

## **ISSUES AND OPPORTUNITIES IN SPREAD OF MUSHROOM ENTERPRISE IN ODISHA**

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### **ABSTRACT**

In Odisha, mushroom production is widely spread in all 30 districts producing 8000 MT of straw mushroom per annum. In the state, paddy straw mushroom is more popular both with respect to consumer preference and production volume. Along with production of straw mushroom during hot and wet months, oyster is produced during winter months. Button mushroom is produced under controlled condition at a very limited scale. The initial spread of the enterprise was fast, mostly among the small, marginal, landless, women farmers and unemployed youths. The reason for fast spread of the enterprise could be attributed to certain advantages like better taste, short production period, easy and simple cultivation method, higher profitability and potentiality of the enterprise to provide gainful employment. In spite of many accelerating bio physical and socio economic factors to support spread of this enterprise, the growth and stability has remained limited during recent years. In order to ascertain the growth limiting factors and opportunities, a study was undertaken in the state of Odisha covering 300 mushroom growers spread in three districts namely Bhadrak, Dhenkanal and Puri. The major issues identified during the study were comparatively poor resource base of the farmers to take it up at commercial scale, lack of specific project or programme to promote the enterprise, lack of ownership of line departments in spread of the technology, unmatched support of banking and insurance institutions, reducing yield potential of spawn, non availability of quality spawn in desired quantity, high perishability of the produce, lack of cold chain, unstable market price, presence of traders as middlemen in the supply chain in both management of input and produce, yield fluctuations due to climate changes, reducing yield due to continuous cropping, substandard marketing facility and absence of fixed price for mushroom as opined by majority of the respondents. Majority of the respondents (44.77%) perceived limited access to finance as the prime issue closely followed by limited availability of production technology, inadequate schematic support for production and post harvest and Inadequate market support. Apart from socio-personal and marketing issues, lack of proper cataloging of mushroom growers, spawn producers and established input agencies were identified to be the major issues in technology dissemination attempts. In the context of opportunities, abundant availability of substrate found to be the most important reason in continuing mushroom production with mean score of 8.08, followed by growing demand for mushroom, increasing number of agencies and promoters to promote, emerging market channels and diversifying food habit from non-vegetarian to vegetarian were rated better than average and have been perceived to constitute the basket which in future will boost the enterprise. More specifically, the demand for the produce by vegetarians and diabetics being the major source of vegetarian protein, potentiality of the enterprise in creating large scale employment in rural and peri-urban areas, ease of production process, over and above the growing acceptability and inclusion of mushroom in the food habit are certain opportunities for the enterprise in the days to come. Government strategies and future programmes will be the catalytic factors in enhancing the enterprise in the state.

**Keywords:** mushroom, technology, constraints, issues

### **INTRODUCTION**

Mushroom farming is popular in coastal states like Odisha, Andhra Pradesh, Tamil Nadu and West Bengal because of congenial agro climatic factors and natural demand for mushroom being a part of the food habit of people. In Odisha, mushroom cultivation is an important agro-based enterprise for the farming community. The agro-climatic conditions of Odisha are conducive for production of paddy straw during March-October, oyster mushroom from November-February, milky mushroom from March-October and button mushroom during winter seasons. Among these varieties, paddy straw mushroom is widely accepted among the farming community because of its excellent taste and flavour, simple and easy production technology, abundance of raw material, shorter crop duration (15 days), higher profitability and potentiality of

the enterprise to provide gainful employment to small, marginal, landless farmers, farm women and unemployed youth. This enterprise is less dependant on land and has the ability to grow on a variety of residual agricultural waste and is a potential food source to fight malnutrition as well as in enhancing farm household income. The total annual mushroom production of Odisha is 12,333.20 MT (CTMRT-2013) out of which 98% is consumed as fresh and a very little portion is processed. Apart from research and promotion of activities by CTMRT, Bhubaneswar, efforts have been made by all the Krishi Vigyan Kendras, private spawn producers, line departments, ATMAAs, NGOs and some farmers to promote the enterprise in a larger scale.

Despite of the favourable agro ecological conditions, support by several institutions and agencies, mushroom farming is not spreading at a pace matching the market demand. There are certain inherent problems or bottlenecks, which limit the growth of the enterprise in the state. The present study was undertaken in the state of Odisha to identify the issues and opportunities in spread of mushroom enterprise.

## MATERIALS AND METHODS

The study was undertaken in three districts namely Bhadrak, Dhenkanal and Puri of Odisha state of India. A stratified multistage sampling procedure was followed to select the samples for the study. Personal interview using interview schedule and focused group discussion techniques were used for collection of information.

## RESULTS AND DISCUSSION

### Socio-personal characteristics

The study was undertaken by involving the mushroom growers in the study area. Even though all the respondents were involved in the enterprise, they vary with respect to socio economic parameters as indicated in table below.

Age distribution of the respondents presented in Table 1 indicate that, majority of the respondents (53.33%) belong to the age group upto 35 years considered to be young age whereas 40% belong to middle age group (36 to 50 years) and rest 6.67% belong to old age group ( more than 50). Majority of the respondents (85.67%) were male and 15.67% were female. Even though mostly the female farmers take care of household activities and contribute to a larger extent in managing the day to day activities of the farm, male as the head of the family were more prominent in decision making activities and considered to be better in adopting mushroom enterprise than female. The education level of the respondents as observed from table above, majority of respondents (49.33%) were up to 10<sup>th</sup> class, followed by up to graduation (22.00%), up to 7<sup>th</sup> class (20.33%), can read and write (6.33%), above graduation (1.33%) and illiterate (0.67%). The data indicate that majority of respondents (43.67%) were in the enterprise for more than 6 years, while 37.67% in between 3-5 years and 18.67% for two years only. The figures in table reveal that, 50% of the respondents were in the medium income group generating an average annual income ranging from ₹ 40100/- to ₹ 101527/- exclusively from mushroom enterprise, where as 18.33% of them were in the high income group getting

**Table 1.** Socio economic profile

	Parameter	Percentage
(A)	<b>Age Group</b>	
	Up to 35 years	53.33
	36-50 years	40
	Above 50 years	6.67
(B)	<b>Sex</b>	
	Male	85.67
	Female	15.67
(C)	<b>Level of Education</b>	
	Illiterate	0.67
	Can read and write	6.33
	Up to 7 <sup>th</sup>	20.33
	Up to 10 <sup>th</sup>	49.33
	Up to graduation	22.00
	Above graduation	1.33
(D)	<b>Age of Enterprise</b>	
	Up to 2years	18.67
	3 to 5 years	37.67
	6 years and above	43.67
(E)	<b>Income from the enterprise *</b>	
	High (>101527.06)	18.33
	Medium(40099.6- 101527.06)	50.00
	Low (<40099.6)	31.67

\*Mean- ₹ 70813.33, SD - 30713.73

average annual income of more than ₹ 101527/- and 31.67% were in the low income group generating average annual income of less than ₹ 40100/- from mushroom enterprise.

### Issues in spread of the technology

Spread of the mushroom enterprise has remained limited because of certain issues associated with the spread. The major issues identified during the study were comparatively poor resource base of the farmers to take it up at commercial scale, lack of specific project or programme to promote the enterprise, lack of ownership of line departments in spread of the technology, unmatched support of banking and insurance institutions, reducing yield potential of spawn, non availability of quality spawn in desired quantity, high perishability of the produce, lack of cold chain, unstable market price, presence of traders as middlemen in the supply chain in both management of input and produce, yield fluctuations due to climate changes, reducing yield due to continuous cropping, substandard marketing facility and absence of fixed price for mushroom as opined by majority of the respondents. These issues have been broadly categorized in consultation with selected sample and experts in the field. The responses of the respondents have been analyzed and presented in Table 2.

**Table 2.** Issues in spread of the enterprise (N=300)

Sl. No.	Issues	Frequency	%	+/- than average
1.	Limited applicability of available mushroom production technology	60	20.00	-
2.	Limited availability of production technology	134	44.67	+
3.	Poor availability of inputs	86	28.67	-
4.	Limited access to finance	134	44.77	+
5.	Inadequate market support	114	38.00	+
6.	Inadequate schematic support for production & post harvest	133	44.33	+

The data presented in Table 2 indicate that out of the six identified issues, majority of the respondents (44.77%) perceived limited access to finance as the prime issue closely followed by limited availability of production technology, inadequate schematic support for production and post harvest and Inadequate market support. However, issues like limited applicability of available mushroom production technology and poor availability of inputs were rated as less important issue.

### Opportunities in spread of the enterprise

All these issues which were identified during the field study and depicted in the above table give a definite framework to think about the approaches and solutions for getting rid upon those problems. During the course of investigation responses were also obtained on opportunities for spread of the enterprise and are presented in Table 3.

**Table 3.** Opportunities in spread of the enterprise (N=300)

Sl.No	Opportunities	Mean score	+/- than average
1	Increasing number of agencies and promoters to promote	7.03	+
2	Availability of substrate	8.08	+
3	Growing market demand	7.06	+
4	Diversifying food habit from non-vegetarian to vegetarian	6.52	+
5	Upcoming schematic supports	4.13	-
6	Emerging market channels	6.97	+

MOS = 10, Overall mean score = 6.47

In the above table the mean score analysis of the parameters against which reactions were studied indicate that, abundant availability of substrate found, to be the most important reason in continuing mushroom production with mean score of 8.08, followed by growing demand for mushroom with mean score 7.06, increasing number of agencies and promoters to promote (7.03), emerging market channels (6.97) and diversifying food habit from non-veg. to veg. The respondents gave least importance to up coming schematic support as an opportunity.

Further analysis of the information obtained indicate that opportunities like availability of substrate, growing demand for mushroom, increasing number of agencies and promoters to promote, emerging market channels and diversifying food habit from non-vegetarian to vegetarian (all+) were rated better than average and have been perceived to constitute the basket which in future will boost the enterprise.

## CONCLUSION

From the initial years of introduction when mushroom was accepted as a backyard activity by the resource poor farm families, it has now being recognized as a potential commercial activity in rural areas of the state of Odisha. However, the potentiality shown in productivity, profitability and market demand has not been exploited fully. On one hand the enterprise has spread like anything, on the other hand farmers do express reservation to proceed further. Even if with so many supporting factors for accelerating the spread of the enterprise, some of the constraints faced by the farmers limit expansion to the full potential level. The issues like limited access to finance, availability of production technology, inadequate schematic support for production and post harvest, and inadequate market support need to be addressed and lot more support will be required from public as well as private sector to address and overcome these issues. At the same time the study has revealed important opportunities like abundant availability of substrate, growing demand for mushroom, increasing number of agencies and promoters to promote the enterprise, emerging market channels and diversifying food habit from non-vegetarian to vegetarian, which can be strategically exploited to achieve higher spread and stability of the enterprise in the state.

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