



Agricultural and Livelihood Development of Tribal Communities in Melghat: Challenges and Recommendations

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The present study explores the constraints faced by tribal farmers in the Melghat region of Amravati district, Maharashtra. An exploratory research design was adopted to systematically investigate the challenges impeding agricultural and livelihood development among tribal communities. The study

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was conducted in Dharni taluka, selected purposively for its high concentration of tribal populations. A multi-stage sampling technique was employed, involving the random selection of 12 villages and 120 tribal farmers actively engaged in farming and allied activities. The study identified four major constraints: lack of market intelligence and regulated markets (91.66%), absence of agro-based and rural industries (87.50%), inadequate education systems (81.66%), and limited awareness of developmental schemes (63.33%). Based on these findings, the study proposed actionable suggestions to address these challenges. The top-ranked recommendation was the development of regulated markets to reduce the interference of middlemen (93.33%), followed by enhancing tribal infrastructure, particularly in education and subsidiary occupations (86.66%), establishing employment-focused agro-industries (77.50%), and conducting awareness campaigns about government schemes (65.00%). This research underscores the critical need for targeted interventions to enhance the socio-economic conditions of tribal farmers, emphasizing the role of government support and community-based strategies in fostering sustainable agricultural and livelihood development.

Keywords: Constraints; tribal farmers; market intelligence; socio-economic condition; livelihood.

1. INTRODUCTION

India is home to a diverse array of tribal communities, collectively referred to as Scheduled Tribes (STs), officially recognized under Article 342 of the Indian Constitution. These groups are often considered the autochthonous inhabitants of the country, with the term "Adivasi" (derived from the Sanskrit words *Adi*, meaning "ancient," and *Vasi*, meaning "inhabitant") highlighting their indigenous identity and long-standing association with their ancestral lands (Gandhale, 2021). According to the 2011 Census, the tribal population in India stands at 10.43 crores, constituting 8.6% of the nation's total population. Of these, 89.97% reside in rural areas, with agriculture serving as their primary occupation (Registrar General & Census Commissioner, India, 2011). The Constitution of India has grouped these ethnic communities under the designation "Scheduled Tribes" to focus on their social and economic development. Articles 366(25) and 342 define STs and empower the President of India to specify the communities recognized as such. These groups inhabit diverse geographical terrains, with a significant concentration in Central India and the northeastern states (Govind, 2011). Central India, in particular, accounts for over half of the tribal population, predominantly in Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Gujarat, Jharkhand, and Chhattisgarh (Ministry of Tribal Affairs, Government of India, 2022). In Maharashtra, tribes such as the Bhiils, Gonds, Mahadeo Kolis, Pawras, Thakurs, and Varlis are primarily located in hilly regions like Sahyadri (comprising districts such as Dhule, Nandurbar, Jalgaon, Nashik, and Thane) and forested areas like Gondwana (spanning Chandrapur,

Gadchiroli, Bhandara, Gondia, Nagpur, Amravati, and Yavatmal). These communities rely heavily on natural resources to sustain their livelihoods, with a socio-economic structure distinctly different from non-tribal populations. Their simple, ecologically adaptive technologies and practices enable them to meet basic needs while coexisting harmoniously with their environment (Xaxa, 1999; Mohanty et al., 2013).

Despite their cultural richness and ecological harmony, tribal communities face numerous challenges, including socio-economic marginalization, limited access to modern technology, and infrastructural deficits. Melghat, a tribal-dominated region in Maharashtra, exemplifies these issues (Jannat et al., 2021; Meher, 2009). This study aims to explore the constraints faced by tribal farmers in Melghat while identifying strategic opportunities for sustainable development. Through an analysis of their agricultural practices, socio-economic dynamics, and ecological interactions, the research seeks to propose actionable insights to alleviate their hardships and enhance their quality of life.

2. MATERIALS AND METHODS

The research design for the present study was structured as an exploratory research design to systematically investigate the constraints faced by tribal farmers in the Melghat region. This design was chosen to ensure the study's validity, reliability, and meaningful outcomes by providing a comprehensive framework for data collection, analysis, and interpretation. The study was conducted in the Melghat region of Amravati district, Maharashtra purposively as it is known

for its substantial tribal population and its dependence on agriculture and allied activities for livelihood. Amravati district comprises fourteen talukas, among which Dharni taluka was purposively selected due to its high concentration of rural tribal populations. A multi-stage sampling technique was adopted for the selection of respondents. In the first stage, Dharni taluka was purposively chosen. In the second stage, twelve villages were randomly selected within Dharni taluka based on the criterion of having the highest tribal population. From each selected village, ten tribal farmers who were actively engaged in farming and allied activities were randomly chosen, making the total sample size 120 respondents. The list of tribal farmers was obtained from the local Talathi (village revenue officer) of the respective areas. The primary data were collected through structured interviews using a pre-tested interview schedule. The interview schedule was developed based on the objectives of the study, ensuring its relevance and clarity. The data collection process involved direct interaction with the respondents to capture their perspectives, challenges, and opportunities related to farming and allied activities. The collected data were systematically coded and analyzed using descriptive statistics and inferential techniques. This approach enabled the identification of key constraints faced by the tribal farmers and the exploration of strategic opportunities for improving their agricultural practices and livelihoods (Girase *et al.*, 2004). The study identified and ranked the primary constraints faced by tribal farmers in the Melghat region based on their frequency and percentage of occurrence.

3. RESULTS AND DISCUSSION

3.1 Constraints Faced by Tribal Farmers Regarding Farming

These findings highlight critical areas requiring intervention to improve the livelihoods of tribal farmers. The detailed results are presented in Table 1.

3.2 Situational Constraints

Lack of market intelligence, interference from middlemen, and lack of regulated market (91.66%) ranked highest was the most significant situational constraint faced by tribal farmers in Melghat which aligns with the findings of Rajan *et al.*, 2014.. The lack of access to accurate and timely market information prevents farmers from

understanding demand, supply, and pricing dynamics. Middlemen exploit this gap, reducing the bargaining power of farmers and depriving them of fair prices. The absence of regulated markets exacerbates the problem, leaving tribal farmers dependent on informal and exploitative systems. Farmers are trapped in low-profit cycles, limiting their ability to invest in improved agricultural practices or diversify their income sources. The lack of regulated markets stifles the potential for organized trade, further restricting access to broader and more profitable markets.

3.3 Technical Constraints

Lack of Agro-Based and Rural Industries for Income Generation and Employment (87.50%) was the most critical technical constraint faced by tribal farmers. Agro-based and rural industries, such as food processing units or handicraft centers, are vital for creating income and employment opportunities for tribal farmers. Their absence leads to over-reliance on subsistence farming, leaving communities vulnerable to economic shocks and seasonal variability. Without value addition industries, tribal farmers cannot maximize returns from their produce and also the lack of alternative income sources pushes families toward poverty, migration, and underemployment.

3.4 Extension Constraints

Lack of Awareness About Various Developmental Schemes and Benefits of Government (63.33%) was the main challenge from extension point of view. Tribal communities often remain unaware of the numerous welfare schemes and programs designed for their development. This lack of awareness prevents them from availing subsidies, loans, training programs, and other benefits that could significantly enhance their agricultural and livelihood outcomes. Thereby the potential impact of government initiatives is underutilized, limiting their efficacy in addressing tribal needs.

The above findings were in accordance with Sarika Khot (2011) studied impact of ecotourism under Gullar Ghat project on livelihood of the people and stated that the respondents faced lack of transportation facilities, lack of guidance and proper training about biodiversity conservation, lack of encouragement from society and Government in the ecotourism program.

Table 1. Distribution of respondents according to constraints faced by the farmers regarding farming

Sr. No.	Constraints	Frequency	Percentage	Rank	
1.	Situational Constraints	Lack of storage facilities	65	54.16	IV
		Lack of market intelligence, interference from middlemen and lack of regulated market	110	91.66	I
		Lack of irrigation facilities	88	73.33	III
		Not having proper education system	98	81.66	II
2.	Technical Constraints	Lack of opportunity to participate in different extension activities	75	62.50	II
		Lack of agro based and rural industries for the income generation and employment to tribal farmers	105	87.50	I
3.	Extension Constraints	Lack of awareness about various developmental schemes and benefits of government	76	63.33	I
		Limited contacts with the officials of development departments scientists/ extensionists	72	60.00	II
		Lack of time and mobility to meet scientists and extensionists	40	33.33	III

Table 2. Suggestions of respondents according to constraints faced by the farmers

Sr.no	Suggestions	Frequency	Percentage	Rank
1	Government should focus on enhancing the tribal infrastructure, especially in the domains of education, subsidiary occupation.	104	86.66	II
2	Efforts should be made by government agencies to set up employment based agro industries.	93	77.50	III
3	On campaign mode awareness should be given on different schemes and benefits of government	78	65.00	IV
4	Development of regulated market to reduce the interference of middlemen	112	93.33	I

Based on the responses from the tribal farmers in the Melghat region, several actionable suggestions were identified and ranked. These suggestions provide insights into potential strategies for improving the socio-economic conditions of tribal farmers. The findings are summarized in Table 2.

Development of regulated markets ranked as the top priority (93.33%), respondents emphasized the need for regulated markets to minimize the role of middlemen, ensure fair pricing, and create a more transparent marketing ecosystem for tribal farmers. It is imperative to establish robust market linkages and enhance the accessibility of regulated markets for tribal farmers. Introducing market intelligence systems, such as mobile-based applications providing real-time price updates and demand forecasts, can empower farmers with the knowledge needed to make informed decisions. Strengthening cooperative marketing structures and promoting farmer producer organizations (FPOs) can help reduce the role of intermediaries, enabling farmers to collectively bargain for better prices and access larger markets. Additionally, expanding the reach of government-regulated markets and integrating them with digital trading platforms like e-NAM (National Agriculture Market) can provide a transparent and inclusive marketing environment, ensuring fair pricing and improved profitability for tribal farmers.

Enhancing infrastructure in education and creating opportunities for subsidiary occupations was suggested by 86.66 per cent of respondents. Better infrastructure could support skill development, education, and diversification of income sources. The setup of employment-based agro-industries was suggested by 77.50 percent of respondents. This would provide employment opportunities, promote value addition to agricultural produce, and stimulate economic growth in the region. About 65 per cent of the respondents suggested launching awareness campaigns on a mission mode to educate tribal farmers about various government schemes and benefits, enabling them to access available resources effectively. These suggestions provide a roadmap for addressing the challenges faced by tribal farmers. Prioritizing these recommendations could significantly improve their livelihoods and promote sustainable development in the Melghat region.

4. CONCLUSION

The study highlighted critical constraints and actionable suggestions for addressing the

challenges faced by tribal farmers in the Melghat region. The findings underscore the pressing need for systemic and targeted interventions to improve the socio-economic conditions of tribal farmers. The lack of market intelligence and regulated markets emerged as the most critical constraint followed by absence of agro-based and rural industries. Establish regulated markets with transparent pricing mechanisms to empower tribal farmers and reduce dependency on middlemen, facilitate the establishment of small-scale agro-industries, particularly in high tribal-density regions, to create employment and diversify income sources and launch focused awareness campaigns on government schemes and benefits through community outreach, workshops, and local media are the key policy recommendations which should be implemented in a collaborative and sustained manner to address the identified constraints and unlock the potential of tribal farming communities, paving the way for inclusive development in the Melghat region and beyond.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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