International Journal of Tropical Agriculture
Volume 43, Numbers (3-4) • 2025 : pp. 237-239
ISSN: 0254-8755

Economic Viability and Marketing Constraints of Mushroom Cultivation among Small-Scale Farmers in Chandrapur District, Maharashtra

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Abstract: The study investigates the economic viability and marketing constraints of mushroom cultivation among small-scale farmers in Chandrapur district, Maharashtra. Primary data were collected from 60 growers in four talukas—Chandrapur, Warora, Bhadravati, and Mul—through structured interviews. The analysis covered cost of cultivation, profitability, and marketing barriers. The results revealed that the average total cost for producing 100 kg of oyster mushrooms was ₹7,850, with a gross return of ₹13,200 and a net return of ₹5,350. The calculated Benefit–Cost Ratio (BCR) of 1.68 confirms the enterprise's economic feasibility. Major constraints included lack of cold storage (76.6%), price instability (71.6%), absence of organized markets (68.3%), and limited buyer awareness (61.6%). Despite these challenges, mushroom cultivation remains a profitable enterprise with strong potential for rural income generation. The study recommends cooperative marketing systems, improved post-harvest infrastructure, and targeted extension services to strengthen the mushroom value chain in Chandrapur district.

Keywords: Mushroom cultivation, economic analysis, marketing constraints, Chandrapur district, small-scale farmers, benefit–cost ratio.

1. INTRODUCTION

Mushroom cultivation has become a promising agro-based enterprise that enhances rural employment, ensures nutritional security, and promotes sustainable resource use. Maharashtra's Vidarbha region, characterized by moderate humidity and temperature, offers ideal conditions for oyster mushroom (*Pleurotus* spp.) production. In Chandrapur district, small-scale mushroom enterprises are emerging as supplementary income sources, particularly for women and marginal farmers. Despite these opportunities, mushroom growers encounter various production and marketing challenges that affect profitability and scalability. Hence, this study was undertaken to:

Evaluate the cost and returns from mushroom cultivation; and

Identify the major marketing constraints faced by small-scale mushroom farmers in Chandrapur district.

2. MATERIALS AND METHODS

2.1 Study Area and Sampling Design

The study was conducted in four talukas of Chandrapur district—Chandrapur, Warora, Bhadravati, and Mul. A purposive sampling

Article History: Received: 10 August 2025; Revised: 06 September 2025; Accepted: 13 September 2025; Published: 30 November 2025

method was adopted, and 60 mushroom growers (15 per taluka) were selected based on their involvement in oyster mushroom production.

2.2. Data Collection

Primary data were collected through pre-tested questionnaires covering socio-economic characteristics, input–output data, and marketing aspects. Secondary data were sourced from KVK Chandrapur, the Department of Agriculture, and published literature.

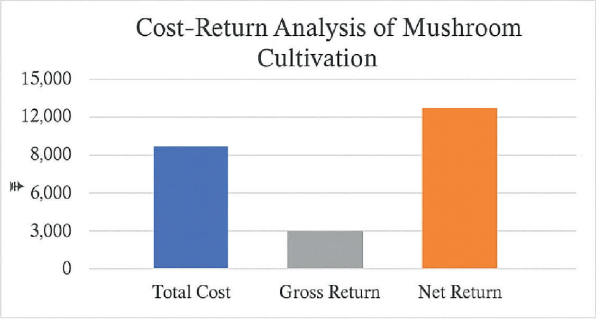
2.3. Analytical Tools

- **Cost analysis:** Computed under cost concepts A_1 (variable cost), B (including fixed cost), and C (including family labour).
- **Profitability analysis:** Net return = Gross return – Total cost; BCR = Gross return / Total cost.
- **Constraint ranking:** Garrett's ranking technique was employed to identify and prioritize key marketing problems.

3. RESULTS AND DISCUSSION

3.1. Cost Structure and Returns

Cost Component	*Average Cost (₹/100 kg)*	*% of Total Cost*
Spawn and substrate	2,350	29.9
Labour (family + hired)	1,800	22.9
Bags and equipment	1,200	15.3
Water, electricity, miscellaneous	900	11.5
Rent/depreciation	600	7.6
Marketing and transport	1,000	12.8
Total Cost (Cost C)	**7,850**	100



The gross return averaged ₹13,200 per 100 kg, yielding a **net return of ₹5,350** and a **BCR of 1.68**, confirming profitability. These results are consistent with Kumare et al. (2024), who reported similar BCR values (1.6–1.9) for mushroom growers in Vidarbha.

3.2. Marketing Channels

Three marketing channels were identified:

1. **Producer → Consumer (Direct sale)** – 42%
2. **Producer → Retailer → Consumer** – 38%
3. **Producer → Wholesaler → Retailer → Consumer** – 20%

Direct selling through local hats and Chandrapur city markets remains most common, though it limits scalability due to perishability and limited cold storage.

3.3. Major Marketing Constraints (Garrett Ranking Results)

Constraint	*Garrett Score*	*Rank*
Lack of cold storage and preservation facilities	74.8	I
Price fluctuation and low bargaining power	71.6	II
Absence of organized marketing channels	68.3	III
Inadequate transport facilities	63.7	IV
Limited consumer awareness	61.6	V
Insufficient technical guidance	58.2	VI

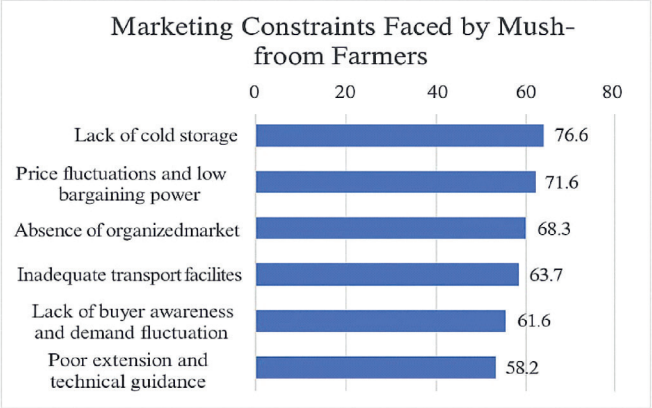


Fig: Marketing constraint face by mushroom cultivation by small scale farmer in chandrapur district of Maharashtra

The absence of infrastructure and organized markets emerged as critical barriers. Addressing these issues through cooperative approaches and institutional support is crucial for sustainable growth.

4. CONCLUSION AND POLICY IMPLICATIONS

The study concludes that mushroom cultivation in Chandrapur district is **economically viable** and **financially rewarding**, with a BCR of 1.68. However, the enterprise faces significant marketing and infrastructural constraints.

Policy recommendations include

- Establishing **cooperative marketing societies** and collection centers.
- Developing **cold storage and processing facilities** through PPP or district schemes.
- Enhancing **KVK-led training** for scientific cultivation, preservation, and branding.
- Encouraging **value addition and contract marketing** with urban retailers.
- By integrating these measures, mushroom farming could become a sustainable livelihood option in rural Chandrapur.

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