



# Impact of Skill Development Training on Mushroom Cultivation in Kanyakumari District of Tamil Nadu

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## ABSTRACT

Mushroom production is simple, low cost and plays a significant role to alleviate poverty and generate employment opportunity for educated unemployed youth in rural and semi-urban areas. The present study was undertaken with the objective to assess the impact of training on knowledge gain about mushroom production as an enterprise/self-employment. The training program on mushroom production was focused on farmers, farm women and youths who have interested in self-employment. Detailed training on different parameters of mushroom production in context to cultivation techniques, preparation of spawn, substrates preparation, marketing of fresh product, preservation and value addition etc was imparted to a total number of 72 participants (men 29; women 43) in five courses. The impact of the training was assessed by pre and post evaluation testing in terms of improvement in knowledge for different parameters. It was observed that 63.88, 59.72 and 55.55 per cent of the trainees were deviating knowledge on types of mushroom, preservation techniques and importance of casing after training. Thus, it can be inferred that exposure to training had increased the knowledge of respondents related to all the sub-components of mushroom production. It may therefore, be concluded that trainees succeeded in acquiring knowledge after exposure to training on mushroom production.

**Key Words:** Gain in Knowledge Mushroom Cultivation, Training.

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## INTRODUCTION

India is primarily an agriculture based country due to diversity in soil and climatic conditions that allows a production of variety of crops in different parts of the country. This also provides vast potential for the cultivation of mushrooms due to ample availability of raw materials and favorable climatic conditions. FAO has recommended mushrooms as a food item contributing to protein nutrition of the developing countries. In a country like India, where vegetarians dominate, attempt should be made to popularize a vegetable protein source like mushroom documented by Bahl (2000). Mushroom growing has been appreciated as a technically feasible and profitable venture and widely accepted by the researchers as a good venture for higher income, employment generation and rural development. However, mushroom growing can help in a long way in the efficient utilization of agricultural and industrial waste. It

can also play a significant role to alleviate poverty and generate employment opportunity for educated unemployed youth. Extension trainings have been considered an outlet for exchange of concepts with in a community. Therefore, trainings have been widely accepted strategy with high returns on investment. There is an urgent need to impart technical knowledge to farm women and youth in order to adopt mushroom production as an income generating activity for enhancing their income.

In this context, ICAR- Krishi Vigyan Kendra, Kanyakumari has conducted 5 training courses on mushroom cultivation and its value addition for farmers, farm women and rural youth on various aspects of cultivation of mushroom during the year 2017-18. Mushroom production is simple, low cost, and suitable for rural areas, is labour intensive and can provide employment in both the rural areas and semi-urban. Mushroom production will improve their socio-economic condition of farmers, families

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and solve employment problems of both literate and illiterate, especially in rural areas. Keeping in view the increasing demand of mushroom due to globalization and opening of the economy, the present study was undertaken with the objective to assess the impact of training on knowledge about mushroom production as an enterprise/self-employment

## MATERIALS AND METHODS

### Selection of Participants

The training program on mushroom production was focused on farmers, farm women and rural youth for those who have interested in self-employment. The study was conducted at ICAR-KVK, Kanyakumari, Tamil Nadu. Seventy two trainees were imparted training on mushroom cultivation in five batches out of which 29 were men and 43 were women.

### Collection of Data

A questionnaire was formulated comprising of general information, background of participants, landholding etc. A pre evaluation test was conducted to know the level of knowledge of participants regarding cultivation techniques, preparation of spawn, substrates preparation, marketing of fresh product, preservation, value addition, etc. Thorough training on various aspects of mushroom production was imparted during the training program. Similarly, after completion of the training course, post evaluation was performed in order to assess the knowledge gained by the trainees and effectiveness of training.

To test the knowledge of trainees, a set of 10 questions related to mushroom growing, nutrients present in mushroom, different products prepared from mushroom, storage and harvesting of mushroom etc. were used. Hence, Deviation or gain in knowledge was calculated from the difference of scores obtained in pre and post knowledge test of the trainees.

$$\text{Deviation/gain in Knowledge} = \frac{\text{Post evaluation score} - \text{Pre evaluation score}}{\text{Total respondents}} \times 100$$

### Preparation of Bedding

Paddy straw, jowar seeds, polythene bags, cooking utensils, spawn and polythene sheets were the materials used for mushroom spawn and cultivation.

## RESULTS AND DISCUSSION

### Socio-economic profile

The participants differed in their socio-economic status based on education, occupation, landholding and annual income etc (Table 1). The results revealed that 59.72 per cent of the participants were female whereas 40.28 percent were male. The age of participants was between 18 to 52 yr. Majority of the participants (48.61%) were in age group of 31-40 whereas 40.28 per cent were below 30 yr and 34.72 per cent are above 40 yr of age. Information with respect to caste showed that 70.83 per cent of the participants belong to Backward Caste followed by Scheduled caste (18.06%).

Assessment of the trainees with respect to education indicated that 44.44 per cent studied up to senior secondary level followed by graduation (25%) and Diploma holders (15.28%). Information with respect to occupational background revealed that 48.61 percent of the participants are housewife followed 40.28 percent of trainees belonged to farming background and only 8.2 per cent belonged to service class. It was found that, 80.55 per cent of the participants were getting low annual income, 15.27 per cent of them had medium annual income and remaining 4.16 per cent were getting high annual income. With regard to mushroom production experience, majority of the respondents (94.44 %) had low experience followed by 5.55 per cent with medium experience .

It was also inferred (Table 1) that majority of the participants (80.55%) were having small land

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**Table1. Socio-economic profile of trainees undergone mushroom cultivation training (n=72)**

Sr. No	Particular	Trainees attended Mushroom cultivation	
		Frequency	Percentage
1	<b>Gender</b>		
	Male	29	40.28
	Female	43	59.72
2	<b>Age</b>		
	Up to 30 yr	12	16.67
	31-40 yr	35	48.61
	Above 40 yr	25	34.72
3	<b>Caste</b>		
	Scheduled caste	13	18.06
	Backward Caste	51	70.83
	Others	8	11.11
4	<b>Education</b>		
	Primary	1	1.39
	Middle level	3	4.17
	Matriculate	2	2.78
	Senior Secondary	25	34.72
	Diploma holder	18	25.00
	Graduate	20	27.78
	Postgraduate	3	4.17
5	<b>Occupation</b>		
	Farming	25	34.72
	Business	4	5.56
	Service	2	2.78
	Housewife	35	48.61
	Others (Retiree, student)	6	8.33
6	<b>Annual income</b>		
	Low	58	80.55
	Medium	11	15.27
	High	3	4.16
7	<b>Mushroom production experience</b>		
	Low	68	94.44
	Medium	4	5.55
	High	0	0
8	<b>Landholding</b>		
	Landless	12	16.67
	Marginal (<1 ha)	58	80.55
	Small (1-2 ha)	2	2.77
	Semi medium (2-4 ha)	0	0.00
	Medium (4-10 ha)	0	0.00
	Large (>10 ha)	0	0.00

holding whereas few of the participants (2.77%) were under small farmers category. Further, 16.67 per cent participants were from landless category and thus it was evident that mushroom farming enterprise does not require much land and therefore,

landless farmers were found to be interested to adopt this enterprise to supplement their family income. The socio-economic factors impacting the adoption of mushroom cultivation enterprise were not consistent with one another. Age has no

significant relationship in adoption of mushroom cultivation.

### Reasons of participation

The factors which motivated the participants to undergo the training were given for ranking in order of importance as perceived by them. As shown (Table 2), 55.55 per cent respondents joined training course to adopt mushroom growing as an occupation, 20.83 per cent wanted to learn about mushroom growing techniques for self consumption and 12.5 per cent joined the training course just to teach fellow farmers about mushroom growing. Similar results were also reported by Kaur (2016). It was evident that majority of participants joined the training course to adopt mushroom cultivation as an enterprise

### Increase in level of knowledge

Pre exposure and post-exposure scores were computed for all the sub-components of mushroom production (Table 3). In pre-evaluation test, the knowledge range of different participants was 18.06 per cent regarding the types of mushroom to 58.33 percent in mushroom recipes. Post evaluation training score of various practices ranged from 77.78 per cent in case of spawn production to 95.83 per cent in case of importance of casing. It was noticed that pre training knowledge score was not much satisfactory for all the aspects of training programme. However, the knowledge score gained by participants after training was more satisfactory in all aspects. Sufficient gain in knowledge regarding mushroom production was recorded for sub-components *viz.*, nutritive value, optimum growing condition, types of mushroom, suitable

substrate, importance of casing, quality spawn production, harvesting methodologies, marketing channels, preservation techniques and Mushroom recipes. It was observed that 63.88 per cent of the respondents were deviating in knowledge on types of mushroom after training whereas, 59.72 per cent of the trainees were deviating knowledge on preservation techniques after training ( Table 3). While, 55.55 per cent of the respondents were deviating in knowledge on importance of casing during mushroom production after training. It was revealed that 54.16 per cent of the trainees were deviating knowledge on mushroom spawn production after training whereas, 48.61, 47.22 and 45.83 per cent of the trainees were deviating knowledge on substrate suitability, optimum growing condition, and marketing channels. It may therefore, be concluded that respondents succeeded in acquiring knowledge after exposure to training on mushroom production. The results were similar to the findings reported by Rachna *et al* (2013), Nagaraj *et al* (2017) and Kaur (2016) that exposure to training increased the knowledge of farmers, farm women and youths. Thus, it can be inferred that exposure to training had increased the knowledge regarding all the sub-components of mushroom production. The reason behind the satisfactory gain in knowledge might be well educational background of participant also having keen interest of participants.

### Suggestions given by the trainees in improving Mushroom enterprise

The suggestions offered by the trainees for further improvement of the training course were presented in Table 4. Majority of the respondents (90.27%)

**Table 2. Reasons of participation in training programme in mushroom cultivation (n=72).**

Sr. No.	Reason	Frequency	Percentage	Ranking
1	To adopt mushroom growing as an enterprise	40	55.55	I
2	To learn about mushroom growing techniques for self consumption	15	20.83	II
3	To teach fellow farmers about mushroom growing	9	12.50	III
4	Just to know about mushroom growing	8	11.11	IV

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**Table 3. Gain in knowledge after training with respect to different components (n=72)**

Sr. No.	Parameter	Pre training (%)	Post training (%)	Change in knowledge
1	Nutritive value	41 (56.94)	66 (91.67)	+25 (34.72)
2	Optimum growing condition	29(40.28)	63 (87.50)	+34 (47.22)
3	Types of mushroom	13 (18.06)	59 (81.94)	+46 (63.88)
4	Suitable substrate	29 (40.28)	64 (88.89)	+35 (48.61)
5	Mushroom spawn	17 (23.61)	56 (77.78)	+39 (54.16)
6	Marketing channels	35 (48.61)	68 (94.44)	+33 (45.83)
7	Preservation techniques	23 (31.94)	66 (91.67)	+43 (59.72)
8	Importance of casing	29 (40.28)	69 (95.83)	+40 (55.55)
9	Harvesting methodology	28 (38.89)	57 (79.17)	+29 (40.27)
10	Mushroom recipes	42 (58.33)	69 (95.83)	+27 (37.50)

**Table 4. Trainees suggestions for improving Mushroom enterprise after training (n=72)**

Sr. No.	Suggestion	Frequency	Percentage	Ranking
1	Quality spawn to be supplied on time	65	90.27	I
2	Help to get financial assistance through banks	45	62.50	II
3	Linkage with marketing channels	39	54.16	III
4	Exposure visit to successful entrepreneurs farm	25	34.72	IV
5	Practical manual on mushroom growing to be provided	19	26.38	V
6	Value addition	12	16.66	V

suggested that quality spawn may be supplied in time. Besides, 62.50 per cent of the respondents felt that financial assistance by government should be provided for mushroom growing and 54.16 per cent respondents need assistance in linkage with marketing channels and 34.72 percent, expected additional exposure visit to successful entrepreneurs farm during training course.

### CONCLUSION

The study concludes that respondents succeeded in gain in knowledge after exposure to training. Mushroom production is an enterprise in which requirement of land is not a big issue so even landless farmers can get additional income through mushroom cultivation. Awareness and training on mushroom production helped in income generation, nutrient supplementation and in profitable marketing among the participants.

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Received on 08/04/2019      Accepted on 15/04/2019