



Skill Development Training on Mushroom Farming for Income Generation

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ABSTRACT

Skill development training on mushroom cultivation was organized to unemployed youth, farmers and farm women by ICAR KVK, Mandya with the objective of providing employment and micro entrepreneurship. The present study revealed that the trainees differed in their socio-economic status based on age, education, occupation, and landholding. Out of 283 trained participants, 46 established mushroom production units. Irrespective of the components considered to test the knowledge level regarding mushroom production technologies of the trainees varied from 2.12 to 34.62 per cent in pre-training where as in post training recorded 42.04 to 85.87 per cent. However, change in knowledge level varied between 26.14 to 74.91 per cent. An economic analysis of five units revealed that the average income of Rs.35,335/- earned by selling 3.87q per crop. Proper training and guidance to the farmers is essential and would help the interested growers to sustain and earn their livelihood.

Key Words: Skill Development, Knowledge, Mushroom Farming, Self – employment

INTRODUCTION

Rural population in India comprises of marginal, landless farmers and unemployed youth hence, there is a need for a low cost and maximum profit enterprises to enhance socio-economic status. One such activity is mushroom farming with minimum capital maximum revenue for providing an additional source of income. Mushroom farming has the potential to solve many problems such as quality food demand, environmental pollutions, unemployment and certain ecological issues in an amicable manner to a significant extent. Mushroom cultivation improves the socio-economy of the farming community through additional revenue by utilizing farm wastes (Nagaraj *et al*, 2017). In addition to this, it paves ways for employment generation in significant amount (Markam *et al*, 2018). In Mandya district, Paddy, Ragi and Sugarcane are the major crops cultivated in the irrigated pockets of the district. The straw is major bi-products left after paddy and Ragi harvest. The available straw can be properly utilized to grow mushroom. The substrate remains after cultivation

of mushroom is more readily digestible and palatable to livestock. Additionally, it can be exploited as a source of manure and mulch for soil. In this context, ICAR- Krishi Vigyan Kendra, Mandya has conducted 11 short and long term skill development training courses on mushroom cultivation and its value addition for farmers, farm women and rural unemployed youth during the year 2017-2020 with the objective to motivate the establishment of mushroom units in the District.

MATERIALS AND METHODS

The skill development trainings on mushroom cultivation were organized to unemployed youth, farmers and farm women by ICAR KVK, Mandya. A total of 283 participants were present in the training, out of which 181 males and 102 females. A questionnaire was formulated comprising of general information, background of participants, landholding etc. To assess the impact and effectiveness of training, pre and post evaluation test was conducted. While preparing questionnaire to test the knowledge of trainees,

Table1. Socio economic status of trainees.**(N= 283).**

Sr. No	Particular	Trainees	
		Frequency	Percentage
1	Sex		
	Male	181	63.96
	Female	102	36.04
2	Age		
	20 - 30 yr	71	25.09
	31- 40 yr	98	34.63
	41 -50 yr	114	40.28
3	Caste		
	Scheduled caste	17	6.01
	Scheduled Tribe	2	0.71
	Others	264	93.28
4	Education		
	Primary School	108	38.16
	High School	89	31.45
	Pre University	57	20.14
	Graduate	29	10.25
5	Occupation		
	Agriculture	194	68.55
	Housewife	74	26.15
	Others (Retiree, student)	15	5.30
6	Landholding		
	Landless	12	4.24
	Marginal (<1ha)	219	77.39
	Small (1-2 ha)	52	18.37

regarding mushroom species, health and medicinal benefits, cultivation techniques, preparation of spawn, substrates preparation, pest and disease management, marketing of fresh product, processing and preservation, record keeping, value addition of mushroom were considered. The change in perception level was calculated from the difference of scores obtained in pre and post knowledge gain by the trainees. The data were tabulated and statistically analyzed using frequency

and percentage. Apart from the skill training, one day training programme was also conducted at frequent intervals to upgrade their skills and to overcome problems. Frequent visits were made to the established mushroom units in order to know the socio-economic constraints. Later on, five well established mushroom units were selected to study economic analysis. The data collected from five randomly selected units were analysed for calculating cost, the actual cost of inputs and actual

Skill Development Training on Mushroom Farming

Table 2. Change in the perception level of mushroom growers (N=283).

Sr. No.	Particulars	Pre-training knowledge of trainees		Post-training knowledge trainees		Change in knowledge (%)
		No.	(%)	No.	(%)	
1	Kinds of mushroom species	45	15.90	119	42.04	+26.14
2	Nutritive and medicinal benefits of mushroom	34	12.01	217	76.68	+64.67
3	Materials and methods used for different types of mushroom farming	29	10.25	225	79.50	+69.25
4	Pest and disease management in mushroom	14	4.95	226	79.86	+74.91
5	Value added products of mushroom	58	20.49	243	85.87	+65.38
6	Material used for spawn production	11	3.89	168	59.36	+55.47
7	Harvesting and storage process	19	6.71	218	77.03	+70.32
8	Cost benefit ratio of mushroom production	29	10.25	226	79.85	+69.60
9	Packaging and labelling	22	7.77	209	73.85	+66.08
10	Marketing linkages	6	2.12	199	70.31	+68.19
11	Financial facilities, provided by public or private sector for mushroom unit	98	34.62	239	84.45	+49.83

Table 3. Trainings conducted and units established by mushroom growers (2017-2020).

Year	No. of training	No. of Trainees	Mushroom Unit established (No.)	Rate of adoption (%)
2017-18	03	82	13	15.85
2018-19	04	93	31	33.33
2019-20	04	108	46	42.59
Total	11	283	90	31.80

price paid by the consumers. The net returns were calculated by deducting the respective cost from the gross returns.

$$\text{Change in knowledge} = \frac{\text{After training-}}{\text{Before training}} \times \frac{100}{\text{Total trainees}}$$

Net income = Gross income - Cost of production

RESULTS AND DISCUSSION

The present study revealed that the trainees differed in their socio-economic status based on age, education, occupation, and landholding. The results showed that 36.04 per cent of the trainees were female whereas 63.96 per cent were male. The age range of trainees was between 20 to 50 yr. Majority of them (40.28%) were in age group of above 41 yr, whereas 34.63 per cent were between 31-40 yr and 25.09 per cent were below 30 yr of age. Information with respect to caste showed that 93.28 per cent of the trainees belong to other backward class followed by scheduled caste (6.01%). Trainees with respect to education indicated that 38.16 per cent studied up to primary school followed by high school (31.45%), pre university level (20.14%) and graduation (10.25%). Information with respect to occupation revealed that 68.55 percent of them were agriculture followed by housewife (26.15%) and only 5.30 per cent belonged to others. It was found that, 77.39 per cent of the trainees were marginal farmers followed by small (18.37%) and remaining 4.24 per cent were landless labours (Table 1), the similar findings were obtained by the Kavitha *et al* (2019). Pre and post training scores were computed for all the sub-components of mushroom cultivation (Table 2). Irrespective of the

components considered to test the knowledge level regarding mushroom production technologies of the trainees varied from 2.12 to 34.62 per cent in pre-training where as in post training recorded 42.04 to 85.87 per cent. However, change in knowledge level varied from 26.14 to 74.91 per cent. Similar results were observed by Kaur (2016).

During the year 2017 to 2020, 11 training programmes were conducted and in which 283 trainees were participated. Initially 13 units were established and with the adoption rate of 15.85 per cent during 2017-18 and later on increased up to 46 units having the adoption rate of 42.59 per cent during 2019-20 (Table 3). Out of 46 mushroom units established during 2017-2020 only five units were selected randomly for economic analysis as depicted in Table 4. They produced and sold on an average of 3.87q of mushroom in the local market and earned Rs.35334/- for one crop. The production of mushroom ranged from 2.5 to 6.0q and net returns obtained varied from Rs. 27633/- to 40500/-. The present study corroborated with the study conducted by Rachna and Goel (2016) and Chaitra *et al* (2018). The socio-economic constraints faced by mushroom growers were depicted in Table 5. The perishable nature of Oyster mushroom was primary constraint (98.59%) followed by timely non-availability of quality spawn (98.60%), selling fresh mushroom is quite difficult when compared to Agriculture produce (95.05%). Lack of financial support for production from financial institutions, lack of awareness among consumers about nutritional and medicinal importance of mushroom, mushroom is a non vegetarian food and unaffordable to poor as it is costly were the other constraints faced by the mushroom growers.

Table 4. Economic analysis of mushroom production units in Mandya District.

Particular	Unit-1	Unit-2	Unit-3	Unit-4	Unit-5	Average
Mushroom yield per crop (q.)	2.50	3.00	3.50	4.36	6.00	3.87
Cost of production (Rs)	9867	16500	13770	24210	19500	16769
Gross income (Rs)	37500	45000	52500	65520	60000	52104
Net income (Rs)	27633	28500	38730	41310	40500	35335

Skill Development Training on Mushroom Farming

Table 5. Socio-economic constraints faced by mushroom growers.

Sr. No.	Constraint	No. of trainees	Percentage
1	Perishable nature of Oyster mushroom	279	98.59
2	Lack of financial support for production of mushroom	235	83.00
3	Sale of produce is quite difficult when compared to agriculture produce	269	95.05
4	Lack of awareness among consumers about nutritional and medicinal importance of mushroom	255	90.11
5	Timely non-availability of quality spawn	279	98.60
6	Unaffordable to poor as it is costly	176	62.20
7	Mushroom is a non vegetarian food	98	34.62

CONCLUSION

The trainees inspired by the easy method of mushroom production and gained knowledge after exposure to skill training. Trainees motivated to establish mushroom production units as it requires less capital and even landless trainees can take up the activity. Proper training and guidance to the trainees is essential and would help the interested growers to sustain and earn their livelihood. Trainees realized that mushroom production helped in additional income generation. As the trainees understood clearly the nutritional importance of mushroom and incorporated in their daily diet. The regular supply of quality spawns, perishable nature of the commodity and market linkages are the most important constraints that need to be addressed for mushroom entrepreneurship to sustain.

REFERENCES

Bahl N (2000). *Handbook on Mushrooms*. Fourth edition. ISBN 81-204-1399-7, Published by Vijay Primplani for Oxford & IBH Publishing Co. Pvt. Ltd.

Chitra K, Venkatesh R, Dhanalakshmi K, Sharavanan P T, Bali Sasikumar C and Karthikeyani Vijayakumari K (2018).

Production and Economic Analysis of Oyster Mushroom (*Pleurotus florida*). *Int J Curr Microbiol App Sc* 7(09): 379-383.

Kaur K (2016). Impact of training course on knowledge gain of mushroom trainees. *J Krishi Vigyan* 4(2): 54-57.

Kavitha K R, Latha S, Nazreen Hassan and Thirukumaran K (2019). Impact of skill development training on mushroom cultivation in Kanyakumari District of Tamil Nadu. *J Krishi Vigyan* 7 (2): 144-148.

Nagaraj R, Arun K P, Hanumanthaswamy B C and Jyoti M R (2017). Mushroom production for self employment – An Impact Study. *Int J Curr Microbiol App Sci* 6(9): 2991-2997.

Rachna S and Goel R (2016). Impact of mushroom cultivation on socio-economic conditions of rural women of Patiala, Punjab. *Int J Farm Sci* 6(2): 251-254.

Markam Shikha, Tigga Ravindra, Kumar Abhay and Kerketta Dharampal (2018). Impact of skill development training on mushroom production for self-employment among rural women in Surguja district of Chhattisgarh. *Int J Home Sci* 4(2): 266-268.

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