CHAPTER II

REVIEW OF LITERATURE

As extensive review of literature on tea was carried out for the study. In tea, there are considerable publications which deal in various aspects of tea viz. production, productivity, labour, quality, economic importance, impact on social life etc.

In course of the research investigation, the researcher had the privilege to go through numerous publications of different sources and visit many libraries. However, it is not claimed that all the available literatures on the subject were exhausted. In this present research investigation, review was confined only to the areas concerning the objectives of the particular study which is presented in the following pages briefly.

2.1 Production and productivity of tea

Production and productivity of tea are vital factors of the tea industry which manages the plantation crop with huge investment in a long term planning.

Sharma (1969) studied the effects of management on yield in Assam tea and observed that management was the most critical factor causing higher or low average yields in Assam. He found that all high yielding teas were better managed i.e. tea was in good health with clean frames, had least vacancy, shade status was better and the soil was well drained. He identified several factors viz. age and jat of tea, soil and climate, drainage, infilling of tea, uprooting and replanting, pruning cycle, shade status and pest and disease control as the important factors restricting the growth and yield of tea in Assam. ¹

Sarkar (1971) studied the size-structure and productivity correlation in tea industry and observed a positive correlation of yields with the size of tea holdings throughout black tea economy of India. He observed a positive correlation between the size of estates and the yield per acre in North India. Similar correlation was observed for estates upto 400 hectares in South India but the relationship was reversed above this. He was of the view that the most satisfactory index of productivity efficiency was unit cost of production of an estate. 2

Hainsworth (1976) identified nutrition, replanting, rehabilitation, weed control etc. as factors of the productivity. He outlined better tea varieties, a weed free medium, undisturbed soil, and a better understanding of plant responses and symptomatology for re-examining the prospects for rebuilding the industry in the field. 3

Misra (1985) in his study on nature of relationship between tea production and price found low elasticity of yield to price changes in short and long runs in nature of production. 4

In his analysis of Indian tea industry, Paranasivam (1988) observed that productivity of both North and South Indian tea was growing, the rate at South being marginally higher and the overall growth rate worked out to 1.87 per cent (24 year period from 1960–84). This was much greater than the area expansion of 0.8 per cent and was the most important component in the increasing production in the past. 5


The study of Baruah (1989) revealed that the growth rate in productivity of Assam tea was marginally lower than that for other regions and the all India average. The production pattern was found to be significantly seasonal and closely followed the geographical area distribution.\(^6\)

Borah and Chiranjeevi (1991) studied the supply response behaviour of Indian tea in terms of area and yield responses. Expected prices and risk due to prices were found to have significant impact on area newly planted. Yield per hectare revealed higher responses to expected prices and risk due to price, as compared to ‘total area’.\(^7\)

Mitra (1993) attempted to explain the observed trend in Indian tea production, domestic consumption, export and prices of Indian tea in both domestic and international markets during the period 1960 to 1980. According to her, the observed behaviour of production apparently suggested the insensitivity of the supply of Indian tea to changes in demand condition.\(^8\)

Dr. Joshi (1993) analysed different factors of productivity of tea and opined that apart from scientific cultivation practices, size of tea estate and age of the tea bushes were significant. Productivity for all regions in general and areas within a region consistently increased as the size of the tea estate increased and productivity of older bushes of 30 years of age or more were significantly less than the productivity of


younger bushes.9

Lahkar (1996) analysed the trend in production and productivity of Assam tea industry and found that the compound growth rate of Assam tea industry during the period 1981-92 was 2.2 per cent against a projected compound growth rate of 4 per cent of Tea Board; the yield rate was slowing down and between 1985 and 1991, the rise in productivity was nominal.10

Dwibedi (1999) studied the observed trend (Period 1961 to 1993) in tea production in Dooars, yield of Dooars tea and factors of variation in yield and resource utilization by tea estates. The study on impact of age of tea bushes on yield revealed no significant relationship between the variables yield and percentage of area under tea bushes of economic age. The study indicated increase in yield at a higher rate estates under proprietary ownership with increase in size of estates compared to other types of ownership.11

2.2 Marketing of tea

Marketing of tea is a unique process as tea is produced in remote tea estates and sold through various channels, mainly auction which is the traditional way of selling tea. There are Government regulations too, to sell tea through auctions although these are relaxed at present and other modes such as direct selling of tea is increasing. Export of tea is a vital source of revenue for the industry and the country but it is declining over the years. Various forces are in play in marketing of tea and there are wide gaps in price realization of the producer and what the consumer pays in addition to time lag of actual realization.

9. Joshi, Dr. S.K. 1993. CSIR and Scenario of Tea Cultivation in India. *Fourth Assam Company Lecture* delivered at Assam Agricultural University, Jorhat on 07.05.1993


Rajagopalan and Meenakshisundaram (1969) studied the production behaviour of tea industry in relation to market imperfections, and concluded that the market structure bordering oligopsony or near monopsony in tea auctions could have generated less dependence of producers on price variability in making plucking decisions.¹²

Goswami (1969) concluded in his study on the problems of export promotion of tea that several factors like cost of cultivation, manufacturing, the provisions for various central and state Government taxes, the commission to managing agents and the profit to shareholders would have to be taken into account while fixing tea prices in the market. The study called for some rationalization in tax structure specially in case of carriage and entry tax by State Government.¹³

An examination of the behaviour of prices in London and Calcutta auctions in the early part of 1970 confirmed the hypothesis that supplies of the particular market were highly influenced by the relative prices. The correlation of prices of North India leaf tea in London auction and in Calcutta auction was found to be very close showing that development in one market immediately affected the other market.¹⁴

Goradia (1979) found many advantages in the buyer of tea in auctions at it provided every buyer full and complete information in regard to kinds of tea offered and price obtained at the various world auction centres regardless or his location or level of influence.¹⁵


However, Yasi (1981) brought into light the fact that auction system of tea was evolved by the Britishers under their colonial rules with the objective of providing the British tea drinkers best tea in the world at a less expensive price. The producer did not have any control on the prices of his produce and necessary profits did not go to the producers. The auction system was entirely dominated by powerful buyers and there was a big gap between auction price and consumer price. 16

According to Misra (1985), market structure of tea was an important factor in low elasticity of supply. In the auction centres, he observed that the competitive elements were weak e.g. four brokers handled about 94 per cent of total sales in 1979-80 at Calcutta auction centre. The market oligopsony or monopsony in tea auction centres might have generated less dependence on price variability in making decisions regarding changes in yield or acreage. 17

Tripathy (1987), pointed out that a tea producer could never be sure of an assured price while producing tea. The prices were also subject to fluctuation because of external factors like international price which did not always follow the rule of supply and demand. The prevalence of an abnormally high international price affected the price of the internal tea, but the reverse was not noticeable beyond a level which was because of presence of very strong internal buyers. 18

Baruah (1989) studied the tea marketing system with special reference to sale of tea through Guwahati Tea Auction Centre. The study found that the growth rate of Assam tea sold through Guwahati auction was very high while it had been declining in all other auction centres. Sale of orthodox tea was found to have a small share


due to limited participation of export buyers.  

**Baruah (1989)** in his study on Guwahati Tea Auction Centre opined that it achieved a rapid growth in a short span having many factors to its advantage. He found that a significant quantity of Assam's production including Cachar and Tripura gardens were sold through it but it failed to attract teas from other tea districts.  

**Baruah (1989)** discussed the problems and prospects of sale of tea through Guwahati Tea Auction Centre and noted that only four to five big buyers were found to dominate the auction as a result of which they were able to rig prices by way of monopolistic power in the auction.  

**Kar (1994)** studied export of Indian tea and called for widening of export base for further growth as export was found to be confined to a few countries. He also identified the area of quality improvement to augment potential demand of international market, production of value added tea and effective measures for cost control. The difference between export and domestic price was found to be narrow and hence, he reasoned for financial incentives.  

**Sharma (1997)** justified the need for a second auction centre in Assam. He opined that sufficient quantity of tea would be available, if established in any one place out of Tezpur, Jorhat, Sibsagar and Dibrugarh, after sales of Assam tea through Guwahati and Calcutta auction centres and auction centre would be viable one.  

Das (1999) viewed that the present auction system was a very effective method in rapid disposal of tea and it provided a smooth procedure for carrying out the operations free from market manipulations. In his opinion, financial security was the main attraction of this system compared to any other system of marketing. 24

Divekar (2002) outlined that there were major changes in marketing of tea in India both at the primary marketing level as well as the secondary (post-auction) marketing level. The future challenges were to create an efficient auction system that would appeal to producers in post-liberalization context at the primary marketing level and development of value-added tea and new consumption channels like vending and out-of-home sector and new product forms. Producer led marketing of tea was a necessity in the liberalized environment. 25

2.3 Tea labour

Tea is one of the most labour intensive industries in India. It provides family based employment in remote and backward areas and about 50 per cent of the labour force constitute of women. Apart from wages, the labour are provided with other facilities and amenities as per provisions of Act. Almost the entire labour force of the tea industry of Assam were brought from different backward regions of India by the Britishers about 150 years back.

Paramasivam (1988) in his analysis of labours in Indian tea industry found that the productivity per labour employed was increasing; but in the North, labour productivity increased at the cost of employment, whereas in the South both were complementing each other. 26


Awasthi (1992) studied land and labour productivity in Upper Assam tea estates and observed that average land productivity increased alongwith increase in utilization of labour by 59 mandays per hectare i.e. from 752 mandays in 1982 to 811 mandays per hectare in 1985 and 1986. With the increased land productivity, the pluckers’ productivity also increased to 25.36 kg per plucker per day in 1985 – 86 from 24.10 kg in 1982. This resulted in cost reduction of 35 paise per kg of made tea in 1985 – 86 over 1982 (based upon estimated cost). 

Goswami’s (1992) study of the labour population of Brahmaputra valley of Assam considering all aspects established that their condition was not at par even with that of the workers of the unorganized sectors as well as the local peasantry. He observed that had it not been for the socio-cultural barriers, many of the garden workers would have come out of the plantations for good and joined the local peasantry even as landless peasants.

2.4 Tea quality

Assam tea is famous all over the world for its unique distinct liquor qualities. The best quality tea is grown particularly in the district of Upper Assam. Since the liberalization of world trade, there is stiff competition among the tea producing countries and the producers are putting maximum efforts in producing quality tea and promote such teas in domestic and international markets.

Wood (1958) studied the quality characteristics of different districts and their effect on manufacture. He reasoned that the natural environment was partly responsible for this regional differences in quality, although other factors might also be involved.


The climate particularly rainfall, humidity and temperature affected the different steps in tea manufacture viz. withering, fermentation and also presence of bacteria in manufacture. Regarding kind of leaf in relation to manufacturer, he also observed that pubescence which determined tip was influenced by environment and some jats were more situated than others to a particular district.  

Deb (1967) defined that quality was an independent character of black tea and flavour or aroma is distinct from black tea but associated with it. The taste and flavour of different tea cultivars were basically hereditary factors which were affected by the environment. He stated that quality is perceived by different persons in different ways like a broad integration of all the desirable characters of tea or flavour or aroma etc. He stated that all clones and bushes did not produce the teas of same quality even if they were manufactured similarly under precise conditions. This variation was due to genetical and environmental differences which when combined reflected on their chemical conditions. Taste and flavour are hereditary factors but were affected by environment. Withering and fermentation played important roles in developing quality during the process of manufacture. During the stage of fermentation of tea leaf, oxidative changes of the colourless polyphenol oxidase took place resulting in production of coloured substances. The coloured substances were very important for liquor characters of tea, including its quality. These products were responsible for the excitation of senses on the tongue and the pallet and were together called quality.  

Chakraborty and Srivastava (1977) observed that the quality of second flush was the best followed by rains tea. They analysed the bio-chemical mechanism involved in quality and increase in quality of tea in rains based on pigment profile study. They


found that tea shoot-stem elongated in rains which contained more chlorogenic acids than two leaves and a bud. Chlorophylls were observed more in rains than second flush tea. The chlorogenic acids and chlorophylls formed complexes with thea rubigins and other chemical components in the second flush and these complexes did not occur freely in the rains tea. Chlorogenic acids and chlorophyll were negatively correlated to the quality of black tea.  

Chakraborty et al (1978) studied the distribution of free amino acids and chlorogenic acids in different parts of the tea shoots and observed that bud and the first leaf contained almost similar amounts of amino acids whereas internode region between bud and the third leaf contained much higher concentration of the same. Compared to the leafy portions of the tea shoots, internodal portions showed very high levels of amino acids, particularly the theanine levels were exceedingly high. Amino acids were negatively correlated to the quality of black tea.

Rahman et al (1978) studied the effect of shade, manuring, pruning, plucking, varieties, herbicides, artificial light and gibberlic acid spray on the cup characters of orthodox and CTC teas. Shade influenced colour and strength favourably but infused leaf and briskness were better under no shade in orthodox teas. Nitrogen application within the normal range had no effect on the cup characters. Foliar application of urea improved quality and valuation of CTC tea but reduced quantity of tip in orthodox tea. Phosphorous improved quantity of tip, strength, quality and valuation while foliar application of Zinc had adverse effect.


Basu et al (1984) found that fine plucking improved the quality of tea because of the presence of high levels of polyphenols and caffeine and low level of chlorogenic acids. Light pruned tea bushes produced comparatively better teas.\textsuperscript{34}

Mahanta and Hazarika (1985) found that essential and characteristic Volatile Flavour Constituents (VFC) could be increased from selection of suitable planting material and by maintaining optimised processing conditions with the consequent positive impact on quality. The volatile flavour constituents played a crucial role in organoleptic evaluation of quality of tea. Some key VFC in tea and their flavour contribution were as follows.

<table>
<thead>
<tr>
<th>VFC</th>
<th>Flavour contribution (effect)</th>
</tr>
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<tbody>
<tr>
<td>Hexenals</td>
<td>‘Green’ and contributes to mouthfeel</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>Cooked flavour</td>
</tr>
<tr>
<td>$\beta$ - ionones</td>
<td>‘Violet’ like contributes to fresh flavour.</td>
</tr>
<tr>
<td>Phenyl ethanol</td>
<td>Fruity note</td>
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<tr>
<td>Phenyl acetaldehyde</td>
<td></td>
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<tr>
<td>Linalool and its oxides and Geraniol</td>
<td>Floral sweet note; Rosy</td>
</tr>
<tr>
<td>Hexanoic acid</td>
<td>Fatty</td>
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The first flush tea was significantly rich in all the VFC. Terpenoid viz. geraniol, The first flush tea was significantly rich in all the VFC. Terpenoid viz. geraniol, most characteristic of a flavoury tea, was also a characteristic constituent of Darjeeling tea. The ability of the clones to synthesise the characteristic and essential VFC depended primarily on geographical location and climatic conditions like cold, dry, windy night (Wickremasinghe, 1974).\textsuperscript{35}


Dev Choudhury and Bajaj (1986) studied the seasonal variation of water soluble sugars in tea shoot and their role in tea quality. Importance of soluble sugar in tea plant was manifested in their metabolism to catechins, which produced theaflavins and thearubigins during processing. The concentration of water soluble sugars in tea shoots comprising terminal two leaves and growing bud varied with season and was high during May and low during early June to early July. Free sugar seemed to be associated with quality of plains teas only to a limited extent. Sugar levels were high in shoots during early May but then rapidly depleted during early June to early July. In teas, TF levels were higher during the depletion period of sugar. During this period tea was considered to have quality in North-East India.  

Mahanta (1988) concluded that traits such as theaflavin, thearubigin, chlorophyll and its derivatives were mainly responsible for development of characteristics in tea. He observed a strong correlation between the ratio of thearubigin and pheophytin on the appearance of made tea. Chlorophyll and related pigments were of considerable importance for retaining freshness of tea. The quality of tea was established in the field and was affected positively or negatively by manufacturing conditions.  

Barbora and Saikia (1989) discussed the effect of length of plucking interval on crop distribution, yield and standard the harvested tea shoots. Fluctuation in shoot quality during different months was minimum at eleven days plucking followed by nine days round and was highest under thirteen days interval followed by seven and five days round respectively.  


Basil (1989) observed plucking rounds and plucking standards to have significant impacts on tea quality. First flush and second flush qualities were intervals, but maintained by teas plucked at 6 – 7 days, during rains flush (Mid July-October) 8 days round was satisfactory. In autumn, 9 to 11 days plucking round did not affect quality specific at that period.  

Mahanta et al (1990) observed significant changes in fiber/cell wall and soluble organic components depending on standard of plucking and method of processing. The coarse plucked leaf was associated with high fiber content (toughness) and contributed to inferior quality of tea while high soluble organic solids (tenderness) in the fine plucked leaf improved the quality.

Barua (1992) reviewed the studies carried out on tea quality in Tocklai and elsewhere. He summarized that colour, brightness, strength, flavour, briskness and quality together determined the character and value of a cup of tea. The first four attributes of tea liquor were amenable to instrumental or chemical measurements while the last two were not. A large majority of tea tasters seemed to regard quality in its broad sense to be the summation of the desirable characters in tea, but a small minority of tasters considered quality to be a separate entity independent of other liquor characters. Kind of tea and soil-climate environment of bushes had profound effect on the overall quality of tea. The attributes like strength and quality varied between teas from different regions which, together with variation of aroma were responsible for the expression of regional characters.

Mahanta et al (1992) reasoned that the key to a good black tea was the quality


like appearance, flavour and texture. They studied the pigment profile as the quality criteria by measuring polyphenol oxidase (PPO) activity from Oxygen uptake studies and monitored changes in pigment composition by High Performance Liquid Chromatography (HPLC). The colour of brewed tea was found to depend on theaflavin (TF) and thearubigin (TR) contents and they contributed to visual brightness and organoleptic briskness while evaluating quality of tea. The results obtained indicated that colour attributes were higher in artificially withered teas than those of natural withered teas.  

Chakravartee (1995) observed that the term ‘quality’ in the broadest sense for made tea is used as a description of all the characters of tea by which it is judged on its market value viz. appearance and cup characters or, in other words, liquoring properties such as odour, brightness, strength, briskness, flavour and fullness. Quality of tea was an inherent factor in the tea bush which was reflected ultimately in made tea through the process of manufacture. Tea made from ‘young shoot’ contained biochemical constituents in a proportion significantly differing from that of mature leaves. Young shoots contained higher amount of polyphenols and caffeine. Higher amount of phenolic compounds, protein / enzyme, chlorophyll in the shoots of shaded leaf indicated higher productivity and good quality. Terpenoids and oxidation products of fatty acids yielded flavour-aroma and fragrance of made tea.  

Dhanakumar (1998) discussed the application of Hazard Analysis Critical Point Control (HA CCP) for plantation product quality and safety. He stated that there was need for plantation industry to adopt HACCA as it aimed at quality culture that made it simpler to progress additional activities such as quality improvement, productivity


and cost reduction. He identified critical control points for application of HACCP in tea factory.  

Ramamoorthy et al. (2000) pointed out that as tea manufacture began from the time leaf was plucked, prevention of damage to the green leaf was an important prerequisite for preservation of quality. Changes in its physical and chemical characters before processing adversely affected the quality of the finished product. The study conducted by them found that recovery percentage (bulk tea to graded tea ratio) also decreased as the coarseness increased. 

The quality of tea depended on plantation and manufacturing. For quality of green leaf, the important plantation factors were condition of tea garden soil, fertility status of the soil, cooperative effort of workers connected with the management of the garden, skill and adequacy of manpower, time of plucking, scientific application of plant nutrients, timely application of appropriate pesticides, insecticides, acaricides and adherence to the advice of scientists. Climate was important factor for the quality of green leaf. The seasonal periodicity of climate influenced the rainfall, atmospheric temperature, humidity which are positively responsible for the mineralization of the nutrients of tea plant, mobilization of the nutrients, humification of soil humus and also for the increase or decrease of soil microbes. Organic matter content of soil was an important factor as soil containing sufficient quantity of well-decomposed organic matter produced better leaf quality.


2. 6 Economic importance of tea, impact of tea industry in the socio-economic life of Assam

Tea is a major agriculture based industry of India. It was also one of the main sources of foreign revenue earner for the country till recently. It is considered to be a profit making industry since long although there were upheavals time to time. Tea also contributes large amount to the Government of Assam’s exchequer through taxes in various forms. However, the peoples of the state always felt that the industry remained aloof maintaining its colonial characteristics and have not contributed to be socio-economic development of the state as it should have done.

Ganguly (1975) observed that the tea industry provided a typical example of usual colonial pattern of exploitation. He viewed that the large tea plantations of Assam were efficiently managed and yielding high profits, but they were not helpful in accelerating regional growth. The development of tea industry in the last century helped in development of some infrastructure but it had not been a leading growth booster in the region. He viewed that tea production not only did directly stimulate production of other goods and services locally, it hampered the growth of local manufacturers. 47

Phukan (1990) lamented the fact that the tea industry of Assam had not learnt to love the state which had most benevolently allowed its prime land for tea cultivation. He felt that the tea industry neglected the place of its growth over the past more than one hundred years. He outlined that the tea industry in Assam was very important to the common man in Assam for the most pertinent reason that the tea bushes the prime areas of the state and retained more areas through occupation of jungles and forest lands in the name of future development from which only the garden owners

were benefited.  

Saikia (1991) observed that in spite of contributions of the tea industry in Assam towards development of the state, the industry remained aloof from the community surrounding it and the development had not truly reflected on the improvement of the quality of plantation workers.  

Nag (1991) observed that tea industry enjoyed a pre-eminent position in India's economy. He opined that the tea industry achieved a phenomenal growth since 1970 and quoted a survey conducted by RBI which revealed that the tea plantation companies offered the highest divided among all the companies in the private sector and ratio was 25.8 per cent on ordinary paid up capital (1987 – 88).  

Bormudoi and Sabhapandit (1992) observed that in spite of Assam producing more than 55 per cent of the tea production of the country, the industry had very little impact on the social life of Assam. It was due to its natural insulation being located in remote areas and also economic, political and cultural insulation. They opined that the British advocated such a systematic insulation due to their colonial attitude but the same attitude was being adopted by the planters subsequently.  

Battacharjee (1999) pointed out that tea cultivation was the key to North- East India's socio-economic emancipation and tribal welfare and the centre and the non-governmental organizations propagate a tea culture in the region for it. Tribal


participation should be encouraged maintaining demographic status of tribal areas but it should also be ensured that tribals were not exploited by individuals or tea companies from outside the region.\textsuperscript{52}

\textbf{Barua (1992)} emphasized the fact that Assam owed her tea industry to the British enterprise and British rule. In his opinion, Assam's tea industry had not usurped the lands that truly belonged to the peasants.\textsuperscript{53}

\textbf{Barooah (1992)} concluded that tea for Assam was not just an industry, it was way of life and the Assamese people were emotionally involved with it. He outlined that in view of the tea industry's role in the socio-economic sphere, it was necessary to formulate meaningful guidelines on how best the industry could serve the society and itself.\textsuperscript{54}

\textbf{Jhawar (1992)} opined that high rates of taxation in tea were counter-productive and there was need for both state and central Government to come out with a come out with a co-ordinated policy and create conditions of steady growth of the industry. He pointed out that the tea companies had invested their profits in capital expenditure and the companies had invested their profits in capital expenditure and the overall size of tea industry in Assam was not that big although it locked large. Lack of growth of other industries in the state caused maximum pressure on tea. He suggested that the tea companies should be allowed to revalue their fixed assets.

\begin{itemize}
\item \textsuperscript{52} Bhattacharjee, N. 1999. Region in Need of Tea and Sympathy. \textit{The Telegraph}, 22 March, 1999.
\end{itemize}
which would allow them to have a large capital base in line with their values and would also be able to offer increase in the value of the security against loans from financial institutions.  

Gohain (1992) observed that foreign (British) domination as it was during pre-independence period had weakened at present but the Assamese share in the capital invested in tea was still insignificant. The habits and practices formed during a hundred years of colonial rule were still difficult to outgrow. He expressed the view that the people of Assam still hoped that the masters of the Industry would recognize their responsibility to the state where it was located and whose natural and human resources it went on utilizing.  

The organizers of 'Boodhbar'’s (Assamese newspaper) workshop (1992) felt that tea being the only major industry in Assam, surely had a role to play in building up industrial infrastructure of the state. The tea industry always refused to acknowledge this responsibility. In spite of demand from people from Assam, the tea corporate sector had refused to operate from Assam on the pretext of non-availability of required infrastructure.  

2.6 Small tea growers of Assam  

The origin and growth of small tea growers in Assam is a recent phenomenon. It is surprising that although Assam was the leading tea producing state in country, tea


growing in small scale by the local Assamese people began only to the end of 1970s. However, a large number of local Assamese people have taken up tea cultivation in small scale since then and they are contributing a substantial amount to the total production of the state and also improving their economic conditions thereby.

Ganguly (1975) advocated for family seized tea gardens by the people of Assam. He advised that for economic viability of growing tea in family farms, it should be grown with other crops so that more labour-time can be applied to farming operations covering all such crops. The factories should be established on co-operative or state sector and the private scale should be subjected to necessary state direction about grading of tea leaves and prices to be paid for it.  

Hazarika and Sharma (1988) identified land, finance, Tea Board registration, labour, lack of technical know-how, scientific method of plantation and maintenance to improve and increase marketing of produce, Acts imposed by the Government on tea plantations and not having separate Government schemes in case of small tea growers as the major problems of small tea growers.

Neog (1992) observe that the advent of the small tea growers in the Assam tea scene during the recent years was a natural response to the normal economic forces of supply and demand. He suggested that a few nucleus estates, as in Indonesia under the World Bank, having all the infrastructural facilities with factory may be established.

Mahanta (1992) viewed that the small tea growers in Assam were growing


increasingly popular and helped in generating employment in a resource deficient state like Assam. It also encouraged growth and development of a number of subsidiary industries. He, however, emphasized that the big gardens and small ones should supplement to each other. 61

The small tea growers of Assam (2001) appealed to the state Government to constitute a development board to look after their welfare and well being. They pointed out that they had to sell their green leaves to the big companies at a humiliating price as they had no choice. 62

Das (2002) admitted that there were marketing constraints for small tea growers. Basic processing and transportation amenities were lacking in some areas, accessibility to market place was poor and there were no standardization / grading of produce and lack of modern technology in processing and proper storage facility. 63

Sinha (2002) outlined from their ORG - MARG findings on small tea growers of Assam that the awareness of cultivation techniques were poor, there were no planned disposal of green leaves and the state Government needed to formalize the ownership of all the land under cultivation. 64

Bajoria (2002) alleged that mushrooming of large number of bought leaf tea factories in Assam without proper monitoring led to theft of green leaf from big

gardens and lowered price levels due to low quality production.65

2.7 Development issue, management and policy on tea

Policies give direction to the development of the tea industry. Various bodies like Tea Board, Government of Assam, Indian Tea Association etc. work out needs of the tea industry for development and better management.

Roy (1968) discussed about an international agreement or co-operation in which all the important tea producing and consuming countries would participate to evolve a workable policy in order to ensure the stable growth of the industry without any obsession or reservation for any country or any particular interest.66

Chacko (1983) observed that introduction of a co-ordinated and comprehensive management system in plantation was coincidental with the emergence of large and extensive plantations. In its expansion phase, the shift from proprietary to co-operate enterprise created the need for the transfer of management responsibility for total production units located in distant parts of the world. He observed that objective and behavioural patterns were modified constantly by external pressures and plantations would have to break out of a cocoon of colonial isolation and apply their special skills and experience to the wider and complex needs of society in the developing countries.67


Ramawami (1984) recommended to formulate a national goal as regards to production and marketing of tea, from which appropriate policies and action programmes could be derived. The national goal should satisfy the extent to which domestic demand and export requirements could be met under different conditions of production and price levels. He also stressed upon a stable Government policy from both Central and State Government on the tea industry. 68

Mitra’s (1986) study of Indian tea industry revealed that large sized units were more efficient than small sized units. The large sized units enjoyed some economics of scale, mainly because of vertical integration of productive units implying the combination of ownership of landholding, factories and transport arrangements in a single hand. But it could not be generalized as size was not the only determinant of yield or efficiency. 69

Mitra (1987) observed cyclical pattern of movements in different tea variables viz. production, export, price and value obtained. He established that in the time series starting from 1900, the periodicity of fluctuation for production was 8 years in the pre-independence series and in the post-independence series, it showed a reduced cycle of 5 years. These tea cycles took place under the influence of both internal and external variables. He observed that in the later part of the pre-independence period, industrial operations were mainly aimed at ensuring quicker return on capital instead of a long-term and growth oriented planned management leading to greater fluctuations in investment. 70


Saha (1992) analysed developments, ups and downs of Indian tea industry during the pre-independence period and concluded that the industry had maintained its inherent strength of growth and development and its lead position in the tea world during the pre-independence period not withstanding its problems.71

Banerjee (1996) analysed various aspects of the tea industry covering economic and social history of the tea industry, its structural changes etc. He observed that a large share of taxes and levies on tea went to state other than Assam. He also concluded that amount spent by the tea industry for increase of fixed assets i.e. reinvestment of capital had failed to achieve tangible economic development in the tea sector.72

Nag (1999) stressed the need for tea to be promoted in new light with a youthful, dynamic image in the new millennium with emphasis on health benefits of tea. He asked for tea to be repositioned in a suitable way to suit the aspirations, attitudes and lifestyles of generation next. This also necessitated, invention of new product forms convenient to anticipation and satisfaction of customers’ needs.73

The Assam Legislative Assembly passed an unanimous resolution on April 2, 2002 demanding that the big tea companies, having gardens in Assam, should shift their headquarters to the state. The resolution moved by AGP (Asom Gana Parishad) received support of all the political parties including the ruling Congress. The House also resolved that the Central Government should take necessary steps in this regard. The members also demanded that the local youth should get preference in


Sharma (2002) observed that the tea plantations had been set up on State Government land at a very nominal rate of land revenue. The State Government had, therefore, inherent right to ensure that the sons of the soil got the maximum benefit out of the plantation.  
