

NEWLY EMERGING PROBLEMS OF TEA CULTIVATION IN ASSAM

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Abstract

India is the second largest tea producing country in the world after China. It is one of the major industries of the country under organize sector and it also consider as an integral part of the economic development of the nation. According to an estimation India is the fourth largest exporter of tea in the world market. Major tea growing state of the country are Assam, West Bengal, Tamil Nadu and Kerala. The tea industries in Assam is about 178 years old. Tea is a major cultivation in the state after rice. It play an important role on the economy of the state as well as the nation. A major portion of the population out of total population are directly or indirectly engage with tea cultivation. The first tea garden in Assam was opened at Lakhimpur district in 1838 by British. Subsequently tea cultivation was started in the different part of the state. In October 2012, the state of Assam officially declared tea as the 'State Drink'. But recently the tea growers of Assam were face different problems due to some natural as well as market oriented reasons. Thus the present study was prepared mainly discuss about some newly emerging problems of tea grower of Assam which effected the economy of State. The required data are collected from both primary and secondary sources.

Key words: Tea, Problems, Cultivation, Economy, Export

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1. Introduction

Assam is major tea producing state in the world. Tea industries play a vital role on the economy of the state. It has been cultivated in most part of the state especially in upper Assam and turned as a single large industries in terms of employment generation. Assam occupies unique place in India by producing 52% of the national production having plantation area of about 3.22 lakh hectares which is more than half of the counties total area under tea (Tappa, et. al., 2018). For the growth of tea plant the climatic condition as to air, moisture and temperature are very essential (Harison, 1965). Besides proper drainage, cheap labor, deep trenching, green cropping and mulching etc. are important. Assam is an ideal place in terms of climatically and topographically to tea cultivation. The major tea producing district of the state are Dibrugarh, also known as the Tea City of India, Tinsukia, Charaideo, Jorhat, Golaghat, Sivasagar, Lakhimpur, Cachar, Karbi Anglong, Kamrup etc. According to Tea Board of India report 2016, in 2006 Assam has produced 50,264 Mkg of tea which was increase in 65,295 Mkg in 2015. During the same period the percentage of growth rate was 30% which was also more than the national growth rate of 24.75%. The small tea growers of Assam grows 25% of the state's production and 14% of the country's overall production (Department of Industries and Commerce, Govt. of Assam). The increase of a large number of tea small tea growers in recent year is a significant development in the field of industries as well as in the socio-economic development of Assam. According to an estimation in 2000-01 the state has approximately 28,585 small tea growers with the cultivated are of 27,878 hectares and produced 257.6 m kg of green tea leaves. Golaghat was the first district where small tea garden was established commercially. The cultivation in small holding have been providing employment to a large number of unemployed youth, generating additional earning of farmers, contributing large quantities to the states total production and thereby the state economy (Neog, 1992).

Recently tea cultivation of Assam faces different problems due to climate change, international competition, increases of labours wage, stagnant market price etc. A combination of climate, market, regulatory and welfare related risks are threatening the health, productivity and longevity of the industries (Charis et. al.,2017).

2. Methodology and Database

2.1. Selection of Study Site

Assam is a major state of northeastern part of the India, covers an area of 78,438 square km and has a population of approximately 26.6 million. The state extending from 22°19' N to 28°16' N latitude and 89°42'E to 96°30'E longitude between the range of Naga and Patkai hills and Eastern Himalaya. According to census 2011, majority of the population of Assam is living in rural area and only 14.1% are lives in urban area of the state. It is the largest tea growing state of India (Ganguly, 2014). The state has produced 50% tea in the country (Economic Survey of Assam, 2009-10). The major tea producing area of the state are Upper Assam, North Bank and South Bank of Brahmaputra River and Cachar. Besides it most other area of the state are suitable for tea cultivation because of its environmental and climatic condition. But expert have warned that many tea growing areas in assam will became unsuitable for tea by 2050 due to climate change and global warming. According to India Tea Association (ITA)many area of in the state will not remain suitable for tea by 2050 if adaptation measures are not taken seriously. Both minimum and maximum temperature are found to increase across all the major tea growing region of Assam, which will have impact on the suitability of tea in a particular region. The changing patterns of rainfall also influence the production of tea in the state. Thus this study selected Assam as study site to discuss about the major problems face by tea growers.

2.2. Data Collection and Analysis

The data for the study purpose has been collected both primary as well as secondary sources. The primary data were collected by using different methods such as field observation, interaction with the tea growers and schedule and questionnaire methods. A reasonable number of tea growers have been selected in some major tea producing region of the state for this purpose. The secondary data have been collected from different journals, books, reports, publication of national and international organization, government publication and other relevant documents available in the print media. The data of economic aspect were collected from Directorate of Economics and Statistics, Government of Assam. The climatic data have collected from mainly website of National Center for Environmental Information (NOAA) and other reasonable sources. For analysis, data are orderly arranged in some tables.

3. Result and Discussion

Tea is one of the most important global agricultural commodity, both commercially and culturally. Assam, an agrarian state of northeastern part of India is a largest tea growing region in the world and the productivity (both in terms of quality and quantity) requires a specific range of climatic condition (Bhagat et. al., 2016). Recently the tea growers of Assam face different problems which effected many tea garden in the state. Concerns are being raised over quality decline in Assam tea amongst the stockholders. According to Tea Board of India, the tea statistic of Assam and India given bellow.

Table 1: Tea Statics of India and Assam

Year	Are under Tea ('000 ha)		Total Tea Production ('000 tones)		Average Yield (kg/ha)	
	Assam	India	Assam	India	Assam	India
2001	269	510	153587	853923	1685	1675
2002	271	516	433327	838474	1601	1627
2003	272	520	434759	878129	1601	1690
2004	272	521	435649	892965	1603	1713
2005	301	556	487487	945974	1622	1703
2006	312	567	502041	981805	1610	1732
2007	321.3	578	511885	986427	1593	1705
2008	321.4	560	487497	980818	1517	1750
2009	321.7	561	499997	978999	1554	1746
2010	322	561	480286	966403	1492	1724

Source: Tea Board of India Report

The table shows that the average yield of tea per hectares are gradually decrease from 2001 to 2010. The major causes of this decreasing rate are financial problems of small tea growers, land problems, labours supply, lack of training, natural disaster like flood, erosion, drought and climate change etc.

3.1. Climate Chang

Now a days, climate change is a major global environmental problem. Like other country it also affect the rainfall pattern of India with an overall decrease in seasonal mean rainfall and increase in extreme rainfall event. It highly impact on the tea cultivation in the nation. According to Tocklai Tea Research Institute, Assam recorded a 1.3° C increase in temperature over last 100 years. Temperature and rainfall are two climatic factors which highly influence productivity of tea. But for last few decades, the state has experienced by heterogeneous Spatio-temporal distribution of rainfall and rising temperature. This has leads to drought condition during tea production season, reducing crop resilience and degrading yield quality.

In Assam of last decades shown that most of the precipitation is concentrating around monsoonal month resulting in periods of heavy rainfall which is followed by periods of drought like conditions. These changes creating a new challenges for tea sectors of Assam. According to an estimation both minimum and maximum temperature will increase in all major tea producing area of the state. The average increase of minimum temperature may reach 1.75°C in 2050 and up to 1.99°C in 2070. Similarly the average increase of maximum temperature in all major tea growing region of Assam are 1.34°C and 1.47°C in 2050 and 2070 respectively. On the other hand the annual precipitation increase in 2050 in all tea growing region, however it reduces in 2070. According to another estimation indicate that tea production will decline up to 40% by 2050 due to climate change in North East India. In the State Action Plan on climate change in Assam (2015) predict a 75% increase in the number of drought week and a 5-38% increase in the number of extreme rainfall days between 2021 and 2050 (Agarwal et. al., 2017). According to Moitra (2016) there has been a significant shortening of the cultivation period from nine months to seven months, as a result of unpredictable and rain patterns.

3.2. Pest

Pest is generally refers to any living organism, plant or animals which cause damage to the tea plant by feeding on it. It damage in tea and impact on productivity. Various new pest like *Heliopelties thievora* or Mosquito bugs which destroy the tea shoots are being increase due to climate change (Cousins, 2015). To prevent pest infestations the small tea growers are using many pesticides which leading to an overall increase in the coast of production and quality of

tea. Pesticide are very harmful to environment as well as human health. In Assam pest are increase at an alarming rate. As a result tea garden have reported an alarming increase in pest attack, with existing pesticide proving to be increasing ineffective (Dutta, 2015). The last two years i.e. 2017 and 2018, there was a sharp decline in tea production in Assam caused by pest infection due to scanty rainfall. It was also reported that this production shortage might raise the price of tea by INR 10-15 per kg (Agarwal et. al., 2017).

3.3. Stagnant Market Price

It is one of the major problem faced by tea growers in Assam as well as India. The price of tea has remained unchanged. The tea industries has been facing a crisis in respect of dropping price in weekly auction since 1988. Some newly emerging tea producing countries like Sri Lanka, Kenya etc. are start to produce cheap and inferior quality of tea which pushing premium quality of India tea to stiff competition in the global market. Export quantity have remain unchanged over last few years at around 200 m kg per year. The piece of export tea has not seen any upward movement, except for a spike in 2013(Bose, 2017). The tea producer of Assam have been facing tough competition in international market due to failure of cost measurement, because the price of Indian tea is much higher than other countries.

3.4. Increase Labour Wage

In increase labours wage is another major problem of tea growers. Assam Cha Mazdoor Sangha (ACMS) and other organization continuously demanding to increase of wage of permanent workers of tea garden. They have protest against the low wage of labours for last few years. Thus the political pressure has led to increase labours wage which affect the small scale tea growers of Assam. Recently Assam Cha Mazdoor Shangha demand to increase the permanent workers wage up to 50% (ACMS Agreement, 2012, 2015). Thus Large Tea Estates (LTE) faced with significant leaps in production cost on many front.

Table 2: Revision to cash component of wage for Permanent Workers on LTE

From	To	Amount Per day (In INR)
01/01/2012	12/31/2012	84.00
01/01/2013	12/31/2013	89.00
01/01/2014	12/31/2014	94.00
10/10/2015	12/31/2015	115.00
01/01/2016	12/31/2016	126.00
01/01/2017	12/31/2017	137.00

Source: ACMS agreement (2012, 2015)

3.5. Lowering the Quality

In international market, quality of tea is highly matter. No doubt Assam is famous for high quality tea. Quality of tea often depend on mainly good seed, good weather, irrigation facility, transport and communication systems, good machineries and equipment in tea factories, packaging etc. But most of tea estates of Assam has lacking this criteria. To gain more profits, quantity has been preferred to quality by surrendering all quality norms, with coarse plucking and unscientific use of fertilizers and pesticides, particularly in the small tea garden of the state (Borah). Recently many small level tea gardens are grow in some remote regions of the state where no any sufficient transport and communication problems.

4. Conclusion

Tea cultivation is the backbone of the economy of Assam as well as the largest employment generator. The growth rate of production of tea in Assam as well as India was very low due to the above mentioned problems. However in Assam a huge number of Unemployed youth started to tea cultivation in small scale basis as their livelihood option especially in upper Assam. It has been already mentioned that many area in Assam will not remain suitable for tea by 2050, if adaption measures are not taken seriously. It will adversely affects in future economy of the State. Thus it is right time to the tea industries, small tea growers along with government to join hand to do some mitigation measures. Otherwise it will be impossible to prevent the decreasing growth rate of tea production in Assam.

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