



## Prospects of mushroom cultivation in Punjab

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### Abstract

Productivity of rice and wheat, the major crops of the state, is reported to have approached a plateau and farm income is reported to be stagnant. There is need to promote different auxiliary enterprises among farmers. Keeping all these things in view study on prospects of mushroom cultivation in Punjab was conducted. From six clusters, two clusters were selected randomly. From these two clusters 90 farmers were selected randomly for the purpose of this study. An interview schedule was prepared for collection of data. Data were collected personally by the researcher. Majority had adopted mushroom cultivation as main occupation (63%), obtained information from friends. Regarding experience in mushroom cultivation majority of the farmers (43.33 %) had experience of 7-14 years. More than 25 per cent of the respondents were willing to decrease their area under mushroom cultivation and only 3.33 per cent of the respondents had plan to keep area constant under mushroom cultivation

*Keywords: mushroom, production, Prospects, straw, trend*

### Introduction

The green revolution tremendously increased food production, accelerated the pace of modernization and urbanization in the state by strengthening economic base of the rural people. On the other side, green revolution created serious regional imbalances in the production of cereals. There is growing pressure of population on land as the size of the operational land holding is declining. Continued degradation and mis-management of land, soil, water, high cost of production and diminishing economic returns in farming are adversely affecting the farmers in Punjab. Productivity of rice and wheat, the major crops of the state, is reported to have approached a plateau and farm income is reported to be stagnant. Mushroom farming is economically a very much viable enterprise. It can be adopted by small, medium and large investors by investing according to the capacity. Other than high profit, it is a fast earning activity and start giving returns within weeks and months. Besides utilizing agro-(industrial wastes, it does not require arable land and waste-lands may be put into use for mushroom

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farming as such, marginal or even land-less laborers may also take up mushroom farming at a small scale to earn their livelihood and some nutritious food for their families. Mushroom farming is labor-intensive and generates employment. Several activities of this enterprise like spawn-production, processing and marketing can be carried out by women-folk and the farmers may involve their family members to augment income. Thus mushroom farming is highly profitable, sustainable economic activity capable of exerting positive impact on the rural scenario of our country. Mushroom has a huge potential for export due to expanding global market. Punjab occupies just 1.53 per cent of the geographical area of India, yet it produces as much as 31014 tons of mushrooms annually accounting for more than 50 per cent of the national production (Anonymous, 2014). Keeping all these things in view study on prospects of mushroom cultivation in Punjab was conducted.

### Material and Methods

List of trainees who got training in mushroom cultivation during last five years was obtained from the office of Directorate of Extension Education, PAU Ludhiana. From this list, six clusters were

prepared based on the concentration of mushroom trained farmers and from these six clusters, two clusters were selected randomly. From these two clusters, 90 farmers were selected randomly for the purpose of this study.

### Data Collection

The data were collected personally by the researcher by visiting the study area and personally interviewing the respondents.

**Statistical tools used:** The data were analyzed with the help of various statistical tools such as frequencies, percentages and cumulative frequency cube root method.

### Results and Discussion

The results of the study have been discussed under the following headings.

#### Education

The data given in Table 1 showed that more than 35 per cent of the respondents had education up to matric, 27.78 per cent up to middle, while 13.34 per cent of them were graduates. It was further found that 12.23 per cent were educated up to primary level and 10.00 per cent of the respondents were illiterate. Overall education level of the respondents was below matric. These findings are in line with those of Kher (1991), Kadam Borse (1993) and Sharma (1996).

#### Operational Land holding

Operational land holding of the respondents was categorized into three categories. The study findings revealed that respondents' operational land holding ranged from 1 to 10 acres. As many as 64.44 per cent of the respondents were operating on 5-10 acres of land, 24.45 per cent of them were operating on 1-5 acres of land, whereas 11.11 per cent of the respondents were operating on above 10 acres of land. Similar findings have been reported by Lanjewar and Rathore (2007).

#### Family type

Data presented in Table 1 further indicate that majority (67.78 %) of the respondent's belonged to nuclear families while 32.22 per cent of the respondents belonged to joint families. Similar

findings have been reported by Singh (1989) and Suraj (1996).

#### Family Size

The figures presented in Table 1 showed that more than 52 per cent of the respondents had family size up to five members while 47.78 per cent of the member had above five members of family.

#### Occupation

Data in Table 1 further revealed that more than 63 per cent of the respondents adopted mushroom cultivation as a main occupation whereas 36.67 per cent of the respondents adopted mushroom cultivation as a subsidiary occupation.

#### Sources of information

The information pertaining to farmers' source of information regarding mushroom cultivation has been given in Table 1. The figures in Table 1 revealed that 47.78 per cent of the respondents had come to know about mushroom cultivation from friends, followed by PAU scientists (33.33%) and relatives (15.55%). However, for 3.33 per cent of the respondents, newspaper was the first source of information regarding mushroom cultivation. These results are similar to the findings of Singh and Parshad (1990).

#### Total production in a year

The total production of mushroom cultivation was categorized into three categories viz. Low, medium and high. Majority (46.67 %) of the respondents had medium level of production i.e. 100-350 qts/acre whereas 41.11 per cent of the member had low (up to 100 qts/acre) level production of mushroom while 12.22 per cent of the respondents had high level of mushroom production (above 350 qts/acre).

#### Annual income of mushroom growers

The annual income of mushroom growers was categorized into low, medium and high. Majority (62.22 %) of the respondents had high annual income (Rs 4,00,000- 6,00,000) followed by 26.67 per cent of the respondents who had medium annual income (Rs 2,00,000-4,00,000) and 11.11 per cent of them had low annual income which ranged up to (Rs 2,00,000).



**Table 1: Profile of the respondents engaged in mushroom cultivation**

Sr. no.	Socio-personal Characteristics	Category	Frequency	Percentage	
1	Education	Illiterate	9	10.00	
		Primary	11	12.23	
		Middle	25	27.78	
		Matric	33	36.67	
		Graduate	12	13.34	
2	Operational land Holding(acres)	1-5	22	24.45	
		5-10	58	64.44	
		Above 10	10	11.11	
4	Family type	Nuclear	61	67.78	
		Joint	29	32.22	
5	Family size	up to 5	47	52.22	
		above 5	43	47.78	
6	Occupation	main occupation	57	63.33	
		subsidiary occupation	33	36.67	
7	Sources of information	Friends	43	47.78	
		Relatives	14	15.55	
		PAU Scientists	30	33.33	
		newspapers	3	3.33	
9	Total production in a year (qts)				
		Up to 100	Low	37	41.11
		100-350	Medium	42	46.67
		Above 350	High	11	12.22
10	Annual income of mushroom growers (Rs)				
		Upto 2,00,000	Low	10	11.11
		2,00,000-4,00,000	Medium	24	26.67
		4,00,000-6,00,000	High	56	62.22

**Experience in mushroom cultivation**

The experience of the respondents in mushroom cultivation ranged up to 21 years. A perusal of data set in Table 2 reveals that about 44 per cent of respondents had experience of 7-14 years in mushroom cultivation, whereas 34.45 per cent of the respondents had 14-21 years and 22.22 per cent of them had up to seven years of experience in mushroom cultivation.

**Area under mushroom cultivation**

The area cultivated by the respondents under mushroom ranged from less than 50 sq. meter to more than 100 sq. meter. This range was categorized into three categories i.e. less than 50, 50-100 and more than 100 square meters. It is interesting to note from the Table 2 that little more

than half of the respondents (55.56 per cent) cultivated more than 100 sq. mts area under mushroom and 31.11 per cent of the respondents cultivated 50-100 sq. mts where as 13.33 per cent of them had less than 50 sq. mts area under mushrooms cultivation.

**Trend of mushroom cultivation**

A perusal of the data given in Table 3 reveals that 71.11 per cent of the respondents wanted to increase area under mushroom cultivation. About 35 per cent of the respondents wanted to increase their area under mushroom cultivation as they fetched good income, 21.11 per cent reported that it can be grown on unfertile land and 15.56 per cent of the respondents wanted to increase area/unit size



under mushroom cultivation as they can be grown indoor without occupying much space. It is evident from the Table 3 that only 25.56 per cent of the respondents planned to decrease the area under mushroom cultivation.

A critical look at the data revealed that about 11.00 per cent of the respondents planned to decrease area/unit size under mushroom cultivation due to non-availability of subsidy, 7.78 per cent of them want to decrease area due to lack of skilled labor,

**Table 2: Distribution of the respondents on the basis of experience and area under mushroom cultivation**

Category	Range	Frequency	Percentage
Experience in mushroom cultivation (years)	upto-7	20	22.22
	7-14	39	43.33
	14-21	31	34.45
Area under mushroom cultivation (sq.mts)	Less than 50	12	13.33
	50- 100	28	31.11
	More than 100	50	55.56

**Table 3: Distribution of the respondents on the basis of Trend of mushroom cultivation**

Trend	Response	Frequency	Percentage	Reasons	Frequency	Percentage
Continue mushroom cultivation	Yes	69	76.66	Profitable	69	76.66
	No	21	23.33	Spoilage of compost	4	4.44
				Non-availability of skilled labor	11	12.22
				Lengthy procedure of cultivation	6	6.70
Increase	Yes	64	71.11	Good income	31	34.44
				Indoor grown	14	15.56
				Can be grown on unfertile land	19	21.11
Decrease	Yes	23	25.56	Lack of Skilled labor	7	7.78
				Spoiled compost	6	6.67
				No subsidy	10	11.11
Constant	Yes	3	3.33	Higher cost of straw	3	3.33

whereas, only 6.67 per cent wanted to decrease area due to spoilage of compost. It can be observed from the data in Table 3 that 3.33 per cent of the respondents neither willing to increase nor decrease area under mushroom cultivation due to higher cost of straw.

### Conclusion

It can be concluded that majority of the mushroom growers had their friends as their first source of information about mushroom cultivation (47.78%),

total production 100-350 qts/acre in a year (46.67%) and their annual income of Rs up to above 6,00,000/acre (62.22%). Regarding experience in mushroom cultivation majority of the farmers (43.33%) had experience of 7-14 years. More than 25 per cent of the respondents were willing to decrease their area under mushroom cultivation and only 3.33 per cent of the respondents had plan to keep area constant under mushroom cultivation.



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