

Growth of Rubber Farming in India Since 1950: An Overview

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Abstract- Farming has emerged as a significant component of India's plantation economy, contributing to industrial development, rural livelihoods, and regional economic transformation. Since 1950, the sector has experienced substantial expansion in terms of cultivated area, production, and geographical spread. This paper provides a comprehensive overview of the growth trajectory of rubber farming in India, examining historical trends, key determinants, and emerging regional dynamics. Based on secondary data and existing literature, the study finds that policy support, technological innovation, and industrial demand have been the primary drivers of growth, while challenges such as price volatility and productivity constraints continue to affect the sector.

Keywords- Rubber farming, India, rural livelihoods, Evolution of rubber Production, Determinants of Growth Challenges and Constraints

I. INTRODUCTION

Rubber is a strategically significant commodity in the global economy, functioning as a critical raw material for industries such as automotive manufacturing, healthcare, and engineering goods. Globally, total rubber production (including both natural and synthetic rubber) reached approximately 28.8 million metric tons in 2023, reflecting substantial growth from earlier decades. Natural rubber alone has experienced a steady increase in output, more than doubling since 2000 due to rising industrial demand and expanding plantation areas.

Natural rubber, derived from *Hevea brasiliensis*, is predominantly produced in tropical regions, while synthetic rubber is manufactured from petrochemical derivatives and is closely tied to global oil markets. The Food and Agriculture Organization reports that Asia accounts for nearly 90% of global natural rubber production, with Thailand alone producing over 4 million metric tons annually (33.8%), making it the world's leading producer¹. Other major producers include Indonesia (19.1%), Cote d'Ivoire (11.3%), Vietnam (9.35%), and India (6.1%).

On the synthetic side, global production reached approximately 15.4 million metric tons in 2023, with China accounting for nearly 38% of total output.

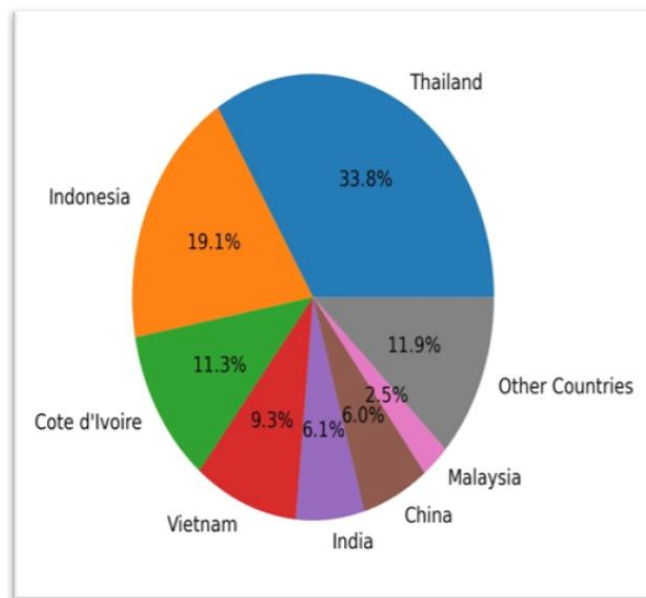


Fig. No: 1 Global Rubber producers

These production patterns highlight the dual structure of the rubber economy. However, increasing demand, climate variability, and supply constraints continue to shape the evolving dynamics of global rubber production.

II. EVOLUTION OF RUBBER PRODUCTION IN INDIA SINCE 1950

The evolution of rubber farming in India since 1950 reflects broader structural transformations in the country's agricultural and industrial economy. Natural rubber serves as a critical raw material for industries such as automobiles, manufacturing, and consumer goods. Over time, rubber cultivation has shifted from a region-specific activity concentrated in Kerala to a more geographically diversified sector, including emerging regions in Northeast India.

In the post-independence period, the sector was characterized by limited production and area. However, institutional support, particularly through the Rubber Board of India, played a crucial role in promoting cultivation through research, extension services, and financial assistance (Joseph, 2018).

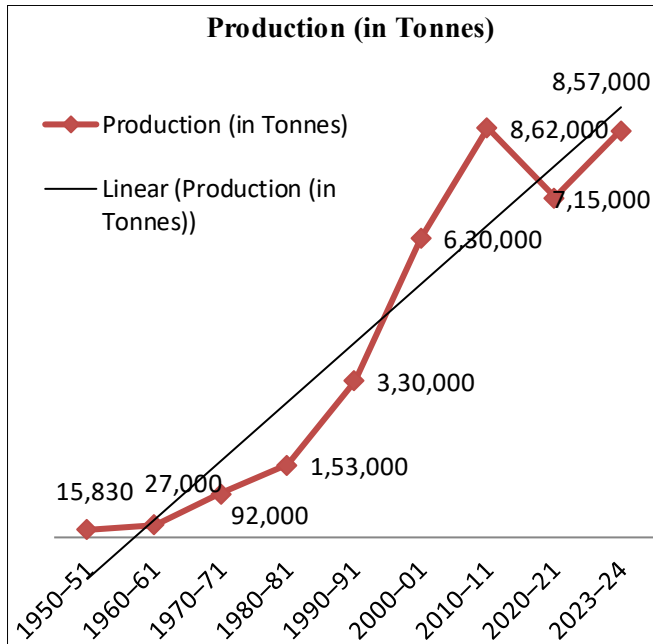


Fig No: 2 Trends in Production since 1950

The figure above shows substantial growth in the level of rubber production from 15830 tonnes in 1950 to 857000 in 2023-24 registering a growth rate of 5313.77%.

- *Early Development and Policy Support (1950–1970)*

During the initial phase, rubber cultivation in India was confined primarily to Kerala, with production levels around 15,000 tonnes in 1950. The Government of India recognized the strategic importance of natural rubber and incorporated plantation development into its planned economic framework.

The Second Five-Year Plan (1956–61) emphasized the expansion of plantation crops, leading to increased investment in rubber cultivation. Institutional mechanisms and policy support contributed to the gradual expansion of area and production (Menon, 2016).

- *Expansion and Technological Advancement (1970–1990)*

The period from 1970 to 1990 marked a phase of steady growth driven by technological progress and improved agricultural practices. The introduction of high-yielding clones and scientific tapping techniques enhanced productivity and efficiency. Kerala continued to dominate rubber production, accounting for over 90 percent of total output. However, the expansion of cultivation into neighboring states such as Tamil Nadu and Karnataka indicated the beginning of regional diversification (George & Joseph, 2013).³

- *Liberalization and Commercial Growth (1990–2010)*

The economic liberalization of 1991 significantly influenced the rubber sector by increasing industrial demand, particularly from the automobile industry. The tyre sector emerged as a major consumer of natural rubber, driving expansion in both production and cultivated area.

By the early 2010s, India's rubber production exceeded 800,000 tonnes, reflecting the cumulative effects of policy support, technological advancement, and market demand (Rubber Board of India, 2022).⁴ The participation of small sector accounting for a major share of consumption (India Brand Equity Foundation, 2024).⁵ farmers increased substantially, making the sector more inclusive and economically significant.

- *Regional Diversification and Recent Trends (2010–2024)*

In recent years, rubber cultivation has expanded beyond traditional regions into Northeast India, including states such as Tripura, Assam, and Meghalaya. This shift has been supported by targeted government initiatives and favorable agro-climatic conditions.

Regional diversification has reduced dependence on Kerala and contributed to balanced economic development. However, production has shown fluctuations since 2013 due to global price volatility and competition from synthetic rubber (India Brand Equity Foundation, 2024).⁵

III. DETERMINANTS OF GROWTH

A. Government Policies and Institutional Support

Government intervention, particularly through the Rubber Board of India, has been a key driver of growth. Subsidies, research initiatives, and extension services have facilitated expansion and productivity improvements (Rubber Board of India, 2022).⁴

B. Technological Advancements

Technological innovation, including the development of high-yielding varieties and improved tapping techniques, has significantly enhanced productivity (Joseph, 2018).¹

C. Regional Diversification

The expansion into Northeast India has increased production capacity and reduced regional concentration (Ministry of Commerce & Industry, 2023).⁶

D. Socio-Economic Impact

Rubber farming has had a significant impact on rural livelihoods and economic development. It has generated employment, increased income levels, and contributed to poverty reduction.



In Kerala, rubber cultivation has played a central role in improving living standards, while in Northeast India, it has supported regional development and economic integration. The sector also contributes to downstream industries, particularly tyre manufacturing, thereby strengthening industrial linkages.

IV. CHALLENGES AND CONSTRAINTS

Despite the significant growth of rubber farming in India since 1950, the sector continues to face a number of structural, economic, and environmental challenges that constrain its long-term sustainability and competitiveness.

A. Price Volatility and Market Uncertainty

One of the most critical challenges facing rubber farmers is the high degree of price volatility in both domestic and international markets. Natural rubber prices are largely influenced by global supply-demand dynamics, crude oil prices (which affect synthetic rubber), and international trade policies. Fluctuations in prices create uncertainty for farmers, often discouraging investment in new plantations and maintenance of existing ones. Periods of prolonged low prices have been associated with reduced tapping intensity and even abandonment of plantations in some regions (India Brand Equity Foundation, 2024).¹

B. Competition from Synthetic Rubber

The increasing use of synthetic rubber poses a significant threat to the natural rubber industry. Synthetic rubber, derived from petrochemicals, is often cheaper and offers greater uniformity in quality. With advancements in technology, synthetic substitutes have become more competitive, particularly in industrial applications. This has led to a gradual shift in consumption patterns, thereby reducing the relative demand for natural rubber and affecting price stability (Ministry of Commerce and Industry, 2023).²

C. Climate Change and Environmental Stress

Rubber cultivation is highly sensitive to climatic conditions, particularly temperature, rainfall, and humidity. Climate change has introduced increased variability in weather patterns, including irregular rainfall, prolonged dry spells, and extreme weather events. These changes adversely affect latex yield, tree health, and tapping cycles. Traditional rubber-growing regions such as Kerala are increasingly experiencing productivity decline due to climatic stress and environmental degradation (Rubber Board of India, 2022).³

D. Long Gestation Period

Rubber cultivation involves a long gestation period of approximately 6–8 years before trees become economically productive. This characteristic poses a major barrier for small and marginal farmers, who may lack the financial capacity to sustain themselves during the non-productive phase. The delayed return on investment reduces the attractiveness of rubber farming compared to other short-duration crops, particularly in regions with limited access to credit and financial support (R. Menon, 2016).⁴

E. Declining Productivity and Aging Plantations

A significant proportion of rubber plantations in India, particularly in Kerala, consist of aging trees with declining productivity. Replanting efforts are often inadequate due to high costs and delayed returns. In addition, limited adoption of modern agricultural practices in certain areas further exacerbates productivity issues. As a result, yield levels in India remain lower compared to some other major rubber-producing countries (K. J. Joseph, 2018).⁵

F. Smallholder Constraints and Fragmentation

The dominance of smallholder farmers, while beneficial for inclusive growth, also presents structural challenges. Small landholdings often limit economies of scale, mechanization, and efficient resource utilization. Additionally, smallholders may have limited access to credit, technology, and market information, which affects their ability to respond to market fluctuations and adopt improved practices (K. T. George & B. Joseph, 2013).⁶

G. Labour Shortage and Rising Costs

Rubber cultivation is labor-intensive, particularly during the tapping process. In recent years, traditional rubber-growing regions have experienced labor shortages due to migration and rising wage rates. This has increased the cost of production and reduced profitability for farmers. The lack of skilled labor for tapping operations further affects yield and efficiency.

H. Inadequate Market Infrastructure

Another important constraint is the lack of efficient market infrastructure, particularly in emerging regions such as Northeast India. Limited access to processing units, storage facilities, and transportation networks increases transaction costs and reduces farmers' ability to obtain fair prices. Strengthening market linkages and infrastructure is essential for improving the competitiveness of the sector.

V. POLICY AND INSTITUTIONAL GAPS

Although government support has been instrumental in promoting rubber cultivation, certain policy gaps remain. Inconsistent implementation of schemes, delays in subsidy disbursement, and inadequate focus on price stabilization mechanisms limit the effectiveness of policy interventions. Moreover, the absence of strong institutional frameworks for risk management exposes farmers to market and environmental uncertainties.

VI. CONCLUSION

The growth of rubber farming in India since 1950 represents a significant transformation in the country's plantation economy. Driven by policy support, technological progress, and industrial demand, the sector has expanded considerably in terms of both area and production.

However, sustaining this growth requires addressing key challenges such as price volatility, productivity constraints, and climate risks. Regional diversification, particularly in Northeast India, offers new opportunities for inclusive development. With appropriate policy interventions, rubber farming can continue to play a vital role in India's economic growth.

Declaration Statement

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