



Tea Production and Export: A Case Study of Select Tea Owners in Assam

^{*1}Deba Pratim Borgohain, ²Bindhu M and ³Thokchom Saphaba

^{*1, 2, 3}Post Graduate Student, Department of Commerce, JAIN (Deemed to be University), Karnataka, India.

Abstract

The research paper is a study of dynamics of production and export of the tea industry in Assam, India with special emphasis made on the decision-making processes, and the problems encountered by owners of the tea gardens. Assam, the major producer of India (more than half of the total Indian tea) with an estimated 3.22 lakh hectares of tea plantations is an important participant in the global tea market. The research is a quantitative research design that utilized snowball sampling method to gather primary data consisting of thirty (30) tea garden owners in different areas of Assam created with secondary data consisting of industry level reports and publications.

The study examines two main concerns that include studying the most important variables in the production and export choice, and the problems that face the owners of tea gardens. The results indicate that the suitability of soil (37%), market demand (30%), and customer feedback (33%), are the most common in the production choice and the main quality evaluation procedure. The respondents said that technological innovation is highly important (40%), and the practice of organic farming is increasing in order to support environmental management (30%).

Regarding the dynamics of exports, it is the international demand that is the most important (43%); Asia comprises 40 percent of the export destinations. According to the study, pest and disease management (43 per cent) is the most dominant production issue, and an increase in the cost of production (37 per cent) has a significant consequence on the quality of output. The barrier to export mainly concerns transportation and logistics (34). In order to resolve these issues, the respondents attach importance to climate-smart farm techniques (37 percent) and investing in infrastructure (50 percent).

The study makes the conclusion that in order to achieve sustainable development of the Assam tea industry, further attention to the technological development, the improvement of the working conditions, the diversification of the market, and better infrastructures should be considered. The results would be informative to policy makers, tea garden proprietors and the industry players in the strategies to help the tea industry in Assam to enhance its competitiveness and sustainability in the international market.

Keywords: Tea production, tea exports, Assam tea industry, decision making factors, production and export challenges.

Introduction

1.1.1 Background

The Indian tea business is an extremely old and rich business with history going back to more than 180 years. The legal trade monopoly that East India Company had with China and the British lapsed in 1832. The possession of tea in India started in 1834. Currently, India supplies nearly 23 percent of the global production volume and with the end consumer consumption at nearly 21 percent of the overall global consumption, India also produces nearly 80 percent of all global output. In 2015, the area of the total plantation in India amounted to 564 thousand hectares with a yield average of 2142 kg/h. India earned an amount of 486 crores foreign exchange by exporting 217.67 million kilograms of tea at an average price of 187.7 per kg and importation 18.61 million kilograms of tea at a cost of 236 crores in 2015 at an average import price of 127 per kg. The tea industry alone provides employment to 1.27 million individuals most of whom are underprivileged and disadvantaged who, in turn, happen to be more of a woman (the second largest employer in the organized sector is immediately preceded by the Indian

Railway). Among the states that commercially grow tea are Assam, West Bengal, Tamil Nadu, Kerala, Karnataka, Tripura, Uttarakhand, Himachal Pradesh, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Odisha and Bihar. Over 95 percent of all the tea production in India is produced in Assam, West Bengal, Tamil Nadu and Kerala.

Assam plants a significant part in India, as it generates over half of the aggregate tea output of the nation, and has an area of about 3.22 lakh hectares of plantations, which is over one half of the entire tea region in the country. The Assam tea is a well-known brand in the foreign countries, and it enjoys the good reputation in the World Tea Market due to their full-bodied, strong and brisk liquor, they have a good market share.

The tea industry contributed the most providing the highest number of employment in Assam. It has a workforce of more than 6.86 lakh on a daily basis, which is an equilibrium of half the number of the daily waged employees in the country.

This industry also facilitates indirect employment in most of the industries like road construction, transportation, warehousing, plywood, tea chest, paper, cardboard, aluminum

foil, tinplate, metal fittings, fertilizers, pesticides, and iron, steel, coal, etc. The rate of growth of the total and Assamese tea production is poor as compared to other ones, tea-producing nations like China, Sri Lanka, Kenya, etc. India led the world in tea production until 2005, when China overtook it.

However, China's superior production in 2006 knocked India down to second place. India has been able to regain its position in the global tea market ever since. India's tea production is growing at a slower rate than in other tea-producing nations, which is concerning for the country's economy.

Conceptual Framework

The Gift of the Indigenous

Chroniclers originally missed the fact that when Robert Bruce, an opium dealer formerly fell ill during one of his peregrinations, the Sing Phos offered him the same herbal drink which was latterly discovered to be tea. It was Maniram Dewan who directed Bruce to the original Sing Pho principal Bessa Gam. When Robert Bruce met the Sing Pho chief in his hunt to discover tea, the lineage not only tutored him the original way to grow these profitable yielding leaves but also helped him understand different kinds of teas. Robert Bruce, still, failed leaving a journal detailing his 'discovery' of tea. His youngish family, Charles Alexander Bruce set up his elder family's journal and wanted to pursue this discovery. In 1825, Charles Alexander Bruce communicated Dewan to take him to Sing Pho chief, Beera Gam. Charles Bruce managed to secure a boatful of tea shops from the Sing Pho chief. He planted some of these tea trees. Unlike the tea backwoods we see in the colonies, Sing Phos gathered altitudinous tea trees in the wild sitting on tails of mammoths. Bruce planted some of the tea shops outside his living diggings in Upper Assam. Using the styles, he learnt from the Sing Pho Chief, Bruce gathered those leaves and transferred it to the Captain David Scott, first Commissioner of Assam.

Cause of Tea

In November 1834, Charlton transferred tea shops with fruits to Wallich, which the botanist and he eventually declared that 'Assam tea was as real as the tea of China'. The leaves of the

Assam tea backcountry are dark green and lustrous and fairly wide compared to those of the Chinese tea factory, producing delicate white blossoms. Wallich wrote to the just appointed Tea Committee of Charlton's discovery of Assam tea on December 6, 1834. In 1835, when Wallich visited Assam as a part of the Tea Committee. Maniram Dewan, who was Minister in the court of Ahom King, Purandar Singha presented a offer. Dewan told Wallich about the eventuality of setting up tea auditoriums in Assam. Maniram Dutta Baruah popularly known as Maniram Dewan was the first Indian to start planting tea in Assam. He was a Dewan (principal executive and fiscal officer) of the recently formed Assam Tea Company until he abnegated in 1841 to start his own tea estate. In 1845, he developed Chinnamara and Toklai Tea auditoriums, the first colonies possessed by any Indian.

Tea Plants

With the expansion of the tea colonies, the social forces, who had the upper hand in the tea exports began to divide the original tea agronomists such as Maniram Dewan, and prefer the British companies in Assam. Dewan offered some conditions to the Crown that cleared the authorities on the horrific state of the Assamese population under the Raj particularly the tea theater workers. Dewan arranged demurrers and participated in the protests against the British Empire when, the first war of Indian independence began. He participated in the rebellion against the British that occurred in 1857 and was arrested on account of the same. Maniram Dewan was hanged by British on the grounds of conspiring against the British crown in 1858 after civilian Maniram Dewan sold off his tea estates, Chinnamara and another bone, Singlo immorally to George Williamson at gamble down prices. This triggered an outcry against the British rule in Assam. To his credit, Williamson felt like a small change of fortune upon receiving the fruits of his newly purchased tea auditoriums as labourers began abandoning the estates unfit to run the auditoriums in which he changed his heart and later sold the tea auditoriums, handing the whole amount to the population of Assam. The agronomists of the Assamese tea were inspired by Maniram immolation, and began their own tea civilization.



Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.amazon.in%2F%2FM-Tech-Gardens-Camellia-sinensis-Evergreen%2Fdp%2FB07H8JGV6S&psig=AOvVaw21de4bvVLwKJdRjOZNw51I&ust=1719388939977000&source=images&cd=yfe&opi=89978449&ved=0CBMQjhxqFwoTCKiKgIy19oYDFQAAAAAaAAAAABAE>

Fig 1: Tea leaves

Tea Garden

The drink with a rich history and culture, tea has been a part of various societies since thousands of years. The history of tea started in ancient China where the first discovery of tea was made by Emperor Shen Nung in 2737 BC. Since that time tea has been dispersed throughout the world making

India and China the largest markets along with producers of the tea. Tea is made by pouring young buds and leaves of *Camellia Sinensis* into boiled water and its flavor and scent can be so different according to the type of tea plants, process and water temperature.



Sources:

https://www.google.com/url?sa=i&url=https%3A%2F%2Ftimesofindia.indiatimes.com%2Ftravel%2Fdestinations%2Ftea-gardens-of-india-journey-of-your-favourite-cup-of-tea%2Farticle%2F105492138.cms&psig=AOvVaw3bW0dkD6au4_xfwSp-Re1&ust=1719387610778000&source=images&cd=vfe&opi=89978449&ved=0CBMQjhxqFwoTCKiGrpqg9oYDFQAAAAAAdAAAAABAG

Fig 2: Tea Gardens

Export of Tea

Assam tea is a large Indian import and Assam export a lot more than 50 per cent of all tea exports of the country. Assam black tea is a brisk tasting, malty flavored tea. It has its popularity all around the globe and it is often used as a foundation of amalgamated teas. Assam tea is mostly imported to the following countries. Russia, USA, UK, Germany, Japan.

Clearly! The Assam tea exports form one of the crucial components of the Indian tea assiduity. Then comes a close-up of the import statistics in terms of volume. The Indian tea export to Assam is so spectacular that according to the figures introduced by Volz in 2023, Assam tea exports amounted to a beautiful 39,601 shipments.

Problems Faced by Tea Owners for Production and Export of Tea

The tea plantation owners of Assam are confronted with various issues that are impacting on the production level and the level of exports.

The following is the breakdown of some of the major issues:

Productions:

Low Productivity: Current production and old tea bushes lowers the productivity compared with other major tea region.

Increasing Prices: The prices of labor, fertilizers and other inputs are on an unending increase lowering the profitability

of tea producers.

Problems with Labor: Access to talented employees and their fair wages is an ever-present problem of property owners.

Export Challenges: Price variability: The prices of tea in the world market may change rapidly and that the Assamese produce will not be able to withstand the competitors in the market who might sell their products at a cheaper price.

Competition: Assam will have stiff competition with other countries like Kenya and Sri Lanka that produce tea with greater quantity in the mass market of black tea.

There is a lack of diversification in the market: by relying on traditional export markets and wholesale sales, one misses the opportunities of the high quality markets offering higher returns.

Infrastructure Bottlenecks: Weak transport and logistics systems may bring about delays and add to the expenses of exports. These difficulties prevent Assam tea producers to get maximum profit and compete in the world market successfully.

Objectives of the Study

- To study the key factors influencing the decision making of tea garden owners in production and export.
- To identify the problems faced by the tea garden owner for production and export of tea products.

Research Questions

The following are narrow research questions that will be used in our study:

- Which are the main drivers of decision making of tea garden owners with regards to tea production and exporting?
- What are the critical issues facing tea garden owners in production and exporting tea products?

Statement of the Problem

Despite being the largest producer of black tea in the world, the Assam tea industry is struggling to achieve sustainable growth due to productivity limitation, export market competition and tea price fluctuations. This statement covers the main challenges faced by tea producers in Assam and highlights the differences between their dominant production volume and the constraints affecting their profitability and long-term viability.

Significance of the Study

Assam tea is an industry which forms a core part in the Assam economy and social life.

- It would help to understand how production and export are carried out by tea holders because:
- Determine the issues of success in exports.
- Bring out issues that affect tea producers.
- Recommendations are prepared on how to work more effectively, and more profitably.

Research Methodology

This research paper will seek to explore the production and export of tea in Assam. The study is quantitative in nature since it uses surveys to gather information regarding the subjects of the study. The goal is achieved by the statistical analysis of the data to establish the pattern and correlation.

Sample Methods and Technique: In this research, a snowball sampling method will be used to mean that all members of the population will have equal opportunities to be selected. In particular, simple random sampling will be taken, this is the method of enrolling people randomly in various places in ASSAM. This is a way of reducing bias and maximizing the representativity of a sample.

Sample Area: This study will cover the sample area consisting of several owners of tea gardens in different geographic location in Assam. This will guarantee that the sample is varied and will be representative of varying location. of urban, suburban and rural areas will be represented to have a wide scope of experiences and outlooks. Population size: A population of the study is all the tea growers of various location Assam. The estimated population of the study is unknown.

Sample Size: A total of 30 responses were used as the study sample.

Source of Data:

Two types of data have been attained as follows.

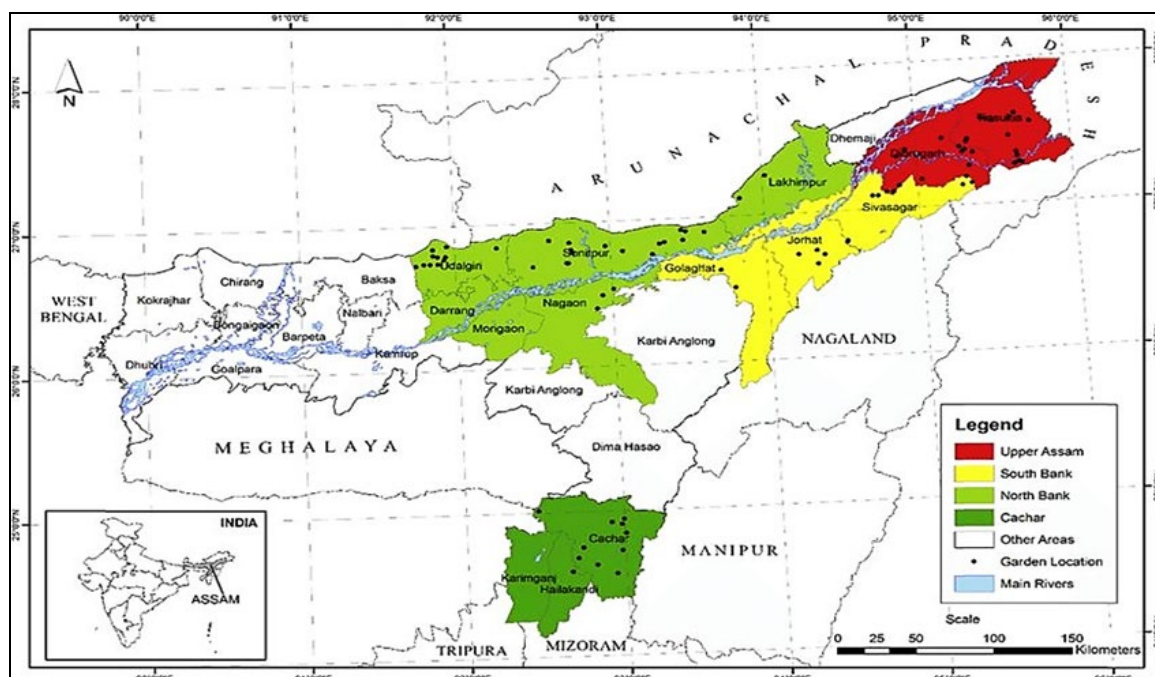
- Primary Data
- Secondary Data Primary Data

Questionnaires

To collect information, interview studies using questionnaires and interview with tea plantation manager and employee, labor used were selected to interview.

Secondary Data

The secondary data is gathered on the basis of new, article, paper, data on area under tea cultivation, number of tea gardens.



Source: https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.researchgate.net%2Ffigure%2FMap-of-Assam-depicting-the-location-of-tea-gardens-from-which-tea-yield-data-were_fig1_309556078&psig=AOvVaw0MSKvJo0O8eIMVptc_NO6f&ust=1719389280332000&source=images&cd=vfe&opi=89978449&ved=0CBMQjhqFwoTCKjFkrSm9oYDFQA

Fig 3: Map of Assam

The paper explores the nature of tea product and import, which is attached on some tea estates in Assam, which is

encyclopedically known as a source of high-quality tea. The tea diligence of Assam is critically crucial to the indigence of

India, and does much to the import proceeds of the country, and to the labor of millions of people. The exploration will be done to tear down the processes, problems, and approaches used by tea estate owners in Assam to maintain and improve their productivity and request presence. Taking the case study technique, the case study investigates activities of some of the leading tea estates including features that seem to be similar to ways of civilization, work, and inventions concerning product. The exploration also studies the effect of changing externalities, comparable to climate change, changes in request demand, and government programs on the product and imports of tea. Structured interviews would have been used to gather the data involving possessors of tea estates, workers, and assiduity experts, but an extensive analysis of the literature on being and import data were also consulted.

Introduction on the Concept of Review of Literature

A Review of Literature is one of the most important components of any scholarly work, it also evaluates the works of the other researchers critically and identifies their strengths and weaknesses, and it assists in developing a theoretical background of the new study.

It is this section that prepares a stage over a new study by summarising the known in a sense of major theories and methods applied in the previous studies. It demonstrates the evolution of ideas with the course of time and assists in diagnosing any gaps or contradictions of which more investigations should be held. In doing this, it assists in sanctioning the need of new research as well as how it would help the field.

Literature reviews are practical as they present an overview of a specific issue. A literature review will provide you with a fast overview in case you do not have much time. To the professionals, such reviews keep them in touch with the new trends in their profession. On the whole, it would be difficult to have an excellent research paper without a good comprehension of the available literature.

Review of Literature

- According to Asopa V.N (2007), existence of extremists in the region is one of the key factors that have led to the decreasing growth of the tea industry in Assam.
- In a research undertaken by Saikia Biswajeet (2008) the concerns surrounding the problem of identity and rights that the employees of the tea gardens in their context had to confront. He pointed out that the Assamese tea fraternity has not received growth support. This has not yet been accorded to these workers in the twenty first century in terms of their identities. In the society of Assam. He has found that few of the youngsters residing in the tea gardens who continue with further education and renounce the long-held tradition of the compulsory labor, have managed to promote the region with a unique image.
- The increased price is putting the tea producers in stiff competition with other countries like Sri Lanka, Kenya, Vietnam, Cuba and others; this means that the export orders are gradually falling (Das H N, 2008). The non-scientific changes in prices are leading to a decrease in the demand of Assamese tea and Indian tea.
- Das Ashim Kr (2000) found out that the tea industry is being affected by the absence of accurate estimates on how to create the long term industry specific action plans.
- Jain Shweta (2011) noted that high input costs, the age of the bushes, unskilled labor, a lack of infrastructure, poor price realization, legal issues, antiquated machinery, high fixed and labor costs, and other factors are some of the main causes of India's poor performance in the tea industry. provided a means, direct way, part of a strategy, incapacity to compete with other countries that produce tea in terms of cost, quality, packaging, etc.; ineffective Tea Board gradual rise in the global demand for tea relative to the ensuing rise in supply, a decline in traditional foreign purchasers, and a preference for the home market over the foreign one.
- According to Majumder Basu and colleagues (2011), India's tea industry needs to adopt strategies to meet the challenges posed by the global demand for its products. They recommended marketing tea as a beverage with health benefits to the world's non-traditional tea markets in order to increase consumption. It is necessary to create a variety of tea products to balance the supply and demand chain for the final consumer.
- According to Hazarika M. and others (2011), the Indian tea industry is dealing with a number of issues. In the plantations, about half of the tea bushes are older than 50 years. The productivity declines as a result of this factor.
- Roy S. (2011) proposed modernizing the Assamese tea industry through improved encouragement for the electronic tea auction, improved plantation techniques, and superior managerial skills.
- Gowalla H. (2012) conducted research on labor relations practices in Assamese tea industry. He made the point that the Assamese tea industry has long neglected the human element of the business. He placed a strong emphasis on the human element to deliver exceptional results in the competitive situation.
- In terms of yield per hectare, Anil P.V. (2013) noted that India is the least productive country among those that produce tea, despite having a unique geo-agro-climate that is ideal for producing extremely fine tea. The typical yield of tea India produces 1693 kg/ha of tea, compared to 2235 kg/ha in one of the major producing Sarkar ^[7] (2008) explained about the process of transformation of formal labor market into informal in tea industry of Bengal. In his study, he pointed out that globalization was the main reason for such transformation of labor market. According to the study, due to the global economic changes, tea plantations were not in a suitable position to overcome its costs, especially labor cost. Management of tea estates made strategies of labor flexibility to minimize such costs but in reality it was not possible because of legislations. However, management of the tea plantation restructured their manufacturing process similar to the small tea growers system. Small growers have limited liability except payment of wage to the workers and employment of labor done as per the requirement. Thus, this practice made casual workforces and directly leads to the informal labor market.
- Mishra, Upadhyay and Sarma ^[8] (2008) analyzed about the crisis of tea sector of Assam. Their study particularly emphasized on the employment and production trend of tea sector in Assam. The study highlighted that the productivity was declined across the state though there were trend of increasing of plantation area in few districts. The employment of labor was found in decreasing trend. The study observed that since 1990s the productivity of labor had come down. Employment elasticity was also in decreasing trend against the eighties. Further, the study proposed suggestive measures

to revive the industry, promising investment highly needed to rejuvenate of the industry.

- Mitra ^[9] (2010) studied on globalization and industrial relations in tea plantations of Dooars region. The study focused on comparison of variety of parameters of industrial relations relating to tea industry. The study used paired sample t-test. The study finally concluded that globalization had an ill effect on the tea plantation industry that has made the industry vulnerable in Dooars region.
- Rahaman ^[10] (2011) painted on the condition of living of tea garden workers in Bangladesh. The study intended to showcase wage composition, sanitation and health, status of literacy of the workers and for their family members. Study revealed that only 68 per cent of workers were contented with their accommodation that was provided by the planters. Only the permanent workers were residing in accommodation provided by the plantation management. 18 per cent of Page | 68 such accommodations were pucca and remaining was kutcha. For the temporary workers, tine and bamboo accommodation were provided. The other facilities like sanitation, health, education, electricity, etc. were reported moderate.
- Product and Productivity Research by the South Asian Studies Centre(1) examines the literal development of the tea assiduity in Assam, pressing factors like favorable climate and social influence that led to its dominance. still, studies by Mishra et al.(2008)(2) and Arya (2013)(3) point out enterprises regarding stagnant productivity and growing tea backwoods.
- Hazarika ^[18] (2014) observed in her study that tea workers in Assam was the most affected worker class in India. Social security measures were seen most conflicted and struggling issues. The needy foundations that is human right, was also violating here in tea industry of Assam. Study unveiled that more or less every tea plantation was violating the constitutions of India in different ways. Further, the study suggested that the level of wage for workers needed to revise urgently. The status of workers reached to the extent that they were become bonded labor. Tea workers had put a lot of efforts from multi aspects to enhance their existing condition but they failed and their condition remains same day after day.
- Hariharan and Kumar ^[19] (2014) observed women workers' status in tea plantation industry. The study found that in tea plantation, the number of female worker was higher than their counterpart of male worker. Female workers' saving capacity was much lower and many of them in deep deftness due to the insufficient amount of income. The study further suggested that strong policy framework needed from the state and central level to safeguard the industry and for the wellbeing of the workers in tea industry.
- Borgohain ^[16] (2013) studied on occupational health and hazards of workers of tea estates of Assam. Study was conducted to examine on occupational health and hazards confronted by the workers of Marangi and Hajua tea estates of the state. Study was conducted by interviewing 212 workers including male and female workers. Study exposed that tea estates have a longer way to go on to mitigate such health hazards. The study suggested that the status of hazard and health could be enhanced through the better practices of health and hygiene, environmental sanitation, making aware the workers about health and

balanced nutrition, improvement of economic condition, etc.

- Griffiths ^[1] (1967) made a laudable work about tea industry of India. In his book, he stated that tea industry of India emerged in early 1830s. This study further revealed that problems of labor in the early stage were prevailed and multifarious problems were also confronted by the planters. The study further elaborately narrated about the labor recruitment, plantation associations, movement of unions, etc. in a lucid manner.

Research Gap

- Limited Disquisition of specialty tea product while being exploration examines bulk tea product, a gap exists in understanding the implicit and challenges of specialty tea product in Assam. This could involve studying the compass for organic, green tea, or other specialty kinds and their request viability.
- Collapse of information on product practices and importation approaches of colorful tea estate sizes being researches could focus on general trends of assiduity. This gap can be filled by your exploration by enquiring into ways of product, processing style and import policies of small, medium and large tea estates at Assam.
- Insufficient examination on how the government programs past exploration would affect the policy interventions can allow, but not investigate, the effectiveness of the interventions. The gap in your study can be filled by conducting an experiment that determines the effect of government subventions, minimum pay envelope policies and import creation programs on the profitability and export competitiveness of the Assamese tea directors.
- Lack of awareness on socio-profitable variables involved in fair trade practices although the fair trade instrument does not have no gap in Assam tea, the aspects of how the method can influence the working conditions of labor, the welfare of workers and the sustainability of the entire assiduity has not been explored.

Data Analysis and Interpretation

Introduction

Data analysis of tea production and export in Assam can reveal valuable insights into the health of the industry, identify trends, and inform future strategies. Key concepts involved:

Data Collection

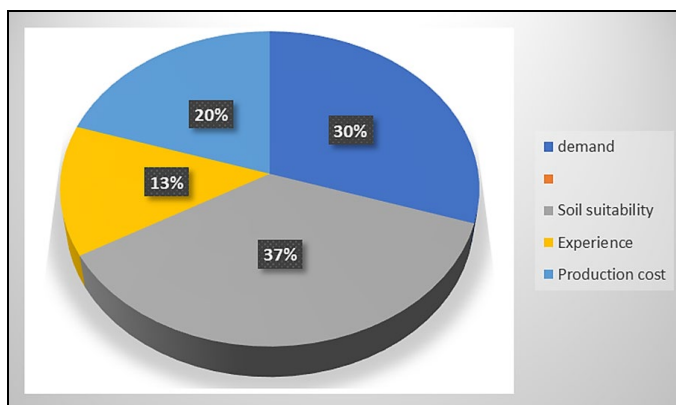
Production Data: This includes factors like total tea production quantity, yield per hectare, and variations across different regions within Assam.

Export Data: Quantity of tea exported, export value, and major export destinations.

Decision-Making in Production

Table 1: Primary factors to consider when deciding on the types of tea to produce.

Primary Factors	No of Responses	% of Responses
Demand	9	30%
Soil suitability	11	37%
Experience	4	13%
Production cost	6	20%



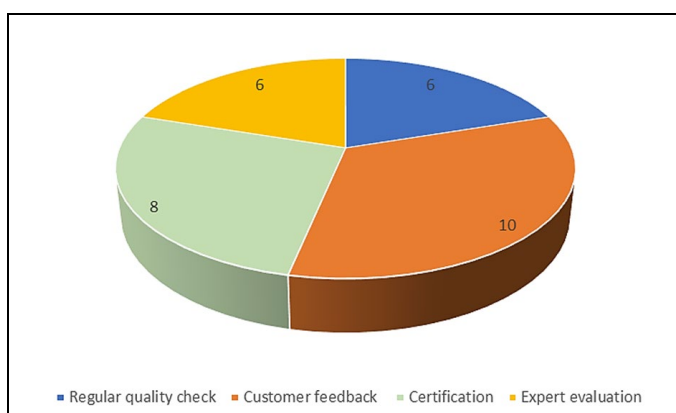
Source: Field survey

Chart 1: Production

From the above Chart 1, it shows the distribution of factors influencing the decisions of the primary respondents according to the survey. The largest slices labeled "demand" and "soil suitability" together account for 67% of responses. This suggests that these were the two most important in the opinion of the respondents.

Table 2: Quality of Tea production

Quality of Tea Production	No of Responses	% of Responses
Regular quality check	6	20%
Customer feedback	10	33%
Certification	8	27%
Expert evaluation	6	20%



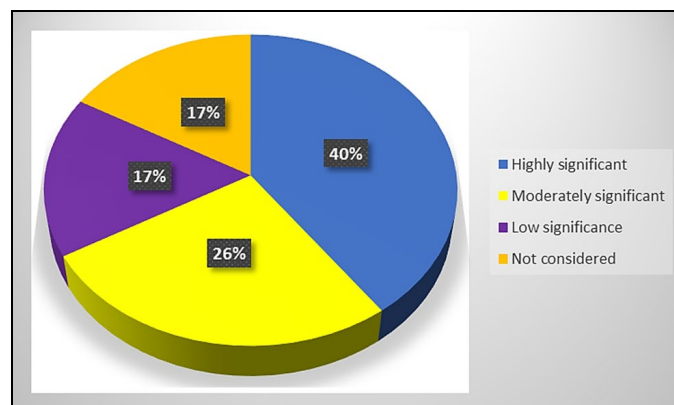
Source: Field survey

Chart 2: Quality

From the above Chart 2, It shows the result of survey on how people assess the quality of tea production. It translates that customer feedback is the most common, accounting for 33% of the responses, certification is the second most common method at 27%

Table 3: Role of technological innovation in production process.

Technological Innovation	No of Responses	% of Responses
Highly significant	12	40%
Moderately significant	8	26%
Low significance	5	17%
Not considered	5	17%



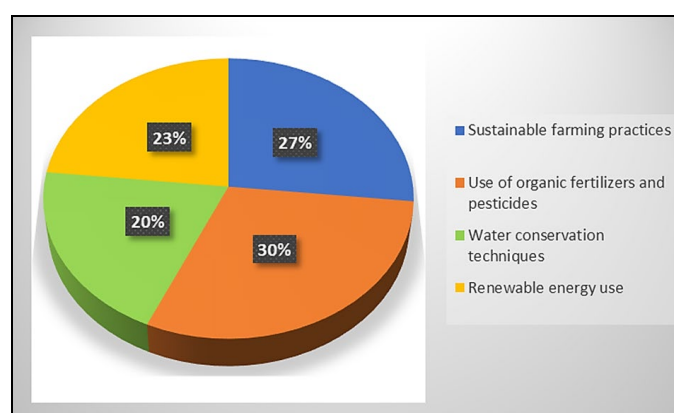
Source: Field survey

Chart 3: Innovation

From the above Chart 3, it shows the result of a survey on the role of technological innovation in the production process. 40% said that technological innovation is highly significant, 26% said moderately significant, 17% said low significance, and 17% said not considered.

Table 4: Managing the environmental impact of the tea garden.

Environmental Impact	No of Responses	% of Responses
Sustainable farming practices	8	27%
Use of organic fertilizers and pesticides	9	30%
Water conservation techniques	6	20%
Renewable energy use	7	23%



Source: Field survey

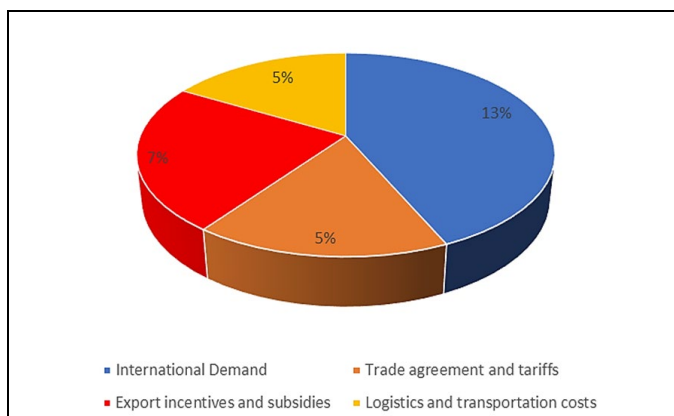
Chart 4: Environment

From the above Chart 4, it shows that 30% of respondents identified the use of organic fertilizers and pesticides as a way to manage the environmental impact of tea gardens.

Decision-Making in Export

Table 5: Key factors influencing decision to export tea

Decision to Export Tea	No of Responses	% of Responses
International Demand	13	43%
Trade agreement and tariffs	5	17%
Export incentives and subsidies	7	23%
Logistics and transportation costs	5	17%



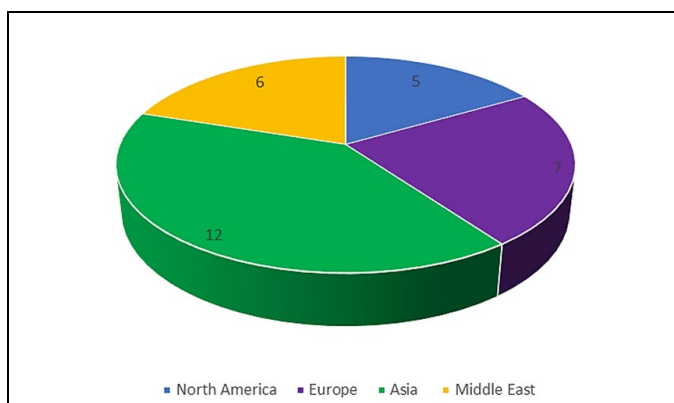
Source: Field survey

Chart 5: Exports

From the above Chart 5, it shows that international demand is the most important factor influencing decision to export tea with 43% followed by the others.

Table 6: Primary Export destination

Export Destination	No of Responses	% of Responses
North America	5	17%
Europe	7	23%
Asia	12	40%
Middle East	6	20%



Source: Field survey

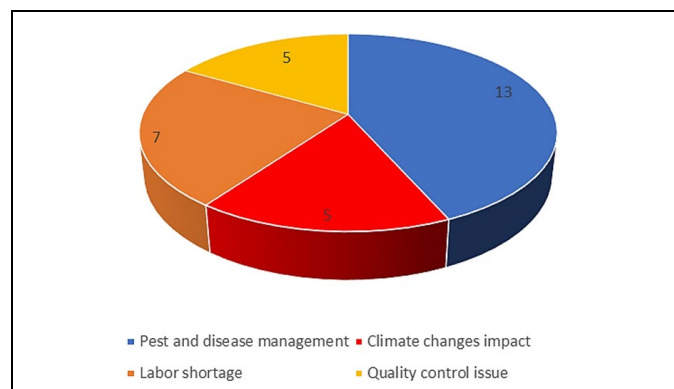
Chart 6: Destination

From the above Chart 6, it is found that Asia is the primary export destination, accounting for 40% of responses, it is followed by Europe 23%, the Middle East 20% and North America.

Production Challenges

Table 7: Challenges faced in Tea production

Challenges	No of Responses	% of Responses
Pest and disease management	13	43%
Climate changes impact	5	17%
Labor shortage	7	23%
Quality control issue	5	17%



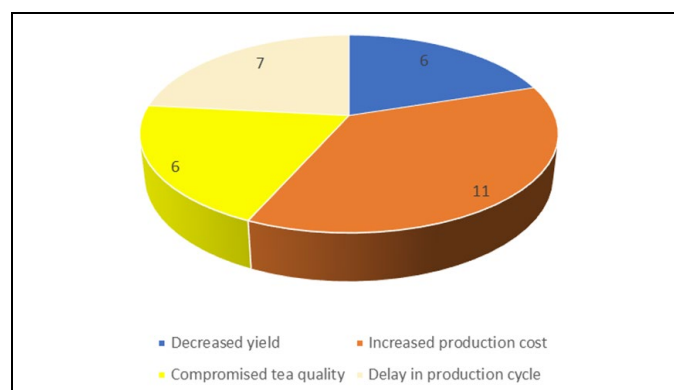
Source: Field survey

Chart 7: Challenges

From the above f Chart 7, it shows the result of a survey on the challenges faced in tea production. Pest and disease management is the most common challenge, accounting for 34% of the responses. Climate change is the second most common at 23%, followed by others.

Table 8: Challenges affecting production output and quality

Challenges	No. of Respondents	% of Respondents
Decreased yield	6	20%
Increased production cost	11	37%
Compromised tea quality	6	20%
Delay in production cycle	7	23%



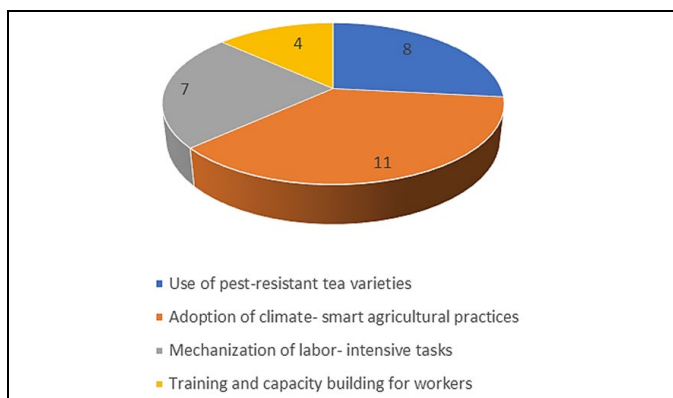
Source: Field survey

Chart 8: Impact

From the above Chart 8, it shows the result of a survey on the challenges affecting production and quality. Increased production is the most common challenges responded by the respondents with 37%, delay in production with 23%, decreased yield with 20% and compromised tea quality with 20%.

Table 9: Measures taken to address production challenges.

Measures	No. of respondents	% of respondents
Use of pest-resistant tea varieties	8	27%
Adoption of climate-smart agricultural practices	11	37%
Mechanization of labor-intensive tasks	7	23%
Training and capacity building for workers	4	13%



Source: Field survey

Chart 9: Measures

From the above Chart 9, it is found that adoption of climate smart agricultural practices is the most frequent measure respondents use to address production challenges at 37%. This is followed by the use of pest resistant varieties 27%.

Export Challenges

Table 10: Encountering difficulties in exporting of tea products.

Difficulties in exporting of tea products.	No. of responses	% of responses
Trade barriers and tariff	7	23%
Transportation and logistics issue	10	34%
Compliance with international standard	6	23%
Competition from other tea producing countries	7	23%



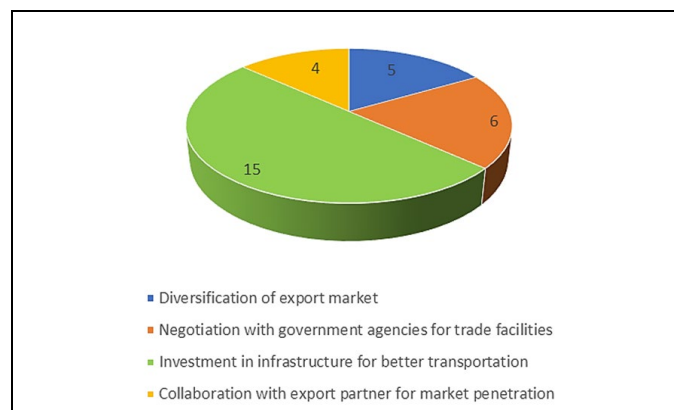
Source: Field survey

Chart 10: Difficulties

From the above Chart 10, it shows that transportation and logistics issue is the most common difficulty faced by exporters of tea products. This suggests that exporters are facing a number of challenges in getting their products to market.

Table 11: Strategies implemented to overcome the export challenges.

Strategies	No. of responses	% of responses
Diversification of export market	5	17%
Negotiation with government agencies for trade facilities	6	20%
Investment in infrastructure for better transportation	15	50%
Collaboration with export partner for market penetration	4	13%



Source: Field survey

Chart 11: Strategies

From the above Chart 11, depicts the percentage of respondents who implemented various strategies to overcome export challenges. Investment in infrastructure for better transportation (50%) appears to be the most common strategy. Negotiation with government agencies for trade facilities (20%) and diversification of export market (17%) are the other two noteworthy strategies. Collaboration with export partners for market penetration (13%) seems to be the least implemented strategy.

Findings, Suggestion and Conclusion

Findings of the Study

Following are the findings of the first objective i.e. to study the key factors influencing the decision making of tea garden owners in production and export.

- According to the data, the majority of respondents labelled soil suitability i.e. 37% as the most common primary factor on deciding on the types of tea to produce.
- According to the data, the majority of respondents determine the quality of tea production by enhancing customer feedback.
- From the above data the technological innovation of the respondents is highly significant i.e. 40%.
- Based on the data collected 30% of respondents identified the use of organic fertilizers and pesticides as a way to manage the environmental impact of tea gardens.
- From the study, it is observed that transnational demand is the most important factor impacting decision to export tea with 43 followed by the others.
- According to the data collected, it is found that, Asia is the primary import destination, counting for 40% of responses, it's followed by Europe 23%, the Middle East 20% and North America 17%.

Following are the findings related to the second objective i.e. to identify the problems faced by the tea garden owner for production and export of tea products

- Based on the data, it shows the result of check on the challenges faced in tea product. Pest and complaint operation is the most common challenge, counting for 34 of the responses
- From the study, it shows the result of a check on the challenges affecting product and quality. Increased product is the most common challenges responded by the repliers with 37%
- According to the data, it is found that majority of the respondents use to address production challenges with adoption of climate smart agricultural practices.

- Based on the data, it shows that transportation and logistics issue is the most common difficulty faced by exporters of tea products. This suggests that exporters are facing a number of challenges in getting their products to request.
- From the study, it is found that investment in infrastructure is the most common response of the respondents with 50%

Suggestion

- Enhancing Soil Management:** Due to the significance of soil suitability, tea garden owners should concentrate on innovative soil management techniques and regularly assess soil health.
- Using Customer Feedback:** Improving systems for gathering and analyzing customer feedback will help in the ongoing process of improving tea production and quality.
- Adoption of Technological Innovations:** Continue to emphasize the adoption of technological innovations and investment in new agricultural technologies, automation, and data analytics to enhance efficiency and productivity.
- Organic Practices:** Encouraging greater use of organic fertilizers and/or pesticides will help in managing environmental impacts while also catering to the growing group of eco-conscious consumers.
- Responding to Transnational Demand:** Staying current on global trends and demand in the global tea markets will allow greater alignment with export opportunities leading to better market demands.
- Improving Transportation and Logistics:** Transportation and logistics issues need to be addressed by investing in better infrastructure, logistics supply chain practices, and exploring other routes.
- Focusing on Developing Infrastructure:** The investments in infrastructure should continue, such as roads, storage and processing facilities, to promote production and exports.
- Climate-Smart Practices:** Encourage and assist tea garden owners to adopt farming practices that are climate-smart. This will address the implications of climate change while ensuring tea production remains sustainable and reliable.

Conclusion

To conclude, the tea assiduity in Assam has a crucial role in the state economy and tea products worldwide. Through the analysis of particular tea owners, we learn the insight into the complexities of the product, import, and the problems they confront. Invention, worker conditions optimization, and experimentation of new requests are paramount in promoting the icing of Assam tea assiduity to prosper. It is one of the practices that are purported to be sustainable as practiced by the named tea owners in Assam. They may also be the bone that is pushed up in the granges and auditoriums into which you have received your tea. Preservation of biodiversity in the tea industry is one among many environmental constraints the tea producers consider. The commonest environmental-driven practices are the conservation of the soil, the nature of intrants used, water quality, and the issue of climate change. Packaging Plastic-Compostable switch-Oil. Cornstarch Scented teas Like the Bergamot Earl grey tea conditioned in both tea bags and loose bags, are virtually always sealed with a thin plastic antipode so as to preserve their natural fragrance. This antipode of plastic is likely to be replaced by

compostable cornstarch in the form of precipitate. It does not qualify to be a nostrum yet specialists confirm the betterment. As a concession to the tea assiduity, the Assam government has opened the Assam Tea diligence Special impulses Scheme (ATIS). This scheme gives fiscal support required to support the product of orthodox tea or specialty tea which are mostly intended to serve the import purposes and the product is very expensive. With its strong taste and rich history, Assam tea is on the way to the constant development and, in fact, to the decrease in recognition on the global level. Through further branding, production, and engagement in transnational tea events, Assam tea would indeed gain less recognition in the world marketplace. By simply pushing facts of the different tea auditoriums and rich history of Assam tea product to consumers, transnational producers would gain an interesting story of their own. In the future, Assam tea is equipped with everything to have a successful future. Its unique flavor, health advantages, focus on sustainable development, and focus on innovation are all belonging to consecutive expansion and the corresponding position to its height in the sphere of tea chart.

References

1. Asopa VN. India's Global Tea Trade: Reducing Shares Declining Competitiveness (CMA Publication No. 235). Allied Publishers, 2011, Vol. 1.
2. Saikia B. Development of tea garden community and Adivasi identity politics in Assam. *The Indian Journal of Labor Economics*. 2008; 51(2):307-322.
3. Das HN. "Assam Tea: Problems and Prospects; in Origin and Development of tea; EBH Publisher, 2008; Guwahati.
4. Das Ashim Kr "Sustainability in tea industry: An Indian perspective"; The Social Scanner-2000. Akansha Publishing House; New Delhi.
5. Jain Shweta. "Indian Tea Industry-An Analysis Using Concept of Forward Engineering" *International Journal of Food Sciences and Nutrition*. 2011; 14(2):17-38.
6. Basu Majumder A, Bera B and Rajan A. "Tea Statistics: Global Scenario" *Journal of Tea Research*. 2010; 3: 6(7):9-11.
7. Hazarika M and other (2011) "Tea in India: An overview" www.tocklai.net/wpcontent/.../TwoBud582011/Tea%20in%20India.pdf
8. Roy Suparna. "Historical Review of Growth of Tea Industries in India: A Study of Assam Tea" 2011 International Conference on Social Science and Humanity IPEDR vol.5 (2011) © (2011) IACSIT Press, Singapore, 2011, V1:166 – V1:170
9. Gowalla H. Labor relation practice in tea industry of Assam: With special reference to Jorhat district of Assam. *IOSR Journal of Humanities and Social Science*. 2012; 1(2):35-41.
10. Anil P.V "Indian Tea Production: An analysis" *International journal of research in Commerce, Economics & Management*". 2013; 3(3):166-168.
11. Sarkar K. Globalization, restructuring and labor flexibility in tea plantations in West Bengal. *The Indian Journal of Labor Economics*. 2008; 51(4):643-654.
12. Mishra DK, Upadhyay V & Sarma A. 'Crises' in tea industry: A study of Assam tea gardens. *Indian Journal of Economics*. 2008; 56(3):39-56.
13. Mitra D. Globalization and industrial relations in tea plantations. New Delhi, India: Abhijeet Publication,

2010.

14. Rahaman A. An enquiry into the living condition of tea garden workers of Bangladesh: A case study of Khan tea estate (Master's dissertation, BRAC Institute of Governance and Development, BARC University, Dhaka, Bangladesh, 2011).
15. Arya Nizara "Growth and Development of Tea Industry in Assam" *International Journal of Scientific & Engineering Research*. 2013; 4(7):226-274.
16. Hazarika FY. Status of welfare measures in the tea estates of Assam and its impact on the tea plantation workers (Unpublished master's dissertation). Tata Institute of Social Sciences, Mumbai, India, 2014.
17. Hariharan NP & Kumar SS. A study on the economic status of workers in large tea estates: With special reference to the Nilgiri district of Tamil Nadu in India. *IJABER*. 2014; 12(3):717-727.
18. Borgohain P. Occupational health hazards of tea garden workers of Hajua and Marangi tea estates of Assam, India. *The Clario*. 2013; 2(1):129-140
19. Griffiths P. The history of the Indian tea industry. London: Weidenfeld and Nicolson, 1967.