

A Study on Commercial Viability and Employment Opportunities in Small Tea Growing Sector in Udalguri District of Assam

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Abstract

One day he was lounging in the yard with a cup of boiling water after a hearty supper. At that moment, a nearby tree's leaves dropped into the cup. He drank the wine without realising it. He continued to drink the tea after every meal since he loved its flavour and how much it relieved his agony. In this way, the tea cup was created. India's tea industry dates back roughly 200 years. Robert Bruce found wild tea plants in the upper Brahmaputra Valley of Assam in China in 1823. With 52% of India's total production, Assam is the state that produces the most tea. A small tea grower is defined by the Tea Board of India as someone who cultivates tea on up to 25 acres of land. Even though they enjoy the benefit of being Small Tea producers, the majority of producers currently cultivate tea on less than 2 acres (7 bighas) of land. In the Udalguri district, small-scale tea production has the highest commercial viability and the greatest potential for creating jobs. Compared to other cash and horticultural crops, tea cultivation in the small sector can provide a greater contribution.

Keywords: - Tea, Tea Board of India, Small Tea Grower, Commercial viability, Employment generation.

Introduction

The Chinese ruler Shen Nung is credited for unintentionally discovering tea about 2700 BC. One day he was lounging in the yard with a cup of boiling water after a hearty supper. At that moment, a nearby tree's leaves dropped into the cup. He drank the wine without realising it. He continued to drink the tea after every meal since he loved its flavour and how much it relieved his agony. In this way, the tea cup was created.

India's tea industry dates back roughly 200 years. Robert Bruce found wild tea plants in Assam's upper Brahmaputra Valley in 1823. However, tea was also present in the country of the hill tribes (Singphos) northeast of the valley before his official discovery and plantation, and it was also made using the Burmese method. Colonel Latter mentioned it that year, Gardner mentioned it again in 1818, and Mr. Bruce mentioned it again in 1824. A year or two later, Mr. Bruce planted it in his garden at Sadiya (1826). Once more, Mr. David Scott, the Assam Commissioner, Mr. Bruce, and others had sent plants to Calcutta for identification. However, it appears that the botanical authorities in Calcutta were remarkably reluctant to admit that tea existed in India.

However, after receiving the circular from the Tea Committee, Captain Jenkins, the Assam Valley Commissioner at the time, gave it to Lieutenant Charlton, a young officer stationed in Sadiya who had also witnessed and consumed the so-called tea that was growing in the Singphos country and close to the Dibru River. In addition to the tea, he sent samples of the fruit and leaves of the so-called tea trees to Calcutta on November 8, 1834. This allowed the plants to be positively identified as tea, identical to that found in China.

Assam is the biggest producer of tea in India, accounting for 52% of the nation's total production and producing 700 million kg of tea a year, or about half of the total. Approximately 4,00,000 hectares of land are used for tea production, making up 2.4% of India's total tea plantation area and contributing 8.5% of the nation's GDP (Press Information Bureau, January 31, 2022). Small tea growers occupy 1,17,000 hectares of the total cultivated land in the tea sector (<https://industries.assam.govt>).

State Wise Tea Growers in India, Areas [including Big Tea Growers (BTGs) and Small Tea Growers (STGs)]

Table -1

States	No. of BTGs	Area in Hectares in BTGs	No. of STGs	Area in Hectares in STGs	Total Nos. of BTGs & STGs	Total Area of Tea in Hectares
Assam	845	232399.35	120000	117000	112845	349399.35
West Bengal	451	114410.47	37365	33711.27	37816	148121.74
Other NE States	111	11785.09	17513	38031.86	17624	49816.95
Tamil Nadu	113	29600.56	45765	33284.57	45898	62885.13
Kerala	93	30303.42	8497	5567.74	8590	35871.16
Karnataka	16	2171.74	0	0	16	2171.74
All India	1649	420670.63	229140	227595.44	222773	648266.07

Source- Tea Board of India

The Tea Board of India defines a small tea grower as someone who cultivates tea on up to 25 acres of land (87.5 bighas, or 3.5 bighas per acre and 7.5 bighas per hectare, according to tea businesses' measurements). Despite being eligible for the Small Tea Grower privilege, the majority of producers currently cultivate tea on less than two acres (7 bighas) of land (source: Tea Board of India). In Assam, the idea of a tiny tea plantation first emerged in 1975. However, because of the high prices that were prevalent at the time, it gained momentum in the mid-1990s (Singh, 1993). Currently, there are about 1,20,000 Small Tea Growers (STGs) operating in Assam, covering about 1,17,600 hectares (8,82,000 bighas). These STGs account for 52% of the total tea output, providing jobs for thousands of households and making a substantial contribution to both the state and national economies.

Green tea leaves are essentially sold by small tea growers around the nation. Practically speaking, small producers, whether working alone or in partnership, simply plant tea plants in tiny areas ranging from two to 130 bighas, although not to the same extent as large tea growers. There are two kinds of tea plants: seed plants and sapling plants. Growers who planted seed plants can begin harvesting green tea leaves after four years, a process that might last up to 100 years. Growers who planted sapling plants can begin harvesting green tea leaves after three years.

According to scientists and tea experts, this can continue for up to 50 years as a full productivity era. The full plucking duration increases from four to five years, respectively. Eight years and seven years, respectively, are the beginning of the commercial plucking era. Green tea leaf marketing is still unorganised in the small-scale tea farming industry. Small tea producers sell their green leaves to large tea manufacturers owned by various corporations and neighbouring bought leaf factories in the region; nonetheless, the financial provider organisations control all aspects of the operations of both small tea factories and bought leaf factories.

Literature Review

Although a lot of research has been done on Assam's tiny tea-growing industry, little of it has addressed small tea plantations in tribal-dominated regions like the current study area. Singh (1993) conducted research titled "Assamese Small Tea Growers: Threats and Opportunities Ahead." One of the study's most important recommendations is to have a strong backward and forward linkage in the tea value chain. Another important recommendation is that small tea growers should establish a network with local financial institutions. According to Daimari's (2008) book "Structure of the Rural Economy of BTAD," the small tea plantation is a new business in the Udalguri region that faces numerous challenges but also has promising future development prospects.

Banerjee and Banerjee (2008) in his book 'Darjeeling Tea: The Golden Brew' outlined the history of Darjeeling tea cultivation system, roles of British and Indian planters and unique features of Darjeeling tea. The treaty dealt with various facts of the tea industry, its marketing aspect, product diversification and innovation in Darjeeling tea. The various problems of the tea industry, future prospects and policies are discussed in this book.

.Bhowmik (2009) described a case study on co-operative tea factory in Nilgiri district of Tamil Nadu. The co-operative factories help to increase the viability of small tea growers. The tea growers of Tamil Nadu are taken role in fulfil the target of tea industry.

.Neog (2010) describes the production behavior of STGs in Tinsukia District of Assam. There is a co-relation between Bought Leaf Tea Factories and small tea growers. Neog highlight the role of tea agents in tea production. The small tea growers face many problems regarding tea production, the market price of tea leaves price and so on.

Saikia (2014) in his book highlighted the relationship between Tea Company and small tea growers regarding production. There had seen a brief history related to the origin of tea in Assam. He highlights the different problems of STGs in Assam such as- labor crisis, low price of green tea leaves and so on.

Biswas (2016) in his article mentioned about small tea growers in the West Bengal region of India. The small tea cultivation helps in self-employment of rural people as well as urban youth. The small tea cultivation helps in economic growth and empowerment of rural farmers. The scenario of green revolution is developing with the farming practice of small tea growers. Besides, the small tea growers are faced lots of problem such as- deprived of getting scheme, the absence of own factory, price rate of green tea, middleman problem, irrigation facilities and lack of training facilities and so on.

Lama Bondona (2025-2026) in her research works she tried to measure the efficiency levels of small tea growers in Udalguri districts of Assam. The present system of business operation in tea sector both small and big sector will reflect the outcome of the research work, because the scenario of business depends completely on demand and supply and test of verities.

Research Gap

The aforementioned analysis of the literature demonstrates that numerous researchers have already carried out studies in the subject of tea cultivation in various parts of the world, involving both small and large farmers, and have revealed numerous significant elements. Production costs, income security, processing, marketing, obstacles, etc. are the most frequently discussed and significant issues. Different areas of interest have been covered by different researchers. Nevertheless, the researcher has not found any comprehensive research on the Bodoland Territorial Council's (BTC) inputs, infrastructure, capital, marketing, and profitability. In order to solve the problems and highlight the area's potential, the research conducts the current study in the Udalguri district as a unique reference. As a minor producer in this area, the territory exhibits unexplored tea cultivation.

Significance of the study

The most significant and profitable commercial plantation crop in India is the development of tiny tea estates. To revitalise the industry in the nation, the causes of this must be found and fixed. Different varieties of tea are grown for commercial purposes in order to boost the economic volume of the district, region, state, and nation as well as the livelihoods of the growers. Small-scale tea production promotes entrepreneurship among the locals. Although modest tea plantations were founded in Assam in 1975, they did not begin in this region of the state until 1985, which is why this district was selected for the study.

Since then, they have expanded rapidly; in just 40 years, there were roughly 5,500 small tea growers in the Udalguri district and 8,519 units (registered and unregistered) operating throughout the Bodoland Territorial Area Districts (source: All Bodoland Small Tea Growers Association (ABSTG), Udalguri 2022). The STGs in our study area currently employ about 1,20,000 people and produce roughly 250 corer kg of tea green leaves a year. The fact that almost all of the workers in this small tea-growing business are indigenous locals is another distinctive feature.

The socioeconomic landscape in rural Assam and Udalguri is changing as a result of the expansion of small-scale tea plantations and gardens in our research area. The district of Udalguri is home to horticulture crops like betelnut, coconut, banana, orange, and various fruits, as well as Robi crops like wheat, pulse, and various vegetables and Karif crops like rice and jute, in addition to the small-scale production of tea. The maximum production trend of the three major cash crops in one bigha land is 4375 kg of tea, 1,200 kg of rice, and 2,925 kg of betelnut, according to in-person discussions with progressive farmers in the district of our study. To achieve this level of yield, farmers must follow all scientific production processes, proper plant nutrition, time-bound nursing, and perseverance.

Our study is important because we need to determine the commercial viability of small-scale tea businesses and demonstrate the increasing trend of profitability for each small-scale tea producer as well as the strength of job creation. The best method for creating a comparative income statement of the district's main cash crops is to determine their commercial viability.

Objectives of the study

The objectives of the proposed research are outlined below:

1. To study the commercial viabilities of Small Tea Growers Sector and employment generating opportunities in the region
2. To identify sources of employment opportunities in the small tea growing sector

Methodology of the study

The methodology of the study is based on primary collected from Udalguri district and secondary data collected from records in books journals, Government publications and magazines.

Primary Data

Using a scheduled in-person interview procedure, questionnaires were used to gather primary data from the respondents of sample growers regarding socioeconomic status, inputs, costs, returns, and constraints faced by small tea growers. The information gathered would only be based on the respondent's recollection at that particular time.

Secondary Data

The Tea Board of India, the Ministry of Commerce and Industries Government of India, the Government of Assam, the Assam Year Book, the BTC administration, including the Statistical Handbook published by the Economic & Statistics Department BTC, and other offices are the preferred sources for the research. Data pertaining to district-wise time series data for ten years regarding area, production, productivity, profitability, and sustainability were presented. Additionally, data has been gathered from books, journals, reports, newspapers, magazines, tea organization records, websites, etc.

Data Management and Analysis

The collected data has been processed by using arithmetical procedure, because the plantation of tea and its production, factories, pricing and auction market are always in practical and not a hypothetical one.

Estimated Income Statement of Three Major Cash Crops in Udalguri District (in Gross) Of one Production Year

Table-2

Sl. No.	Name of cash crop	Sample area of land . (In bigha)	Estimated Production (in kg) (Maximum)	Average Rate per kg(in Rs)	Total amount. (Gross) (In Rs)
1.	Tea (small scale)	1	4,375	30	1,31,250
2.	Paddy	1	1,200	25	30,000
3.	Betelnut	1	2,925	30	1,02,375

Details about Plantation Procedure of Tea:

As per practical and field survey of nearby big and small tea gardens, the procedure of tea plantation can be highlight as below: -

Plantation of 1(one) bigha land as sample example-

- Total area of one bigha land in feet is 14400 square feet;
- Two times ploughing & harrowing be done as required;
- Total number of tea plants required is 1750;
- Plantation gaps of tea plants between columns and rows consists of 3 and 2.5 feet respectively;
- Types of tea plants- (i) seed plants and (ii) sapling plants;
- Time required for growing tea plants/trees- (i) seed plants require 4 years and sapling plants 3 years.

- Seed plants exist 100 years and sapling plants exists 50 years in production as per the information of tea cultivators both small sector and big sector.
- Estimation of production minimum 2500 kgs and maximum 4375 kgs annually as per nursing of tea trees.

Expenditure for preparation of land, plantation and nursery period. For tea cultivation in one acre land (one acre land is consist of 3.5 bighas of land) and nursery period consist of three years. To maintain one acre land two labour is needed.

Table-3

Sl No.	Item	Amount (Rs)
1.	Cost of ploughing 2 times @ Rs 450/- each. (450 x 2) per bigha x 3.5	3,150
2.	Cost of harrowing 4 times @ Rs 400/- each (400 x 4) per bigha x 3.5	5,600
3.	Drainage and plot preparation (approximate) Rs 7000 per bigha x 3.5	24,500
4.	Plants of tea 1,750 Nos. @ Rs 8/- per plant (1750 x 8) per bigha x 3.5	49,000
5.	Fertilizer (urea, muriate of potash, super phosphate, insecticide), pesticide and herbicide etc. for three years during nursery period as required (approximate) Rs30,780 per bigha x 3.5	1,07,730
6.	Labour full time two person @ Rs 300/- per day for three years.	1,72,800
7.	Fencing Rs 16,000 per bigha x 3.5	65,000
	Total	4,27,780

Source- oral interview with farmer and practical experience

Production of Tea by Small Tea Growers under Udalguri District, BTC, Assam

Table-4

Sl No.	Production Year	Production of tea by STGs In KG (approx.)	Average price per KG (In Rs)
1	2015	8,78,98,679	25
2	2016	9,98,37,589	24
3	2017	8,95,98,896	25
4	2018	10,18,86,582	26
5	2019	9,48,65,249	26
6	2020	8,50,99,987	28
7	2021	9,98,99,845	29
8	2022	10,98,98,289	28
9	2023	11,29,82,589	31
10	2024	11,65,89,891	33
11	2025	15,95,85,789	35

Source- Records from 18 bought leaf factories and estate factories under All Bodoland Small Tea Growers' Association (ABSTGA) Dimakuchi Zone and Udalguri District Committee

The green tea leaves are also supplied to other estate tea factories located inside and outside of the Udalguri district. As per estimated survey the total green leaf production by small tea growers under Udalguri district is approximately 22,98,91,987 kg.

Average Rate- The rate of tea green leaf is varied in different bought leaf factories. The average rate is an approximate of the price fixed in different weeks/ fortnight / month throughout the year.

Example of yearly average price of per kg tea green leaf in the year 2025

Monthly average price for the month of March Rs.40

April Rs. 38

May Rs. 35

June Rs. 35

July Rs. 34

August Rs. 34

September Rs. 33

October Rs. 32

November Rs. 31

December Rs. 30

Yearly average price per kg Tea Green Leaf = Rs. 34.2

- In the tea factory made tea is made as different grades such as Grade A, Grade B, Grade C, Grade D. (or any other category or name)
- The price of each Grade is not similar
- Calculation of cost of production of made tea per kg (each grade)
 - a. For one kg made tea maximum 4.75 kg tea green leaf is required.
 - b. The price of 4.75 kg tea green leaf is- $4.75 \times \text{Rs. } 40$ pkg (Fixed in each time)
 - c. The manufacturing cost (labour, staff, fuel, energy water etc) required per kg made tea is Rs 52 (approximately)

A. Cost of production of one kg made tea-

Cost of 4.75 kg tea green leaf is $4.75 \times \text{Rs } 40 = \text{Rs } 190$

Manufacturing cost = Rs 52

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Cost of production of one kg made tea = Rs. 242

B Cost of production of one kg made tea-

Cost of 4.75 kg tea green leaf is $4.75 \times \text{Rs } 38 = \text{Rs } 180.5$

Manufacturing cost = Rs 52.0

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Cost of production of one kg made tea =Rs 232.5

- Calculation Invoice Price for Auction (each grade)

Cost of Production + % of cost of production (profit determined by the bought leaf factory).

Cost of Production PKG = Rs 242.0

Add Profit determined by the bought leaf factory ($242 \times 20\%$) = Rs 48.4

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Invoice Price to the tea auction centre = Rs 290.4

- After negotiating with the relevant producer, the parties (buyers) in the auction center set the invoice price as the auction price or either less or more than the invoice price.
- The producer who purchased the leaf factory must sell the tea product at a loss if the auction price is lower than the invoice price to the auction center.
- In the event that the auction price exceeds the amount invoiced to the auction center, the manufacturer might profit from the sale of its tea products.

(Source- Personal interview with Sri Gautam Sarma one of owner partner of Ganapati tea factory).

Comparative study

About 97,020 hectares (7,27,650 bighas) of the 1,39,647 hectares of agricultural land in the Udalguri district are used for paddy farming. (source: <https://dirhorti.Assam.goiv.in>, Directorate of Horticulture & Food Processing). According to in-person interviews with paddy growers, when contemporary technology and all rice cultivation regulations are adhered to, the greatest amount of paddy that can be produced per bigha is 1000 kg. Each bigha must produce at least 480 to 520 kilograms. From the perspective of maximal output, the Udalguri district produces about 72,76,50,000 kg of paddy annually. The Assamese government's Maximum Support Price (MSP) is approximately Rs. 1,800 per quintal, or Rs. 18 per kilogram of paddy. It will be Rs. 1,309,77,00,000 (gross) if we convert it to money. From the expender's perspective, each bigha costs about Rs. 6,500. The district will spend a total of Rs. 472,97.25,000 on paddy production. The district would earn Rs. 1,186,06,95,000 from paddy cultivation.

A total of 2350 hectares (17,625 bighas) of land are used for betelnut farming. According to ResearchGate (<https://www.research.net>, Directorate of Economics and Statistics, Government of Assam <https://des.Assas.gov.in>), the district of Udalguri produces 24,109 tonnes of betelnut annually, or 241,09,000 kg. The Assamese government does not include the price of betelnuts in the MSP; instead, the price is determined by supply and demand. According to the betelnut farmer interviewed, the average local price is between Rs 25 and Rs 30, depending on availability and demand. The district's betelnut industry has a gross yearly turnover of Rs. 72,32,70,000.

The cost of producing one kilogram of betelnuts is approximately Rs. 12/14. Thus, the district will spend a total of Rs. 33,75,26,000 on betelnut production. In the study region, betelnuts will generate Rs. 38,57,44,000 in revenue.

Comparative Statement of Tea, Paddy and Betelnut in Udalguri District

Table-4

Sl. No	Name of Crop	Total production (approx.) In kg	Gross amount (approx.) In Rs.	Total Expenditure (approx.) In Rs.	Income (approx.) In Rs.
1	Tea in small sector	22,98,91,987	804,62,19,545	479,83,79,805	324,78,39,740
2	Paddy	87,31,80,000	1,309,77,00,000	472,97.25,000.	836,79,75,,000
3	Betelnut	241,09,000	72,32,70,000	33,75,26,000	38,57,44,000.

Comparative Analysis of the Statement

Table-5

Sl No.	Name of Crop	Total area of Land Covered (approximately) (In bighas)	Total Estimated Income (In Rs.)	Average net income (per bigha) (in Rs.)
1	Tea in small sector	67,812	324,78,39,740	47,894
2	Paddy	7,27,650	836,79,75,000	11,500
3	Betelnut	17,625	38,57,44,000	21,886

The income strength of the three main cash crops is displayed in the above table. According to the analysis, the small sector's expected net income per bigha land is Rs. 47,894 for tea, Rs. 11,500 for rice, and Rs. 21,886 for betelnut. The Udalguri district's small-scale tea production is the most commercially viable of the three.

Employment Generating Opportunities

Tea cultivation in the small sector offers enormous job-creating potential. According to the data, 67,812 bighas of land are used for small-scale tea cultivation. To sustain the complete job of one bigha of tea cultivation, at least two people are needed. So, in order to sustain the tea cultivation of 67,812 bighas, a total of 1,35,624 direct labours, male and female, are necessary, and they are now employed as direct labour. Further indirect labours include car drivers for transportation, co-pilots as helpers, labour for tea bag carrying, and managers, officers, clerks, accountants, electricians, machine operators, washing men, gatekeepers, cleaners, and so on in these purchased leaf factories, as well as transport operators for transporting made tea to the tea auction center from the purchased leaves. Tea cultivation in the small sector employs around 2,05,300 direct and indirect labourers and employees. Which accounts for 22.54% of the district's total population. (Source: Personal interview with STGs and proprietors of purchased leaf factories.)

Conclusion

The BTC dominates the state's acreage and output. According to the Tea Board of India's assessment, the region covers 9,041.57 hectares of land in the small tea growing sector, accounting for 10% of the state's total area. Every year, the region produces approximately 23 crore kgs of tea green leaves in the minor tea producing sector, accounting for roughly 20% of the state's output. However, the Udalguri district under BTC merits extensive research on tea cultivation in both large and small tea growing sectors. The district's tea productivity per hector of land is quite poor when compared to other tea-producing districts in Assam. According to the Tea Board of India, the state produces 715 million kg of tea annually. The district produces 65 million kg of tea per year, accounting for around 11% of the state's total tea production. When compared to other sectors, the tea sector in the area generates the most jobs, with tea alone accounting for more than 23% of employment. However, the area under tea cultivation in the research region has not expanded as much as it did in previous years. It represents the static scenario of tea cultivation in the research region district.

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