on the south by river Brahmaputra. The district has two subdivisions and five revenue blocks with 1205 inhabited villages.

Dhemaji district shelters a population of 5,69,468 as per 2001 census, which includes 294,105 males and 275,363 females, sex ratio being 936 females per thousand males. The average density is 176 per Sq. Km. The Schedule tribe and schedule caste population of the district works out to be 47.29% and 5.33% respectively of the total population. The major tribes of the district include the Mishings, the Bodos, the Sonowal Kacharis and the Deoris. The district has a fair proportion of women engaged in cultivation and agricultural activities (32.9%). The urban population is only 1.85% indicating the rural character of the district. The annual rate of growth of population worked out to be 5.22% compared to the overall state growth rate of 2.62%.

Spatial distribution and density of population in the Dhemaji district is not even. The pattern of population density and distribution can be linked with its
spatially varied environmental conditions as soil type, occurrence of floods, transport and communications etc. Concentration of population is found to be more in the middle part of the district than the other areas. The Jonai subdivision of the district is mostly inhabited by the tribals (66.96% of total population) and the Scheduled caste population of the subdivision is only 2.36% of the total population. Dhemaji subdivision of the district also has a fair proportion of tribal population (36.62% of the total population). The scheduled caste population of the subdivision is 7.64% of the total population.

The present physiographic configuration of the district has taken shape only during the geologically recent times and is still under the influence of the process. Fluvial processes are significantly dominant on the flood plains where alluvial deposition takes place due to erosion of the higher surfaces by rivers and flooding. The erosion and depositional process are intensified by copious rainfall and occasional seismic movements. The topography of the district varies from undulating uplands on the northern foothill belt to low lying plains on the south. The district has a total cropped area of 100237 hectares while 63665 hectares are covered by forestland. The grasslands and grazing lands normally occur along the main rivers and in Char areas. Most of these areas are used as grazing land for cattle. The area under this category accounts for 11.71% of the total land area of the district. The district has altitude ranging from about 35 meters (areas in riverine belts) to 140 meters (areas in the foothill belt) above the mean sea level.

The climatic conditions of the district is hot humid during the summer and cool dry during the winter months. All the tributaries of River Brahmaputra in the district are perennial in nature and originate from the hills of Arunachal Pradesh and
have a shorter course in the plains. These rivers flow through the high rainfall region at the foothill of Assam Himalayas and hence the district acts as a runoff zone for the access water from Arunachal Pradesh. Moreover, they reach the plains at an enormous speed carrying silts especially during the summer months when rainfall is abundant in the encashment areas of the rivers, resulting in flush floods and devastation in the plain regions. Besides the tributaries of the river Brahmaputra, there are numerous channels that drain the district. An extensive area of the district is thus invariably subjected to 3-4 waves of flood during the monsoon season.

The economy of this backward district is mainly agro-based. Lack of good communication system, shortage of power (electricity), lack of proper irrigation and marketing facilities adds to the backwardness of the district. Dearth of any major and small industry worth mentioning is also responsible for multiplying the problem of unemployment, while galloping explosion in the rate of population growth has already shown signs of negative impact.
ANALYSIS:

Assam is the homeland of many ethnic groups with different languages, customs and with different historical, economical, cultural traditions and religious believes. Although, most of them share a common mode of income from agricultural activities, even than there exists variation in the pattern of agricultural practices among different groups. The study of spatial distribution in work participation rate in Assam indicates that this rate is high in the tribal dominated and economically backward districts. The main economic activities of the tribal population in Assam lie in the primary sector of agriculture. In rural areas, agriculture and allied industrial sector employ most of the female workers. The work participation rate of female (percentage of female workers to total female population) in Dhemaji district is 37.94%, which is much higher than state average (18.09%). The percentage of female main workers to total female population in the district is 15.15% against 9.82% for the state of Assam. The corresponding figures in female marginal workers are 22.53% and 10.89% in Dhemaji and Assam respectively (Census, 2001). This indicates that most of the female workers in the district are underutilized.

In Assam, out of the total workers 77% are engaged in agriculture and allied activities and contribution of agricultural sector to state income is as high as 56% (Das, 1984). The agriculture sector employs as much as 85% of all economically active women. In Dhemaji there has been a decline in the number of cultivators over the years with an increase in female agricultural labourers, due to the floods and declining land holding pattern.
In Dhemaji district of Assam the sex ratio of female workers is 490 per 1000 males as compared to the state average of 240 per 1000 males. However, female main workers engaged in sectors other than agriculture is very low (0.53% of total population) as apart from Government jobs there is very little scope of engaging female workers in work categories other than the agricultural or allied sectors. The proportion of female marginal workers is also much higher in Dhemaji district (10.13% of total population) than the state average of 0.43%.

In the main workers category, the increase in other workers category recorded highest annual growth rate (17.4%) followed by agricultural labourer (15.28%), while cultivators recorded an increase of a mere 6.78%. This shift during the last decades can be attributed to various factors like negative impact of population explosion, decreasing land holding pattern, loss of agricultural lands due to floods etc. which also accounts for increased poverty in the district.

There is a considerable variation in the work participation of women in agriculture in different parts of Assam and a same phenomenon is observed between different ethnic groups residing in Assam. However, there exists little difference in work participation pattern among women of different ethnic and tribal population residing within a particular geo-climatic condition. In Dhemaji district of Assam, the female work participation in agriculture is more or less similar among different tribal and ethnic groups with very little variations. Within the district women are not involved in ploughing and are minimally involved in activities like seeding and carrying harvested crops home but are maximally involved in transplanting, harvesting, livestock maintenance and preparation of food. Threshing, previously
done exclusively by women in the tribal dominated areas of the district are now gradually replaced by the use of bullocks and most of the husking process became mechanized. However, a sizeable proportion of the tribal women are still using the manual method of threshing and husking. The process of kitchen gardening and horticulture is found to be minimum for the Mishing tribe followed by the Deori tribe. However, the women of the Sonowal Kachari tribe as well as non tribal groups are found to be involved in kitchen gardening in a moderate degree. It may be due to the fact that the women and girls of these two tribes used to meet their daily necessities through rearing of pigs and poultry in their backyard openly and open grazing system is not feasible for kitchen gardening. Thus it shows that the traditional pattern of participation of women in various activities related to agriculture exists in the district.

To make the evaluation of the agricultural work participation by women purposeful, the sample profile covers information on age, education and landholding etc. Age acquires a special significance as far as efficiency is concerned. Although women’s participation in agricultural activity starts at a very early age, the respondents of the present study mainly confined to the housewives, hence their age ranged between 18 to 60 years, comprising 31.88% respondents in below 30 years age group, 37.10% in 30-45 and 31.02% respondents in above 45 years of age group range. The analysis revealed that the age of nearly two third of the respondents ranged between 20 and 40 years.

The percentage of workers of tribal women in Dhemaji district is substantially higher than non-tribal women irrespective of age groups indicating
higher FWPR among the tribal women as compared to non-tribal women. Moreover, women in the district are economically active up to the age of 45 years after which their economic contributions towards family income tends to decline.

It is also observed that many women of low income groups of the Sonowal Kachari tribe residing in the foothill areas near Subansiri River are engaged in wage earning activities in the construction works associated with the Subansiri hydroelectric project. Moreover, many women of all ethnic groups residing in Flood affected areas of Jiadhol are also engaged in wage earning activities.

A woman has very little access to education in the rural areas, which is more pertinent in tribal dominated areas; hence most women are illiterate. The educational level of the respondents in the present study is classified into four categories viz. illiterate, educated up to primary school level, educated up to High School (HS) level and higher educated women (HSLC and above). The study shows illiteracy among the respondents is found to be highest among Mishing women (67.8%) and lowest among non tribal women (43.9%).

Agricultural activity doesn’t require lots of skill and training, hence most rural women engage themselves in such activities where education is not a prerequisite. It is observed in the present study that the participation rates of illiterate and primary educated women are more in agricultural activities in comparison to the higher educated women.

In the marginal workers category women participation rate is found to be maximum in all the levels of education since traditionally they are over represented
in this category. The proportion of non workers is almost negligible among Mishing women. A sizeable proportion of Deori and Sonowal Kachari women belonged to the main workers category. In contrast most of the women of the non tribal communities are either non-workers or marginal workers. The statistical analysis of FWPR with that of education level of women reveals insignificant relationship for all the ethnic groups, probably due to lesser job opportunity outside the primary sector within the district.

Economic status of a family has a direct relationship with the women’s work participation in agriculture, and thus land holding has a significant relationship with the FWPR of women irrespective of their ethnicity. It is observed that the FWPR increases with the decrease of size of land holdings, which indicates an inverse relationship with the size of land holdings.

The participation rate of women of poor families is higher in the agricultural activity, therefore their economic contributions towards family income is higher than the others families. The work participation of tribal women is higher than their non tribal counterpart irrespective of their age, education and land holding. In general most of the tribal women are self-employed and very few are in formal employment. Moreover, livestock care was more or less a female dominated work. Men’s involvements in livestock activities were rather limited to cleaning and milking the cows, thus women play a significant role in livestock management and production. Women takes care the animals, takes them to grazing and collects fodder, cleans animal sheds and helps in milk processing and livestock products.
The socio-economic characteristics of the society also plays significant role in FWPR. The Mishing women are found to be more active than the other two tribes in terms of work participation rate. However, proportions of main workers are higher in Sonowal Kachari and Deori tribes than the Mishings. The FWPR of all the three tribes are much higher than their non tribal counterparts residing within the district.

The above discussions of inter tribal and inter ethnic variations in work participation of women reveals that the FWPR in Dhemaji district (37.94%) is much higher than the state average (18.09%). The percentage of female main workers to total female population in the district (15.15%) is also significantly higher than the state of Assam (9.12%). It is observed that in Dhemaji district, although the women work participation in agriculture is more or less similar among the different tribal and ethnic groups but slight differences are observed in some aspects. It is also observed that there a definite relationship between different socio-economic characteristics as age, education and land holding of women belonging to different ethnic groups with their work participation rate and their economic contributions towards family income. However, it is seen that the agriculture is carried out through traditional customs and it is more labour intensive and low productive.

The working force and the occupational pattern of women are greatly determined by the characters of socio-economic status of a society. Further, the work participation rate, occupational pattern of women and prevalent sex disparity in different economic pursuits certainly reveals the economic status of women and the social system prevalent in the society. Women, besides engaging themselves in a variety of activities, both on the farm and at home, also contribute to the family
income through their wage earnings. Their earnings form a major part of the income of poor households and in fact poorer the farm household, greater is their relative contribution to total income.

Employment in any occupation depends upon various parameters. Any occupation involves certain range of responsibility and functions, which requires education, training and experience. Therefore, a positive co-relation between occupational pattern and education always exists. Experience or expertise substitutes educational requirement of certain occupations. However, it becomes difficult to establish a relationship between women's education and work, although education always plays an important role in diversifying females work participation pattern.

It is observed from the field study that the majority of female literates have only a primary education or even less. Therefore, women's work participation rates in various occupations are low except in the primary and tertiary sector (weaving). Thus diversification of occupational structure of women is almost nil in the district.

The proportion of female workers in Dhemaji district is much higher (18.47%) than the state average (10.03%). This is due to the fact that the district has a substantial population of scheduled tribes, where women work participation rate is always higher than the other ethnic groups including scheduled castes population. The ratio of female workers in Dhemaji district is 714 per 1000 males which is almost double to that of the sate average of 388 per 1000 males. The proportion of female main workers is 388 per thousand male in the district in comparison to the state average of 213 females per thousand males.
The rural urban analysis of the distribution of workers indicates that the difference of work participation of the district with the state average lies only in the rural sector while the urban work scenario is almost similar with that of the state average.

Women are found to be over-represented in the informal sector because the flexibilities of work involved in such activities, especially in home-based works. However, much of their informal works are unrecognized and unpaid, and therefore it is not considered in the standard labour force and employment indicator system.

Services constitute a very heterogeneous economic category and much of the works women typically perform comes under the category of unpaid labour, performed within the household or local community. The care economy dominates in such works. Such work comes dominantly in the form of self-employment, and because most of it is conducted in the informal sector, it is extremely difficult to get reliable estimates of such employment. Thus data inadequacy is certain in FWPR and in determining the occupational structure of women in a region.

In Dhemaji district as high as 80.94% of the workers are engaged in the primary sector, while a mere 19.06 per cent of workers are engaged in other sectors of occupation including the household industries in comparison to the state average of 52.65% and 47.35% respectively in similar occupations. This may be due to the fact that the district has a fair proportion of scheduled tribe population, and as scheduled tribe populations are traditionally linked with land and nature, and thus the proportions of workers are found to be high in primary sector, particularly in
agriculture. Moreover, the district is one of the most backward districts of Assam with very little job opportunity outside the agricultural sector.

The proportion of female workers to total workers involved in agricultural activities in urban areas are 3.46% while 11.96% of urban women are involved in activities other than agriculture against the state average of 0.60% and 14.45% respectively. However, in the rural sector the difference of FWPR in the district with the state becomes prominent where 38.56% of women (of total workers) are involved in agriculture against the state average of 17.87%. The work participation in other sectors including household industry (4.44%) for the rural women of the district is substantially lower than the state average of 11.74%. Kar (2002) also observed that the share of workers in primary occupations, especially of women among the scheduled tribe is significantly higher than the scheduled caste and non tribal groups.

In Dhemaji district as most of the workers are engaged in occupations related to the primary sector hence variation in occupational structure is relatively lower than the state. Lack of industrial and associated infrastructure development is one of the primary causes of over representation of workers in the primary sector in the district. Among the Sonowal Kachari tribe living near the Subansiri Hydro-electricity project peoples' livelihoods are changing. Over the past few years, there is a move from agriculture as the primary livelihood, to a mix of agriculture, small scale tea plantations and off-farm employment as wage labourers in the project sites. More and more people are engaged in wage earning activities among the tribes other than agriculture.
As compared to general females, the tribal females are engaged more as cultivators in agriculture, animal husbandry and weaving. In the past, few women participated in the labour force and their work place was at or nearer to their homes, so that they can simultaneously take care of the family and manage the domestic world. The present women’s works become diversified and female employment growth rate has also increased. However, the diversification of occupational structure of women workers in Dhemaji district of Assam is negligible and they prefer to work near to their homes. This may be due to various factors including sense of social insecurity, lack of industrial activities, poor communication systems etc.

In the present study very little variations in occupational structures among different ethnic group respondents residing in Dhemaji district is observed. The assessment of the occupational status of the women reveals that there are not much differences in working status among different ethnic groups of women. Very few of the tribal women of Dhemaji district are involved in activities other than agriculture except weaving and sericulture. Sericulture is recognized as an intensive employment area for women. Sericulture sector is exclusively controlled and managed by women in this district. The sericulture is practiced in many parts of the district by all ethnic groups, while weaving is invariably practiced by almost all the womenfolk of the district.

It is revealing to note that only a negligible proportion of women are found in occupation other than agriculture. The female wage labourers mostly earn their wages through work in agricultural fields and its related activities. There is a growth in the number of female wage labourers over the years due to loss or damage of
agricultural lands of many of the farmers. This damage or loss is caused by devastating floods and sand silting occurring annually over the last decades. The establishment of Subansiri Hydro-electric project also attracted many female workers as it provides better wage structure and regular wage employment. This project is located in an area where Sonowal Kachari tribe is found to be concentrated. This is reason for the growth of wage labourers among Sonowal Kachari women.

It is observed that occupational share of female workers in the primary sector is 88.45% while only 4.07% and 7.48% female workers in the district are engaged in household industry works and other sectors respectively. The corresponding state average in primary sector (56.90%) is lower than the district while it is much higher in household industrial activities (7.89%) and in other sectors (35.21%). Lack of industrial and associated infrastructure development is the primary cause of low share of female workers in both these sectors in the district.

Gender roles are the socially, not biologically ascribed roles of women and men, which can vary between different societies and cultures, classes and ages, and throughout different periods in history. Gender-specific roles and responsibilities are often conditioned by household structure, access to resources, and the specific impacts of the global economy, and other locally relevant factors such as ecological conditions (FAO, 1997).

Throughout the world, rural women have played, and continue to play an important role in farming systems. It is believed by some historians that while men went out hunting, women started gathering the seeds of plants and began cultivating
them to meet their food, fibre and fuel needs (Swaminathan, 1985) and thus women are first to initiate farming by domesticating crop plants. The rural women play key roles in the entire food system, starting from the selection of seeds through sowing, manuring, transplanting, weeding, harvesting, threshing, winnowing, drying, stacking and storing, to feeding the family from the harvested produce. Besides engaging themselves in a variety of activities, both on the farm and at home, the farmwomen also contribute to the family income through their wage earnings. Poorer the farm household, greater is their relative contribution to its total income and contribute a larger share of what they earn to basic family maintenance than men (Mencher, 1987).

Women are also involved crafts like embroidery, weaving etc. Handlooms and textile sector is a major employer of women. The handloom industry is home-based sector employing women. The practice of weaving though handlooms is done in the Dhemaji district as a subsidiary income generating avenue of women. Moreover, women provide most of the services related to personal services such as domestic work, cleaning and cooking services and care of children and the elderly.

There are identifiable patterns in gender division of labour in agriculture, which is not only quite complicated, but also dynamic and subject to change. There were considerable variations in the position of women, caste-wise, region wise and between caste communities and tribal communities. Division of labour in Dhemaji district varies very little in farming system but not among the tribes. Some tasks are exclusively undertaken by men, and some by women. Predominantly male tasks include the felling of trees, ploughing with oxen, digging etc. and market related
activities such as purchase and use of pesticides/ fertilizers, sale of agricultural products etc. Women, besides household tasks usually undertakes transplanting, harvesting, thrashing, crop drying, and other post harvest operations, like winnowing, fetching water and pig and poultry-rearing. Other tasks, such as weeding, and crop storage, are almost equally undertaken by both women and men. In general, women's workload considerably exceeds than men.

The personal, demographic and socio-economic profile of the women workers of the district reveals that majority of the women belong to low to medium income groups and also low economic status (literacy, land holding, annual family income etc.). The household works (child care and household chores) and economically benefited works (as fetching of water), which are essential for a family, is still a women's responsibility. Women usually do not get any help from their men folk for domestic activities and economically benefited activities. On the whole, distribution of task responsibility is a gender biased and divided along the traditional lines, irrespective of women's work status. It may be because of the cultural point of view that women do the household works and men do the outdoor works (Sethi, 1991). Although many women do additional work outside their home, only a few men are involved in additional work inside their home.

Most of the women in the district work in agricultural fields and during off season they engage themselves in weaving of their dresses. Women are traditionally responsible for the daily household chores. In the past, cultural restrictions were the primary impediments to female employments in formal jobs; now a day, the shortage of job opportunity contributes to low female employments.
Although the district experiences a multifaceted society, a generalized trend in gender division of labour is observable among various regional, religious, social, and economic groups. The society is extremely hierarchical where virtually everyone is being treated according to their caste, class, wealth, and power, though specific customs vary from region to region. There are different standards of behavior for men and women. Women are modest in all actions, which may constrain their ability to perform on an equal basis with men. When family economy is sound women receive a greater educational opportunity but still they remain at home to protect family's moral.

Most of the ethnic groups of the district are living close to each other; hence the pattern of gender division of labour from one ethnic group to another group has lots similarity. It is seen that most of the pre-harvesting operations are taken care by men, especially ploughing, sowing, watering and fertilizing the field. Use of machinery and draught animals are performed by men, but the farm tasks that require direct manual labours are done by women. Harvesting and other post harvest operations like manual thrashing; husking (manual), cleaning etc. were exclusively women's responsibility. However, thrashing with the help of animals and husking with the use of machinery (milling) are performed mainly by men. As a whole woman extends helping hand to men folk in every activity in agricultural production, in addition to their household activities. It is a fact that livestock’s cares are more or less women’s work. Men’s involvements in livestock activities are limited to cleaning, milking and market related and products.
Cash crops are not very popular in the district. However, mustard seed plantation is carried out in many flood affected and sandy field areas. In the family farms where such crops are grown men only takes care of them. In general, men tend to dominate in more remunerative activities in agriculture. Women and children are normally assigned to tedious and time consuming jobs of agriculture. A man takes care of the marketing of high-valued cash crops and cattle, whereas women normally sell their domesticated chickens and pigs. Role sharing and working conditions are not static and are redefined as per social change. Earlier day's agricultural activities were shared by the community by way of helping each other in ploughing, planting and harvesting etc. Now a day these practices are not very common in many areas but still exists in some tribal villages of the state. Technological development in the district is at its rudimentary stage. Hence, the division of labour through technology is less felt in the district.

Due to disintegration of joint family structures, changes are also taking place in the gender division of labour within the family. Work division within the family depends in the size of the family and availability of works requires to be done. The disintegration of the extended family and the transition to the nuclear family often results to shortage of work within the family and thus more involvement of woman in agriculture activity is seen. The changes in family structure are accompanied by willingness and capacity on the part of the men to help the women.

Restructuring the economy of a poor district like Dhemaji needs a comprehensive policy framework emphasizing on increasing agricultural production. The implications of such a framework for women farmers need to be adequately
explored in this flood ravaged district of Assam conforms the actual conditions on the ground. The process of making production cost of cash crops competitive can primarily be done through reducing labour costs, as there is abundance of human resources available in the district. Women in the family farms provide cashless labour force and are also shouldering the tedious tasks involved with cash crop production, wherever such crops are grown.

In the present study the female work participation rate among different ethnic groups of Dhemaji district reveals that the tribal women are involved in a higher proportion in various activities related to agriculture than their non tribal counterpart. The work participation rate of women within Dhemaji district does not differ significantly among different tribal groups and proportion of non workers are comparatively low. However, the non tribal counterpart has shown a lower proportion of main workers and higher percentage of non workers.

Female work participation rate in primary activities are dependant upon various factors including the agricultural production system, local ecosystem and the farming system. Rice being the main crop of the district is typically produced in ecosystems like irrigated land, rain fed land and swamps. However, the district is difficult to partition on the basis of its agro-ecological setup. There are limited irrigation facilities in the district covering only 7.53% of the gross cropped area, due to which most of the lands remain fallow during winter season. Moreover, traditional method of cultivation is practiced in most parts of the district. Developments in the field of agriculture, including the use of HYV, fertilizers and mechanization are yet to make impact in the district. Thus in the context of the present study the sampling
villages are divided into two agro-ecological units (Unit-I and Unit-II) on the basis of irrigation facility. Villages having irrigation facilities (even partly) are grouped in Unit-I and villages without having irrigation facilities are grouped into Unit-II. The data of these two units are used in testing the hypotheses of the present study.

The present study did not reveal any significant relationship of FWPR between the two agro-ecological units for all the ethnic groups, indicating that variation in agro-ecological condition do not determine the extent of variation in female participation in work among the tribes as well as the non-tribal segment of the population.

There is a significant difference of work participation rate among the different ethnic groups rejecting the null hypothesis indicating that inter tribal variation in female work participation in agriculture is not equivalent even in similar agro-ecological units of the district. This may be because of differences of cultural, traditional and historical traditions among different ethnic groups despite the influence of one ethnic group over the other as they used to live in close proximity for decades together. Moreover, as the influence of poverty is an determining factor on FWPR irrespective of ethnicity and as the district is backward in respect of industrialization, communication etc. and as most of the tribal people are dependant on agriculture and allied activities as their sole source of income. Therefore, there are differences in work participation rates of women among the different tribes residing within the same agro-ecological unit.
Dhemaji district has a multifaceted society and customs varies from place to place; but a generalized pattern of gender division of labour is observable among various religious, social, and economic groups. The society is moderately hierarchical and people are moderately ranked relative to others according to their wealth, power and caste. In general women are expected to be chaste and modest and their employment outside the sphere of home and family farmyard is viewed as inappropriate and threat to their chastity and womanly virtue. Women and girls of the economically sound families generally receive a greater educational opportunity but are usually kept at home as a demonstration of the family’s morality.

Most of the ethnic groups residing within the district are living at close proximity to each other and there are cross integration of each others cultures, traditions etc. Moreover, inter-caste, inter-tribe and inter-ethnic marriages also are not uncommon in the district. Hence, the pattern of gender division of labour of one ethnic group has definite influence on the other groups resulting in a generalized trend.

The third hypothesis which states that “Sexual division of labour shall be more prominent between the tribes and the non-tribes” is also rejected since there are very little differences in sexual division of labourers, except fetching of fuel or firewood which are carried out by women in the tribal society and man in non tribal communities. Thus the sexual divisions between the two groups are not significant within similar agro-ecological units as well as within the district as a whole.
CONCLUSION

Women make a considerable contribution to agricultural production in developing countries. Women workers in farming may be unpaid family labour or self-employed own-account workers and wage labourers on farms. There needs a clear understanding of the role played by women in agriculture. The recognition that most women in rural areas are farmers necessitates a reorientation in research work related to women and agriculture.

The present research work basically embodies the detailed geographical treatment of the demographic and socio-economic characteristics of women population in the Dhemaji district of Assam. Main focus was given to the female work participation in the primary activities of the Mishing, the Deori and the Sonowal Kachari tribes. An analysis of the pattern of socio-economic characteristics of women at local level was also studied to know the position of women in various socio-economic and cultural situations in the region.

Methods and approaches thought to be appropriate for the present study have been applied including field observations. It may be mentioned here that the analysis of the problem is sometimes constrained due to non availability of adequate data.

Dhemaji is an agricultural district where people depend on agriculture directly or indirectly as it constitutes to be mainstay of the economy. With food being the growing need of the mankind, adequate production and distribution of food has lately become a high priority of the people in the globe. With the changing
In agriculture the factors like high soil productivity, supply of balanced crop nutrients, efficient water management, improved crops, better plant protection, post-production management for value addition and marketing are responsible for higher yield.

Achievements of Indian agriculture like development of HYVs, new hybrids of different crops have strengthened the field. The enormous pressure to produce more food from less land with shrinking natural resources is a task for the farmers. To keep up the momentum of growth a careful economic evaluation of inputs like seeds, fertilizers, irrigation sources etc. are of considerable importance.

Rural women play a vital role in agriculture and participate in all stages of crop production, as they constitute a major part of rural labour force. They contribute in agricultural operations like transplanting, manuring, fertilizing, harvesting, threshing, winnowing and drying etc. For better exploitation of the emerging opportunities, there is need for changed outlook in favour of women, evolving technologies to suit women farmers, increasing the number of women extension workers, educating and training women farmers.
MAJOR FINDINGS OF THE STUDY

1. Dhemaji district has a substantial population of tribes (43.92%). The urban population is only 1.85%, indicating a rural character of the district. The district is situated in one of the heaviest rainfall areas of Assam and thus is most flood prone. The economy of the district is mainly agro based characterized by subsistence level of production and consumption. Sericulture, fishing and driftwood business are also carried out in smaller scales.

2. There exists a small difference in work participation pattern in agriculture among women of different ethnic and tribal population residing within the district. Agriculture is carried out through a traditional lines and customs and thus it is more labour intensive and low in productivity.

3. The proportion of female main workers involved in the agricultural sector is much higher than that of the state average. However, very few female main workers are found outside the primary sector. Similarly the proportions of female marginal workers are also much higher in Dhemaji district (10.13% of total population) than the state average of 0.43%.

4. The FWPR of tribal women are substantially higher than the non-tribal women irrespective of age groups. Women of the district remain economically active up to 45 years of age after which their economic contribution tends to decline. There is a significant relationship between age group and work participation rate in agriculture.
5. There exists an insignificant relationship between education level and FWPR in agriculture sector for all ethnic groups in the district probably due to lesser job opportunity outside the primary sector within the district.

6. Economic status of a family has a direct relationship with the women's work participation in agriculture, and thus land holding, which holds a direct relation to the economic connotation of a family, has shown a significant relationship with the FWPR of tribal women as well as of non tribal women.

7. Mishing women are found to be more active than the other two tribes in terms of work participation rate. However, proportions of main workers are observed to be higher in Sonowal-Kachari and Deori tribes. The FWPR for all three tribes are much higher than their non tribal counterpart residing within the district. There is an increasing trend of shift of women workers engaged in their own family farms to agricultural labourers during the last decades due to damage of agricultural lands by flood and erosion in Dhemaji district. This also indicates increase in landlessness and poverty, although accurate data is not available in this regard.

8. Very little variation in occupational structures among different ethnic groups of respondents residing in Dhemaji district was observed in the present study. Female workers in the district are mainly engaged in primary sector and work variation is relatively lower than the state scenario. As women workers prefer to work nearer to their homes, diversification of occupational structure of women in the district is found to be negligible. The shares of female workers in the primary occupations
among the non-tribal population in the district are considerably lower than the scheduled tribe population.

9. Most of female workers in the district are engaged in the primary sector (88.45%), while negligible proportions of female workers are found to be involved in household industry works (4.07%) and other sectors (7.48) respectively. Lack of industrial and associated infrastructure development in the district is the primary cause for low percentage share of female workers in other sectors in terms of employment.

10. Over the years, there is a decline in the number of cultivators and more and more women are engaged as agricultural labourers in the district, mainly due to floods and resultant sand deposition and erosion making the farm lands unusable for cultivation. Moreover, there seems to be moving away from agriculture as the primary livelihood, to mix cultivation, small scale tea plantations and off-farm employment as wage labourers in the western part of the district (Bordoloni block) as subsidiary income-generating activity.

11. As most of the ethnic groups residing within the district are living at close proximity to one another and are interacting with each other for decades together hence, the pattern of gender division of labour of one ethnic group must have influenced the other groups resulting in similarity.

12. As in other cultures and societies, the sociological system of the region is also firmly rooted in a hierarchical system of economic, social and political relations based on the sexual difference between men and women, where male domination and
female submission form the basic structuring principle of society resulting in gender division of labour. Generally tasks related to the public domain and to the generation of family income were assigned to men, while women were assigned tasks of biological and human reproduction that were mostly limited to private, domestic domain.

13. Predominantly male tasks in the primary sector includes the felling of trees, ploughing with oxen, digging, preparation of field, carrying harvested crops to home etc and market related activities such as purchase and use of pesticides/ fertilizers, sale of produce etc. Women, besides household task usually undertake transplanting, harvesting, threshing, crop drying, other post harvest operations, grinding grain, winnowing, fetching water and pig and poultry rearing etc. Other tasks, such as weeding, bagging and crop storage are almost equally undertaken by both women and men.

14. Most of the women of the district work in agricultural fields and also do weaving activities. It was further revealed that livestock care was more or less a female work. Men’s involvement in livestock activities was rather limited to cleaning, milking and market related activities of livestock and livestock products. Cash crops are not grown in a generalized way in the district. However, in the family farms where such crops were grown, men tend to be responsible for them.

15. Due to progressive disintegration in joint type of family structures, changes are also taking place on the level of the gender division of labour within the family. The changes in family structure are accompanied by willingness and capacity on the part
of the men to act supportively in works that are previously and exclusively performed by women. However, lack of elementary knowledge of work simplification techniques is increasing the drudgery of rural women's work.

16. The work participation rate of women within Dhemaji district does not differ significantly among different tribal groups and proportions of non workers are comparatively low. However, the non tribal counterpart had shown lower proportions of main workers and higher percentage of non workers.

17. Variations in agro-ecological conditions within the district had no effect on the extent of female work participation rate among the tribes as well as the non-tribal segment of the population.

18. Only a negligible section of the tribal women are involved in activities other than agriculture and weaving in the district and is comparatively lower than that of females in the general population in similar occupations. Sericulture practice is a major source of income for many women of the district. Almost all the rural households of the district have looms for weaving. Sericulture is recognized as an intensive employment area for women. Women are actively involved in silkworm rearing including their feed, silk reeling, spinning etc. Sericulture being a small-scale industry, is a source of subsidiary income in many rural households of the district, and is operated exclusively by women.
SUGGESTIONS:

1. Though considerable attention was paid to identify and calculating the value of women's unpaid work, there was hardly any attention paid to women's work in terms of income in the home based production. As the FWPR of tribal women is always higher than their non tribal counterpart hence, this fact assumes more importance in tribal societies. This is an area where statistical data is not available from official records, except a few. As rural women are becoming increasingly responsible for household activity and food production, development programs must adapt to this changing demographic profile so that rural women can acquire the necessary training on new productivity-enhancing techniques and technologies. The study of this sector assumes importance because most of the income derived from this work frequently provides the very basis for family survival particularly among the extremely poor farmers.

2. There are very few data available on the number of women engaged in home based production due to the lack of recognition of home based producers as workers in most data gathering system. A wide range of productive activities can be included in the home-based work as production of handicrafts, garments, rearing of small animals and poultry, grain cleaning etc. Women often combine their household tasks with income generating work. The hours of work vary from part time work to extended days work. Data on tribal women in this sphere may be gathered, which in turn can be analyzed in a meaningful way for the benefit and economic uplift of the district in general and the tribal societies in particular.
3. Tribes are always associated with the nature and agriculture is the main source of income for them. Tribal women always play a key role in agricultural production and thus there is a need for re-defining the concept of ‘worker’ and giving a monetary status for these activities. These should also be reflected in Gross National Product.

4. Analysis of rural women’s work showed that there was increasing drudgery of the household work because of lack of elementary knowledge of work simplification techniques. This is particularly true for the tribal societies. It is, therefore, necessary to evolve time-saving technologies for these household chores. Non-formal education emphasizing work simplification, time and energy management can considerably reduce the physical labour of work, thereby releasing more time and energy for economically productive activities. Education programs on such areas can be incorporated in rural development programs.

5. Access to science, technology and information improve life for rural women and help to reduce poverty. Basic education for women has been shown to have significant impacts on agricultural production. However, women have lesser access to skill acquisition, skill training and skill upgradation. While women play a predominant role in agriculture and food provisioning women’s participation in agriculture extension training and research in next to insignificant. These areas of consideration need immediate attention for uplifting the rural economy of the district.

6. With a commitment to sustainable development, priorities emerged to work with rural and tribal communities which are vulnerable to underdevelopment. Further, a growing realization of the need for a comprehensive process of development,
the significance issues of core areas are addressing Women’s Development and Sustainable Agriculture.

7. Tribal women traditionally possess a commendable knowledge about feed value of various fodder plants, indigenous medicinal plants and about organic farming, though they themselves are ignorant about their knowledge. A systemic study of such know-how should be made for their maximum utilization and to promote organic farming so as to increase women’s productive role in agriculture, decrease health hazards and avoid the drain of scarce family income to pay for unnecessary chemicals.
BIBLIOGRAPHY

(Part-I & Part-II), Tribal Research Institute, Assam, Guwahati

Census of India (2001): Directorate of Census Operations, India


