Impact assessment of vocational training programmes on mushroom cultivation on knowledge gain of rural farmers

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ABSTRACT

Krishi Vigyan Kendra, Bawal, Haryana imparted training to 120 trainees on mushroom cultivation by conducting four vocational training courses during 2022-23. In order to evaluate these training programmes, present study was undertaken to find out the knowledge gain of the participants. The data were collected on the socio-economic profile of the participants and the purpose of their participation in the vocational trainings. The gain in knowledge of the trainees was calculated through pre- and post-training tests. It was found that almost half of the respondents (50.36%) were in the age group of 26-40 years; majority of the respondents (46.40%) were landless farm labourers and belonged to backward class (60.00%); most of the trainees (45.00%) were educated up to primary level and majority of the trainees (53.30%) were involved in farming. Majority of the respondents (48.33%) participated in the trainings to adopt mushroom cultivation as an enterprise. There was considerable gain in knowledge of the respondents after the training programmes. The gain in knowledge of the respondents after the trainings varied from 54.0 to 94.1 per cent on various aspects of mushroom.

Keywords: Mushroom cultivation; vocational training; gain in knowledge

INTRODUCTION

Mushrooms have been considered as ingredient of gourmet cuisine across the globe, especially for their unique flavour and have been valued by humankind as a culinary wonder. More than 2,000 species of mushrooms exist in nature, but around 25 are widely accepted as food and few are commercially cultivated. Mushrooms are considered as a delicacy with high nutritional and functional value and they are also accepted as nutraceutical foods; they are of considerable interest because of their organoleptic merit, medicinal properties and economic significance (Miles and Chang 2004, Ergönül et al 2013).

Mushroom cultivation can also generate huge employment opportunities for unemployed (Shakil et al 2014). It plays a very significant role to eradicate malnutrition, alleviate poverty and create employment opportunity for rural unemployed folk specially the rural farming community (Rachna et al 2013).

The demand of mushroom has been increasing day by day due to population growth, market expansions, changing of consumer education and awareness along with the developments in the manufacturing industries, storage facilities and transportation. It is a well established fact that the rural unemployed individuals can be developed, their outlook can be changed and their ideas can be given a true shape of enterprise through regularly organized vocational training/ motivational programmes. Mushroom cultivation is environment-friendly and they biosynthesize their food from agricultural crop residues, which are readily available in rural areas. Moreover, mushroom production can often be recommended to a situation where large scale capital-intensive operations are not possible (Dalmia and Kumar 2018).

The present study was, therefore, conducted to evaluate the impact of vocational trainings on mushroom cultivation on the knowledge gain of the rural farmers.

METHODOLOGY

Krishi Vigyan Kendra, Bawal, Haryana conducted four vocational training courses on mushroom cultivation during 2022-23 for the farm men/ women and rural youth in the villages. A sample size of 120 respondents was selected for obtaining the data. For evaluating the impact of vocational training programmes, data were collected on the general profile of the trainees. The data were also collected from the trainees regarding the purpose of their participating in the training programmes. A pre-training test was conducted to know the level of knowledge of participants regarding types of mushrooms, their nutritive value, diseases, preparation of casing material, harvesting techniques, storage, preservation etc. After completion of the training courses, post-evaluation was done in order to assess the knowledge gained by the trainees. Gain in knowledge was calculated from the difference of scores obtained in pre- and post-training tests of the trainees. Suggestions from the trainees were collected for bringing further improvement in the vocational training programmes. The data were analyzed using frequency, percentages and ranking.

Table 1. Socio-economic profile of selected trainees

Component	Respondents	
	Frequency	Percentage
Age (years)		
Up to 25	12	12.34
26-40	62	50.36
Above 40	46	37.30
Landholding (ha)		
Landless (0)	56	46.40
Marginal (<1)	34	30.30
Big (>1)	30	23.30
Caste		
Scheduled caste	48	40.00
Backward class	72	60.00
Education level		
Primary	54	45.00
Middle	42	35.00
Matriculation	24	20.00
Occupation		
Farming	64	53.30
Vegetable selling	22	18.30
Household work	34	28.30

RESULTS and DISCUSSION

Socio-economic profile of the trainees: The data (Table 1) show that almost half of the respondents (50.36%) were in the age group of 26-40 years followed by 37.30 per cent who were above 40 years and 12.34 per cent below 25 years of age. Majority of the respondents (46.40%) were landless farm labourers followed by 30.30 per cent who were marginal farmers with less than 1 ha and 23.30 per cent big farmers having more than 1 ha landholding. Out of the total respondents, 60.00 per cent belonged to backward class, whereas, 40.00 per cent were scheduled cast. Most of the trainees (45.00%) were educated up to primary level, 35.00 per cent up to middle level and only 20.00 per cent were matriculate. Majority of the trainees (53.30%) were involved in farming; 28.30 per cent had been doing household work and 18.30 per cent were involved in vegetable selling.

Reasons of participation in vocational training programmes: Data given in Table 2 depict the reasons of the trainees behind the participation in vocational training programmes. Majority of the respondents (48.33%) participated in the trainings to adopt mushroom cultivation as an enterprise followed by 12.50 per cent each who wanted to learn about mushroom growing techniques for self-consumption and learn the techniques of mushroom compost production at the home, 11.67 per cent to teach other men/women farmers about mushroom cultivation and 10.83 per cent to get certificate of vocational training course. Only 4.17 per cent respondents participated in trainings just to know about mushroom cultivation.

Earlier, Kaur (2016) reported that 63.5 per cent respondents joined training course to adopt mushroom growing as an occupation, 12.9 per cent wanted to learn about mushroom growing techniques for self-consumption and 10.6 per cent joined the training course just to get the certificate of training. In a study conducted by Manyam et al (2020) in Nellore district, Andhra Pradesh, reported that majority of the respondents (63.6%) expressed to establish mushroom enterprise as the reason for attending training programme.

Increase in the level of knowledge: Data given in Table 3 show that there was considerable gain in knowledge of the respondents after the training programmes. The gain in knowledge of the respondents after the trainings varied from 54.0 to 94.1 per cent on various aspects of mushrooms. Maximum gain in knowledge (94.1%) was recorded regarding diseases

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Table 2. Reasons of participation in vocational training programmes on mushroom cultivation

Reason	Respondents	
	Frequency	Percentage
To adopt mushroom production as an enterprise	58	48.33
To learn about mushroom growing techniques for self-consumption	15	12.50
Just to know about mushroom cultivation	5	4.17
To get certificate of vocational training course	13	10.83
To teach other men/women farmers about mushroom cultivation	14	11.67
To learn techniques of mushroom compost production at the home	15	12.50

Table 3. Gain in knowledge of rural youth after vocational trainings on mushroom cultivation

Component	Gain in knowledge of respondents (%)		
	Pre-evaluation	Post-evaluation	Gain in knowledge
Varieties and types of mushrooms	22.0	100.0	78.0
Nutritive value of mushrooms	24.0	100.0	88.0
Knowledge about diseases controlled by consumption of mushrooms	17.6	96.5	77.9
Knowledge about identification of good quality/edible mushrooms	28.3	98.0	54.0
Diseases of mushrooms and their control	5.9	100.	94.1
Market price and profit from mushrooms	21.1	90.6	69.5
Method of compost/manure making	8.2	96.5	88.3
Preparation of mushroom spawn production	3.8	95.3	91.5
Method of preparation of casing material	9.4	97.6	88.2
Storage and harvesting techniques of mushroom	25.9	100.0	74.1
Value addition to mushrooms	34.6	100.0	65.4

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of mushrooms and their control followed by preparation of mushroom spawn production (91.5%), method of compost/manure making (88.3%), method of preparation of casing material (88.2%), nutritive value of mushrooms (88.0%), varieties and types of mushrooms (78.0%), knowledge about diseases controlled by consumption of mushrooms (77.9%), storage and harvesting techniques of mushroom (74.1%), market price and profit from mushrooms (69.5%), value addition to mushrooms (65.4%) and knowledge about identification of good quality/edible mushrooms (54.0%).

Vishwakarma et al (2023) reported that after training, 76.8 per cent of the trainees gained the knowledge of preparation of compost, 75.2 per cent each of nutrition and health benefits and harvesting methods, 73.6 per cent of different types of mushrooms and 75.2 per cent of uses by different mushroom recipes. Overall, the study concluded that the training effectively increased participants' knowledge in all aspects of mushroom production.

Kaur (2016) recorded maximum gain in knowledge (94.1 and 92.9%) on diseases of mushrooms and their prevention and varieties of mushrooms respectively. Mazumdar et al (2020) observed that the knowledge gained after exposure to training programme on mushroom cultivation was satisfactory in all aspects in comparison with pre-training knowledge score. The exposure to training had increased the knowledge of farmers regarding mushroom production techniques by 73.7 per cent.

Manyam et al (2020) observed 72.24 per cent average change in perception level of respondents on major aspects of mushroom cultivation before and after trainings and demonstrations. Kavitha et al (2019) observed that 63.88, 59.72 and 55.55 per cent of the trainees were deviating knowledge on types of

mushrooms, preservation techniques and importance of casing after training respectively. Thus exposure to training had increased the knowledge of respondents related to all the sub-components of mushroom production.

Ranjitha et al (2018) identified that, prior to the training, the trainees were less aware with respect to their knowledge and understanding about the mushroom cultivation aspects. But after the training, there was significant increase in the knowledge level of trainees. All the trainees had positive change in the level of knowledge after the training. Mavi and Thakur (2021) observed that pre-training knowledge score was not much satisfactory for all the aspects of training programme. However, the knowledge score gained by respondents after training was more satisfactory in all the aspects. The study revealed that exposure to training had increased the knowledge of participants regarding techniques of mushroom production by 80.75 per cent.

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REFERENCES

Dalmia K and Kumar R 2018. Impact assessment of vocational mushroom cultivation training programme on knowledge gain of rural women. International Journal of Pure and Applied Bioscience **6(3):** 265-270.

Ergönül PG, Akata I, Kalyoncu F and Ergönül B 2013. Fatty acid compositions of six wild edible mushroom species. Scientific World Journal **2013:** doi: 163964; doi: 10.1155/2013/163964.

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

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

Manyam P, Jyothi GLS, Swamy GN and Lakshim TT 2020. Mushroom cultivation: understanding of knowledge gain and enterprise adoption through trainings and demonstrations. International Journal of Botany and Research **10(2):** 23-28.

Mavi HK and Thakur P 2021. A study to evaluate growers response in vocational training programmes on mushroom cultivation organized by Krishi Vigyan Kendra, Moga. Bhartiya Krishi Anusandhan Patrika **36(2):** 131-135.

Mazumdar H, Neog M, Deka M, Bhattacharyya S, Sarma UJ, Ali A, Rajbongshi A, Chakravorty M and Ali NF 2020. Impact of training on mushroom cultivation for women entrepreneurship development. International Journal of Creative Research Thoughts **8(4):** 1287-1290.

Miles PG and Chang S-T 2004. Mushrooms: cultivation, nutritional value, medicinal effect and environmental impact. 2nd Edn, CRC Press, CRC Press, Boca Raton, Florida, USA, 480p.

Rachna, Goel R and Sodhi GPS 2013. Evaluation of vocational training programmes organized on mushroom farming by Krishi Vigyan Kendra, Patiala. Journal of Krishi Vigyan **2(1):** 26-29.

Ranjitha G, Teza J and Veeraiah A 2018. An impact study on vocational training programme on milky mushroom farming. International Journal of Current Microbiology and Applied Sciences **7(11):** 1475-1484.

Shakil MH, Tasnia M, Munim ZH and Mehedi MHK 2014. Mushroom as a mechanism to alleviate poverty, unemployment and malnutrition. Asian Business Review **4(3):** 31-34.

Vishwakarma N, Singh DK, Sharma A, Tomar A and Shukla R 2023. Impact of skill development training on mushroom production in Madhya Pradesh district of Jabalpur. Pharma Innovation **12(6):** 734-736.