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Constraints of Conventional and Organic Small Tea Growers in Assam

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Abstract

This study explores the multifaceted challenges faced by small tea growers in Assam, who contribute nearly 50% of the state's total tea production and thus play a crucial role in sustaining its tea economy. Despite their importance, these growers face economic, social, and environmental constraints that hinder the progress of both conventional and organic cultivation. To assess these issues, a survey of 120 small tea growers was conducted, and responses were analyzed using Garrett's ranking method to identify and prioritize the most pressing problems. For conventional growers, the results highlight high labour costs (73.80), shortage of skilled labour (66.63), and price fluctuations of green tea leaves (64.87) as the most severe constraints. Additional challenges include pest and disease outbreaks, high input prices, exploitation by middlemen, lack of reliable market information, and limited institutional support. Organic growers, while facing some similar issues, reported distinct constraints such as the high cost of organic inputs (71.50), pest and disease problems (69.10), and high initial investment (65.60). Barriers such as labour intensity, market uncertainty, certification hurdles, and inadequate knowledge further restrict the adoption of organic practices. The findings emphasize the need for integrated solutions including policy support, cost-reduction strategies, infrastructure development, farmer training, and stronger market linkages to ensure the long-term sustainability of small tea growers in Assam.

Keywords: Tea, organic, small tea growers, constrains

Introduction

The tea industry is the lifeline of Assam's economy, deeply intertwined with its history, culture, and rural livelihood system. Introduced during the colonial period, the industry initially revolved around large plantations, but over the past three decades, small tea growers (STGs) have emerged as a transformative force. Today, they account for nearly half of Assam's total tea production, reflecting not only their numerical strength but also their growing economic significance. Their participation has democratized tea cultivation, creating opportunities for rural households that were once marginally linked to the plantation sector. The expansion of STGs has generated substantial employment, encouraged diversification of rural livelihoods, and contributed to poverty reduction. Unlike estates, where tea is grown on large tracts of land with structured management, STGs typically operate on fragmented holdings, often less than two hectares. Their cultivation practices vary widely, with some adopting conventional methods while others move toward organic farming in response to rising global demand for chemical-free products. This shift demonstrates both the adaptability and the aspirations of small growers to integrate into emerging markets. However, the growth of the STG sector also raises critical questions about sustainability, profitability, and institutional support. Since STGs function at the intersection of traditional practices and modern market demands, their challenges differ significantly from those of large estates. Understanding these dynamics is essential not only for improving grower livelihoods but also for ensuring the resilience of Assam's tea economy in a competitive global environment. This study seeks to bridge that knowledge gap by analyzing the key problems faced by small growers and identifying pathways for their sustainable development.

Methodology

The study was carried out in the Jorhat and Golaghat districts of Assam, regions where tea cultivation is a dominant agricultural activity and where the number of organic tea growers has been steadily increasing in recent years. A total of 120 respondents were selected for the research through random sampling, consisting of 90 conventional small tea growers and 30 organic small tea growers. This distribution provided a balanced perspective to analyze the comparative challenges faced under both cultivation systems.

A mixed-methods approach was adopted to ensure comprehensive data collection. The study employed structured questionnaires, personal interviews, and on-site observations to gather first-hand information directly from growers. This combination allowed for both quantitative measurement and qualitative insights into the constraints of

small tea cultivation.

Analytical Technique

The Henry Garrett ranking technique was used to analyze the data and prioritize the problems faced by small tea growers. In this method, the percentage position of each rank assigned by respondents is converted into scores using Garrett's conversion table. The scores for each factor are then summed across all respondents and divided by the total number of responses, providing a mean score for each factor.

Formula

$$\text{Percent Position (PP)} = \frac{100\,(Rij - 0.5)}{Nj}$$

Where Rij = Rank given for the ith factor by the jth respondent
Nj = Total number of factors ranked by the jth respondent

This ranking method enabled the identification of the most critical constraints faced by both conventional and organic small tea growers in the study area.

Results and Discussion

The analysis of small tea growers in Assam reveals significant challenges affecting both conventional and organic cultivation. Labour costs, input expenses, pest and disease management, and market uncertainties emerged as the most pressing constraints influencing production efficiency and farmer income.

For conventional small tea growers. it was seen in Table 1 that high labour cost emerged as the most critical problem with a Garrett score of 73.80, reflecting the labour-intensive nature of tea cultivation and the difficulty in hiring skilled workers. The unavailability of skilled labour (66.63) and price fluctuations of green tea leaves (64.87) were the next most significant issues, indicating that workforce scarcity and market instability strongly affect profitability. Pest and disease outbreaks (55.56) also rank highly, demonstrating the vulnerability of crops to biotic stresses. Other notable constraints include high input prices (44.23), exploitation by middlemen (41.21), lack of market information (38.15), unfavourable weather conditions (35.40), limited government support (32.20), and delayed payment from buyers (29.80). Collectively, these results show that conventional growers face overlapping operational, economic, and structural challenges that impact their sustainability and income security.

Table 1: Constrains faced by Conventional Small Tea Growers

Sl. No.	Problems	Garrett score	Ranking
1	High Labour Cost	73.80	1st
2	Non available of skilled labour	66.63	2nd
3	Price fluctuation of green tea leaves	64.87	3rd
4	Pest and diseases issues	55.56	4th
5	High input prices	44.23	5th
6	Exploitation by middleman	41.21	6th
7	Lack of market information	38.15	7th
8	Unfavourable weather	35.40	8th
9	Lack of government support	32.20	9th
10	Delayed payment	29.80	10th

For organic small tea growers In case of organic tea growers it was seen in Table 2 that they experiences a distinct set of challenges. The high cost of organic inputs (71.50) is their most pressing problem, emphasizing the financial burden of eco-friendly practices. Pest and disease issues (69.10) and high initial investment (65.60) are also significant, highlighting the capital-intensive and labour-intensive nature of organic cultivation. Labour intensity (57.67), market uncertainty (53.20), certification barriers (42.93), knowledge gaps (37.37), untimely availability of inputs (37.27), erratic rainfall (34.87), and transportation challenges (31.50) further restrict operational efficiency and expansion.

Table 2: Constrains faced by Organic Small Tea Growers

Sl. No.	Problems	Garrett score	Ranking
1	Cost of Organic Inputs	71.50	1st
2	Pest and diseases Issues	69.10	2nd
3	High initial cost	65.60	3rd
4	Labor Intensity	57.67	4th
5	Market Uncertainty	53.20	5th
6	Certification Barriers	42.93	6th
7	Knowledge Gaps	37.37	7th
8	No- availability of inputs on time	37.27	8th
9	Erratic rainfall	34.87	9th
10	Transportation	31.50	10th

Policy Recommendations for Overcoming Challenges and Promoting Sustainable Tea Cultivation in Assam

To effectively tackle the technical, economic, labour, marketing, and infrastructure challenges faced by small tea growers in Assam, a comprehensive set of policy measures is needed. The following recommendations outline strategies that can strengthen the tea sector, enhance productivity, and promote sustainable cultivation practices, with particular focus on both conventional and organic small tea growers.

Suggestions for Conventional Tea Growers

Use of Small Machines: Introducing small tea plucking and pruning machines can reduce the need for manual labor and help manage rising labor costs. Providing subsidies may encourage more small growers to adopt these machines.

Skill Development: Setting up tea training centers in villages can help create skilled workers, especially among local youth, improving both employment and cultivation practices.

Stable Prices: Developing a system to monitor and regulate green leaf prices can help growers get fair and predictable income.

Affordable Inputs: Promoting bulk purchase of fertilizers and other materials through cooperatives or Farmer Producer Organizations (FPOs) can lower costs and make inputs easier to access.

Better Pest Management: Creating village-level support units for pest and disease control, combining traditional knowledge with modern advice, can help solve problems more effectively and on time.

Suggestions for Organic Tea Growers

Training in Organic Methods: Providing practical training in organic tea farming can help growers adopt better practices and build a skilled workforce.

Eco-Friendly Pest Control: Encouraging the use of bio-pesticides and natural methods can help manage pests safely and sustainably.

Financial Support: Offering subsidies or low-interest loans for costly organic inputs and initial setup can make organic farming more affordable.

Easier Certification: Simplifying the organic certification process and providing financial or technical help can motivate more growers to switch to organic cultivation.

Better Market Access: Connecting organic growers directly to export markets or online platforms can improve their income and marketing opportunities.

Conclusion

The study highlights that small tea growers in Assam face multiple challenges that affect productivity, income, and sustainability. Conventional growers are mainly constrained by high labour costs, shortage of skilled workers, and price fluctuations, while organic growers struggle with expensive inputs, high initial investment, and certification barriers. Pest and disease management is a shared concern for both groups. Addressing these issues requires integrated strategies, including technical training, financial support, improved market access, affordable inputs, and infrastructure development. Effective policy measures and institutional support are essential to strengthen small tea growers, promote sustainable cultivation, and ensure long-term growth of Assam's tea sector.

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