



# **Problems and Suggestions under Extent of Adoption of Recommended Mushroom Production Technology by Mushroom Growers of Jabalpur District (M. P.), India**

**Kanta Kumar Sahu <sup>a++\*</sup>, Anushka Khare <sup>a++</sup>,  
Devanshu Dixit <sup>a++</sup> and Jitendra Chandravanshi <sup>b#</sup>**

<sup>a</sup> Department of Agricultural Extension, MGCGV, Chitrakoot, Satna, MP, India.

<sup>b</sup> College of Horticulture and Research Station, Saja, Bemetara, CG, India.

## **Authors' contributions**

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

## **Article Information**

DOI:10.9734/IJECC/2023/v13i113422

## **Open Peer Review History:**

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/107772>

**Original Research Article**

**Received: 25/08/2023**

**Accepted: 01/11/2023**

**Published: 09/11/2023**

## **ABSTRACT**

Mushroom production technology offers a promising avenue for income generation and sustainable agriculture. However, the extent of adoption of recommended mushroom production technology by mushroom growers in Jabalpur District, Madhya Pradesh, remains a matter of concern. This study aimed to identify the key problems hindering the widespread adoption of recommended practices and propose suitable suggestions to overcome these challenges. The researches involved conducting surveys and interviews with mushroom growers in Jabalpur District to assess their

<sup>++</sup>Ph. D Scholar;

<sup>#</sup>Guest Teacher;

<sup>\*</sup>Corresponding author: E-mail: [kantasahu7771@gmail.com](mailto:kantasahu7771@gmail.com);

current practices and level of technology adoption. The study revealed several critical issues, including limited awareness and knowledge about modern mushroom cultivation techniques, inadequate access to training and extension services, and the lack of financial resources for adopting advanced technologies. Additionally, the absence of supportive policies and market linkages posed significant barriers for mushroom growers. To address these challenges, several practical recommendations were put forth. First, targeted awareness campaigns and training programs should be organized to educate mushroom growers about the benefits of adopting recommended practices. Secondly, government agencies and agricultural institutions should enhance extension services and provide hands-on technical support to mushroom growers. Moreover, financial institutions should introduce specific loan schemes and subsidies to facilitate the adoption of modern technologies. Strengthening market linkages through farmer-producer organizations and value-chain development initiatives will enable mushroom growers to access better markets and improve their income prospects. Overall, this study sheds light on the obstacles faced by mushroom growers in Jabalpur District concerning the adoption of recommended mushroom production technology. The suggested interventions offer practical solutions to enhance technology uptake and promote sustainable mushroom cultivation practices. Implementing these recommendations can potentially lead to increased productivity, income diversification, and improved livelihoods for mushroom growers in the region.

*Keywords: Mushroom; mushroom growers; farmers; problems; suggestion.*

## 1. INTRODUCTION

Agriculture is a critical pillar of the Indian economy, contributing approximately 17% to the total GDP. Despite farmers' hard work to maximize production with limited resources, their income remains relatively low. During the Kharif season, after sowing the main crop, farmers have the opportunity to utilize their time and resources for additional income and employment opportunities. One such avenue is mushroom production, where waste materials from wheat and rice can be utilized to generate extra income.

The ICAR- Directorate of Mushroom Research, Solan, has been actively supporting start-ups in the mushroom industry by transferring technology and providing various training programs and technology demonstrations. The high-yielding varieties and farmer-friendly technologies developed by this institute have played a significant role in driving the growth of the mushroom industry in India. Currently, India has a total mushroom cultivation area of 1.98 lakh hectares, producing about 4.87 lakh tonnes of mushrooms annually. While this is substantial growth, it still lags behind China, which produces 330 lakh tonnes of mushrooms each year.

Encouraging mushroom production holds several advantages for India. Mushroom cultivation is an indoor activity, making it suitable for small farmers and landless laborers as it doesn't require agricultural land [1-3]. Additionally, numerous agricultural wastes can be utilized to produce high-quality food and organic manure for

field crops. With over 700 million tonnes of agri-residues in India, which are underutilized commercially, there is immense potential for mushroom production to utilize these waste materials on a larger scale. By utilizing just 1-2% of agri-residues, India can produce approximately 15-20 lakh tonnes of protein-rich mushrooms, which can help combat malnutrition while providing livelihood opportunities in rural areas [4-7].

Furthermore, mushroom cultivation requires relatively low land and water compared to other field and horticultural crops. This makes it a sustainable and efficient way to generate self-employment and income. As the mushroom industry continues to grow, it presents a unique agricultural activity suited to the country's needs and offers various benefits in terms of nutrition, livelihood, and environmental sustainability.

## 2. MATERIALS AND METHODS

The study was conducted in Jabalpur district of Madhya Pradesh. Jabalpur is a district of Madhya Pradesh state in central India. Jabalpur district comprised of seven blocks, viz; Jabalpur, Majholi, Panagar, Shahpura, Sihora, Kundam and Patan. Out of 7 blocks, Jabalpur, Panagar and Patan blocks were selected purposively as these blocks were maximum number of mushroom growers. From each selected blocks, 60 per cent respondents were selected by proportionate random sampling technique. Thus samples of 120 mushroom growers were prepared from Jabalpur, Patan and Panagar blocks.

### 3. RESULTS AND DISCUSSION

#### 3.1 Problems Faced by the Farmers

Common Problems that farmer's are facing are discussed below

#### 3.2 Suggestions Offered by the Respondents

##### 3.2.1 Problems faced by the mushroom growers in achieving desired profit and suggestions to overcome them

Desired profit can be achieved only when farmers problems get solved.

#### 3.3 Problem Faced by the Farmers

The highest percentage of respondents (78.33%) opined that lack of proper marketing channels was the most important problems which they face. Problem of untimely availability of spawn(74.17 %) followed by people possess indifferent attitude towards mushroom (72.50%), perishable nature of mushroom (71.67%), no storage facilities (69.17%) and less knowledge about post-harvest handling (67.50%) were the other main problems. Other problems which they face were spawn production is highly scientific and require more investment (66.67%), less training duration (65.83%), no marketing of mushroom in local markets (65.00%) and non-availability of quality spawns and substrates

(63.33%). Few of them faces the lack of government scheme for mushroom production(61.67%) and lack of technical guidance (59.17%).

The findings are in linewith the study of Arora [8], Roopa et al. (2016), Shiruret al. (2017), Karthick and Hamsalakshmi (2017) and Shipra et al. (2018).

#### 3.4 Suggestions Given by the Mushroom Growers

Majority of the respondents (80.00%) suggested to arrange or provide proper marketing channel. The other suggestions were spawn should be available easily and timely (75.83%) followed by awareness among the people may be created for its use and importance through demonstration, training etc. (74.17%), provide cold chain facility to avoid post-harvest losses (71.67%), more focus on post-harvest technology i.e. grading, picking, canning etc. (69.17%), lack of support for mushroom enterprises for government side (65.83%), increase the duration of practical training (64.17%), availability of good quality of spawn and substrates (63.33%). About 61.67 per cent of the respondents opined that government must provide marketing facilities at village level for selling mushroom and lastly 57.50 per cent of the respondents suggested that create the government schemes and provide subsidies for mushroom cultivation [9].

**Table 1. Distribution of respondents according to problems faced by them (N=120)**

Sr. No.	Problems	Frequency	Percentage (%)	Rank
1	Non availability of quality spawns and substrates	76	63.33	X
2	Lack of proper marketing channel	94	78.33	I
3	No storage facility	83	69.17	V
4	Less training duration	79	65.83	VIII
5	People possess indifferent attitude towards mushroom	87	72.50	III
6	Spawn production is highly scientific and require more investment	80	66.67	VII
7	Untimely availability of spawn	89	74.17	II
8	Less knowledge about Post-harvest handling	81	67.50	VI
9	Perishable nature of mushroom	86	71.67	IV
10	No marketing of mushroom in local market	78	65.00	IX
11	Lack of technical guidance	71	59.17	XII
12	Lack of government scheme for mushroom production	74	61.67	XI

**Table 2. Distribution of respondents according to suggestions offered by them**

(N=120)				
Sr. No.	Suggestions	Frequency	Percentage(%)	Rank
1	Availability of good quality of spawn and substrates	76	63.33	VIII
2	Government must provide marketing facilities at village level for selling mushroom	74	61.67	IX
3	Provide proper marketing channel	96	80.00	I
4	Increase the duration of practical training	77	64.17	VII
5	Awareness among the people may be created for its use and importance through demonstration, training etc.	89	74.17	III
6	Spawn should be available easily and timely	91	75.83	II
7	Provide cold chain facility to avoid post-harvest losses	86	71.67	IV
8	Create the government schemes and provide subsidies for mushroom cultivation	69	57.50	X
9	More focus on post-harvest technology i.e. grading, picking, canning etc.	83	69.17	V
10	Lack of support for mushroom enterprises for government side	79	65.83	VI

The findings are in line with the study of Shiruret al. [10]; Karthick and Hamsalakshmi (2017), Dalmia and Kumar (2018), Kumari et al. [11]; Ranjitha et al. (2018) and Shipra et al. (2018).

#### 4. CONCLUSION

The highest percentage of respondents opined that lack of proper marketing channels was the most important problems which they face followed by problem of untimely availability of spawn, people possess indifferent attitude towards mushroom, perishable nature of mushroom, no storage facilities, less knowledge about post-harvest handling, spawn production is highly scientific and require more investment, less training duration, no marketing of mushroom in local market, non-availability of quality spawns and substrates, lack of government scheme for mushroom production and lack of technical guidance.

Majority of the respondents suggested to arrange or provide proper marketing channel. The other suggestions were spawn should be available easily and timely followed by awareness among the people may be created for its use and importance through demonstration, training etc., provide cold chain facility to avoid post-harvest losses, more focus on post-harvest technology i.e. grading, picking, canning etc., lack of support for mushroom enterprises for government side, increase the duration of practical training, availability of good quality of spawn and substrates, government must provide marketing

facilities at village level for selling mushroom and create the government schemes and provide subsidies for mushroom cultivation.

#### 4.1 Suggestions for Further Work

The area of research could be extended further and sufficiently large number of samples should be studied to draw more valid conclusion.

In the study, the dependent and independent variables were limited and therefore, further studies may be taken up based on situation and infrastructural variables.

In this study, the recommended mushroom production technologies were limited. In future, research may be broadening the scope of the study by including different and more number of scientific practices.

More intensive statistical techniques should be used for improving contribution of different variables which might be given more strength to study.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

#### REFERENCES

- Gautam AK, Singh P, Mishra D, Kumar A, Singh AP. Constraints in adoption of mushroom production enterprise, Indian J. Exten. Edu. 2014;50(1&2): 39-41

2. Hanjabam S. Analysis of the profile characteristics and attitude of the farmers, extent of and constraints in taking up precision farming in Kerala. International Journal of humanities and social science 2014;1(2):258-289.
3. Naik YG. A study of mushroom growers with reference to extent of adoption and constraints in mushroom production. M.Sc. (Agriculture) Thesis (unpublished), Mahatma Phule Krishi Vidyapeeth, Rahuri (MH); 2004.
4. Nasib S, Mehta S, Godara AK, Yadav VP. Constraints in mushroom production technology in Hariyana Agricultural Science Digest. 2008;28(2):118-120.
5. Patnaik T, Mishra S. Constraints in adoption of mushroom cultivation technology, Asion. J. Home. Science. 2008;3(1):86-89.
6. Sharma P, Masoodi Z, Manzal B, Sharma S. Adoption of recommended mushroom production technology by the farmers in Jammu regions. Journal of Pharmacognosy and Phytochemistry. 2018;7(2):3411-3413.
7. Majumder D, Das PK, Robin G. Adoption of recommended mushroom production technology and strategies for developing mushroom industry in Assam. Mushroom Research. 2009;18(2): 83-90.
8. Arora RK. 2015. Impact of vocational training programmes on "mushroom cultivation for self employment" in district ambla, haryana, india. International journal of recent advances in multidisciplinary research. 2(1): 0171-0173.
9. Jaiswal M and singh A. 2018 international conference on food security and sustainable agriculture. Journal of pharmacognosy and phytochemistry. 2018;SP4:395-400.
10. Shirur M, Shivalingegowda NS, Chandergowda MJ, Rana RK. Technological adoption and constraints analysis of mushroom entrepreneurship in Karnataka. Economic affairs. 2016; 61(3):427-436.
11. Kumari AR, Singh DP, Singh A, Laxmikant and Kumari M. Adoption level and constraints in scientific mushroom cultivation among rural women. International Journal of Current Microbiology and Applied Sciences. 2018;7:1280-1287.

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