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A STUDY ON ENTREPRENEURSHIP IN SMALL TEA PLANTATIONS WITH SPECIAL REFERENCE TO ASSAM

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ABSTRACT

Entrepreneurship in small tea plantations has reshaped Assam's rural economy over the past three decades. This paper examines how small tea growers (STGs)holdings up to 10.12 hectares—mobilize land, labor, and local networks to create self-employment and enterprise opportunities. Using secondary sources up to 2022 (Tea Board of India, Economic Survey of Assam and NEDFi, NABARD district studies, and peer-reviewed work), we analyze sectoral scale, organization, pricing, credit, and capability gaps, situate Assam within national production patterns, and discuss gendered employment effects and climate exposure. Descriptive statistics and value-chain analysis show that (i) STGs nationally contributed roughly half of India's tea output in 2019; (ii) Assam remained a cornerstone producer with 2018–2021 production ranging ~619–716 million kg; and (iii) entrepreneurial returns hinge on green-leaf price realization, quality compliance, access to finance, and buyer linkages with bought-leaf factories (BLFs). The paper recommends transparent price discovery, collective action via producer companies, inclusive finance aligned to tea husbandry cycles, quality upgrading, and climate-smart field practices to strengthen smallholder entrepreneurship.

Keywords: Assam, Small Tea Growers, Entrepreneurship, Self-Employment, Bought-Leaf Factories, Green-Leaf Prices, Inclusive Finance, Value Chain, Women's Employment, Climate Risk

1. INTRODUCTION

Assam is India's largest tea-producing state and a historical epicenter of plantation culture. Since the 1990s, a rapid rise of small tea growers (STGs) has diversified production away from large estates toward dispersed, family-managed enterprises linked to bought-leaf factories (BLFs). The Tea Board defines STGs as growers with up to 10.12 hectares; early estimates for Assam in the late 2000s suggested many more unregistered growers than official counts, signaling the sector's informality and energy.

Nationally, STGs' output has reached parity with estates. Tea Board statistics for 2019 show STGs producing 49.24% of India's tea; press reports based on Tea Board data put the absolute STG output at 685.08 million kg in 2019 out of 1,389.70 million kg total. These benchmarks, though national, contextualize Assam's smallholder dynamism.

Within Assam, total state production fluctuated with market and weather shocks but remained structurally high: 691.9 million kg (2018), 716.5 (2019), 618.2 (2020), and 667.7 (2021),

according to the Economic Survey of Assam compiled in the NEDFi databank. While these totals aggregate estates and STGs, the persistent output underscores the economic space within which smallholder entrepreneurship operates.

2. CONCEPTUAL FRAME: SMALLHOLDER TEA AS ENTREPRENEURSHIP WITHIN A BUYER-LINKED VALUE CHAIN

We view small tea cultivation as asset-lean agrarian entrepreneurship embedded in a buyer- driven value chain:

- **Entry and asset base:** Land conversion of small plots to tea, nursery development, planting, and a gestation of ~2.5–3 years before commercial plucking. Capital is incremental; many entrants rely on household savings or informal credit.
- **Operating model:** The modal STG sells green leaf to a BLF that processes into made tea for auctions/direct sales. Revenues depend on (i) green-leaf prices, often indexed to auction realizations; (ii) quality (plucking standard, freshness); and (iii) logistics (transport time/cost to BLF).
- **Employment and gender:** Plucking is labor-intensive with marked women's participation— NABARD district studies in Assam (e.g., Golaghat) highlight higher employment per acre than most crops and approximately 50% female employment in tea operations.
- **Entrepreneurial scope:** Beyond leaf production, STGs spur micro-enterprise in nurseries, pruning/field services, input retail, and leaf transport—multiplying local business activity.

This frame clarifies why price discovery, quality systems, and collective logistics are as central to entrepreneurship as agronomy itself.

3. LITERATURE AND BACKGROUND

Scholarly and institutional sources converge on several features:

1) Sector expansion and registration gaps. Early 2010s literature noted rapid STG proliferation and a gap between registered and de-facto growers, reflecting entry dynamism.
2) Near-parity output with estates at the national level by 2019. Tea Board's 2019–20 report records a 49.24% STG share of national output; press summaries report 685.08 million kg STG production in 2019.
3) Assam's macro context. Economic Survey series show large, resilient state production totals through 2018–2021 despite pandemic shocks.
4) Constraint set. NABARD district appraisals emphasize (i) price uncertainty at the green-leaf gate; (ii) limited institutional credit during gestation and maintenance; and (iii) capability gaps in quality compliance.

4. DATA AND METHODOLOGY

4.1. DATA SCOPE (PRE-2022 ONLY)

- **Assam totals (2018–2021):** Production (all growers) from the Economic Survey of Assam, compiled by NEDFi's databank.
- **India STG share (2019):** Tea Board of India Annual Report 2019–20; media summary used for absolute values.
- **Entrepreneurship and constraints:** NABARD Golaghat area-based scheme (pre-2018); Hazarika (2013) on definitions and early dynamics.

4.2. METHODS

Descriptive statistics (Assam 2018–2021 totals; India 2019 STG share).

Value-chain analysis to examine how prices, quality, finance, and logistics mediate entrepreneurial returns.

Thematic synthesis of institutional and peer-reviewed sources to assess employment, gender, capability gaps, and policy instruments.

4.3. LIMITATIONS

Assam-specific STG vs estate split is not consistently published pre-2022 in a single series; we therefore use (i) national STG share for 2019 and (ii) Assam's aggregate production for dynamics.

District-level microdata on incomes/returns are limited in the public domain before 2022; inferences about profitability remain indicative.

5. SECTOR SCALE AND DYNAMICS

5.1. ASSAM'S OUTPUT CONTEXT

Figure 1 shows Assam's total tea production during 2018–2021: a rise up to 2019, a pandemic- year dip in 2020, and recovery in 2021. The persistence of high output underscores underlying demand, agronomic suitability, and the embeddedness of STGs within state supply networks.

Figure 1

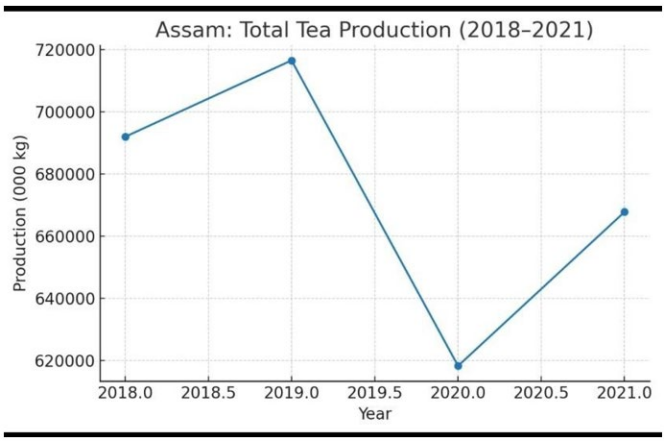

Figure 1 Assam: Total Tea Production (2018–2021)

5.2. INDIA'S STRUCTURE: STG NEAR-PARITY WITH ESTATES

In 2019, STGs accounted for 49.24% of national tea output (Tea Board), practically neck-and- neck with estates. This national structure frames the entrepreneurial opportunity set available to Assam's smallholders who face similar buyer and auction dynamics. Figure 2 visualizes this split.

Figure 2

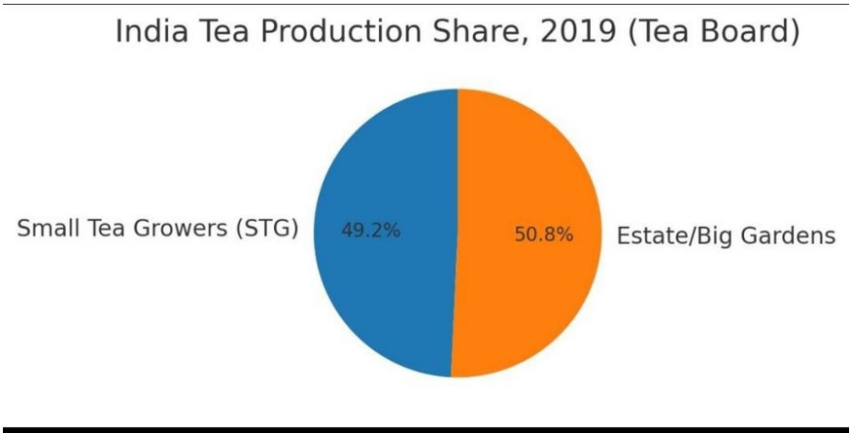

Figure 2 India Tea Production Share, 2019 (Tea Board)

6. THE ENTREPRENEURIAL PROCESS IN SMALL TEA PLANTATIONS

6.1. OPPORTUNITY RECOGNITION AND ENTRY

- **Agro ecology and proximity advantages:** Upper Assam's rainfall, temperature, and loamy soils are conducive to tea; proximity to BLFs lowers transaction costs for smallholders.
- **Incremental capital path:** Many entrants convert small plots; planting, infilling, and pruning cycles can be staged, allowing cash-constrained growers to expand progressively. Hazarika (2013) documents the momentum among indigenous growers even when registration lagged.

6.2. ORGANIZING PRODUCTION AND LABOR

- **Husbandry calendar:** Nursery → planting → formative pruning → first plucking (after ~30–36 months) → cyclic pruning and plucking rounds.
- **Labor model and gender:** Plucking is the most labor-intensive task and the primary wage opportunity for women; NABARD reports from Assam districts cite ~50% women's employment in field tasks, underlining the gendered impact of STG entrepreneurship.

6.3. MARKET LINKAGE AND PRICE DISCOVERY

- **BLF linkage:** Most STGs sell daily/alternate-day green leaf to BLFs. Prices often track auction realizations for made tea with a conversion factor; weaker quality or longer transport time yields discounts.
- **Exposure to volatility:** NABARD highlights uncertain green-leaf prices as a key constraint; without own processing, STGs' margins are squeezed when auction prices soften, while input costs (labor, fertilizer) are sticky.

6.4. FINANCE AND WORKING CAPITAL

- **Gestation finance:** Many STGs established gardens without formal bank credit, relying on informal sources; mis-timed cashflows can delay pruning or fertilizer application, depressing yield/quality.
- **Enterprise finance:** Once in steady state, short working-capital cycles (for labor and transport) require accessible, small-ticket credit aligned to plucking rounds and seasonal troughs.

6.5. CAPABILITY AND QUALITY SYSTEMS

- **Leaf standard:** Two leaves and a bud, minimal coarse leaf, low contamination, cool chain/logistics to reduce withering delays.
- **Institutional support:** Training and extension are pivotal to reduce rejection/discount rates at factories—an area repeatedly flagged in district and Tea Board documents.

7. ENTREPRENEURSHIP OUTCOMES

7.1. INCOME AND ENTERPRISE DIVERSIFICATION

- **Self-employment:** Owner-cultivation plus family supervision create direct self-employment; scale can increase through plot consolidation, leasing, or partnerships.
- **Spillovers:** Nurseries, pruning services, logistics (leaf collection and transport), tool repair, and input retail are typical micro-enterprises arising around STG clusters.

7.2. EMPLOYMENT AND INCLUSION

- **High employment per acre:** NABARD reports underscore tea's relatively high employment intensity per acre versus most field crops, channeling steady rural wages.
- **Women's agency:** Women's participation (~50% in some districts) supports household cashflow smoothing and empowerment, though wage parity and workplace amenities remain ongoing concerns.

7.3. RESILIENCE AND RISK

- **Market risk:** Auction/BLF price cycles transmit quickly to STG incomes.
- **Weather and climate:** Excess rainfall, floods, and extended dry spells affect flush frequency and quality; adaptation via shade management, mulching, soil organic matter, and water harvesting is increasingly important (less quantified for Assam pre-2022 but widely recognized in tea agronomy).
- **Institutional voids:** Incomplete registration, limited bargaining power with BLFs, and uneven adoption of quality systems constrain returns.

8. DISCUSSION

What enables (and constrains) STG entrepreneurship in Assam?

Information and price signals. Weekly dissemination of district-level reference prices derived from auctions, with transparent conversion ratios, can improve bargaining and planning. Tea Board statistics already anchor the linkage between made-tea realizations and green-leaf pricing; operationalizing this transparently at district level would stabilize expectations.

1) Collective action. Producer groups and companies expand scale economies (shared transport, centralized weighing, basic QA) and improve contract terms with BLFs. Access to micro and mini- factory investments—where feasible—lets STGs internalize value addition and reduce single- buyer risk.
2) Finance architecture. Gestation loans with grace periods matched to first plucking; revolving working-capital lines tied to plucking cycles; and risk-sharing (e.g., credit guarantees) can crowd in lenders. NABARD's area-based program logic in Assam offers a template.
3) Capability upgrading. Field schools on plucking rounds, pruning cycles, integrated nutrient/pest management, and logistics would lower rejection and discounts and raise effective prices.
4) Gender-responsive measures. Ensuring safe transport to fields, sanitation, protective gear, and skills pathways (field supervisors, quality technicians) enhances women's gains from the sector.
5) Climate adaptation. Promote shade trees, contour bunds, mulching, rainwater harvesting, and climate-resilient clones through subsidies and technical assistance—mainstreamed into extension.

9. FINDINGS (SYNTHESIZED)

- **Scale:** Assam's tea output remains large (2018–2021: ~619–716 million kg), providing ample market space for STG entrepreneurship even during shock years.
- **Structure:** Nationally, STGs reached ~49% of output in 2019, indicating that smallholder models can be as productive as estates when markets and support systems align.
- **Employment:** Tea's high labor intensity and women's participation (≈50% in some districts) make STG development a lever for inclusive rural employment.
- **Binding constraints:** Green-leaf price volatility; uneven quality compliance; limited, ill-timed credit; and dependence on a narrow set of BLF buyers.
- **Policy levers:** Transparent reference pricing, producer-company logistics, credit aligned to tea cycles, targeted extension, and climate-smart practices can lift entrepreneurial returns.

10. POLICY RECOMMENDATIONS

1) Reference price bulletin and floor-price pilots. Create a district-level weekly reference price for green leaf tied to recent auction realizations and conversion factors; test seasonal floor-price pilots during gluts with limited, rules-based stabilization, conditional on quality standards. (Rationale anchored in Tea Board pricing linkages.)
2) Producer companies and shared logistics. Support STG producer companies with matched grants for leaf collection points, calibrated weighing, transport, and first-mile quality checks; negotiate standardized supply contracts with BLFs.
3) Credit design. Offer gestation loans with 30–36-month grace tied to first plucking; revolving working capital pegged to weekly plucking; and first-loss guarantees to crowd in lenders— drawing on NABARD's area-based approach.
4) Quality and extension. Fund field schools on pruning cycles, plucking standards, fresh-leaf handling, and pest and nutrient management; link incentive payments to reductions in rejection and discount rates at BLFs.
5) Gender-smart upgrading. Invest in safe transport, sanitation, protective equipment, and supervisory training for women workers, promote women-led micro-enterprises in nurseries and quality labs.
6) Climate adaptation mainstreaming. Subsidize shade-tree planting, mulching, rainwater harvesting, and climate-resilient clones, integrate weather advisories and crop insurance pilots through producer groups.

11. CONCLUSION

Small tea plantation entrepreneurship has reconfigured Assam's rural opportunity structure by enabling asset-lean entry into a high-employment cash crop connected to robust domestic demand. Pre-2022 evidence shows a sector that is both opportunity-rich (nearly half of India's tea from STGs by 2019; large and resilient state-level output) and risk-exposed (to price cycles, quality penalties, and climate variability). The most effective path forward is to tighten the market interface—transparent reference pricing and collective logistics—while raising farm capability through extension and finance matched to tea's biological and commercial cycles.

Doing so can stabilize incomes, increase value capture by growers, and consolidate small tea as a durable platform for rural entrepreneurship and women's employment in Assam.

12. METHODOLOGICAL APPENDIX (DATA NOTE)

Figures:

Figure 1 uses Assam total production 2018–2021 from the Economic Survey of Assam (NEDFi databank). Values (in 000 kg): 2018: 691,910; 2019: 716,490; 2020: 618,200; 2021: 667,730.

Figure 2 uses Tea Board (2019–20) national production shares: STG 49.24%, Estates 50.76%.

Narrative evidence: NABARD Golaghat area-based scheme for employment intensity, women's participation, and price uncertainty; Hazarika (2013) for STG definition and early registration dynamics.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

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