

## IMPACT OF INTEGRATION OF EXTENSION METHODS ON FARMERS KNOWLEDGE LEVEL ABOUT MUSHROOM CULTIVATION

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### ABSTRACT

*A study was conducted to assess the impact of integration of various extension methods on knowledge gain about mushroom cultivation amongst farmers. Before and after research design was followed and a total number of seven combinations of extension methods were tested. The study revealed that farm visit integrated with training & on-farm demonstration proved most effective in enhancing the knowledge about mushroom cultivation. Similarly, farm visit + training, training + on-farm demonstration and mushroom pathashala on AIR + training combinations were also found effective in transferring mushroom cultivation technology.*

**Key words :** Integration, Mushroom Cultivation, Training.

### INTRODUCTION

Mushroom cultivation is a non-traditional, highly profitable and sustainable enterprise. Undoubtedly, it suits to various categories of people of the farming community due to its obvious peculiarity. Promotion of mushroom cultivation by various Govt. Department, S.A.U.s and N.G.O.'s was attempted using very simple and common transfer of technology methods during last few decades. Planned and strategic transfer of mushroom cultivation technology was not done and major emphasis was given on research for development and standardization of technologies. As a result, a lot of mushroom cultivation technologies are available at the various research institutes. Now the only need is to transfer them effectively to the farmers.

Transfer of mushroom cultivation technology aspect was neglected in the past, which resulted into slow progress of mushroom cultivation in India (Sagar, 2001). Adoption of mushrooms cultivation varies between 8 to 21 per cent (Sagar, 2002, Kumar and Bindra, 1997, Perumal and Sujatha, 1993). Mushroom cultivation being a complex process, common awareness generating extension methods cannot serve the purpose. To hasten the transfer of technology process, there is need to identify best methods of transfer of technology, hence this study was planned on integrated use of various extension methods and their impact on knowledge level of farmers about mushroom cultivation.

### METHODOLOGY

For this study, Solan district of Himachal Pradesh was selected purposely because of location of

investigating Institute in this district. However, other districts of H.P. were also taken into consideration using All India Radio as medium because of its wide coverage. Keeping in view the available manpower and resources, six villages were selected randomly around Solan district for conducting the study. In order to select farmers for the study, a list of farmers in each selected village was prepared and 40-50% farmers with medium socio-economic status were selected purposely from each selected village in consultation with panchyat members and Pradhans. In such manner 10-12 farmers were finally selected from each village. In case of mushroom pathashala on AIR, 33 listeners who responded properly during the second phase out of 97 registered listeners were selected from various districts of Himachal Pradesh. To collect data from selected farmers, an interview schedule on selected variables was developed. Data were collected in two phases i.e. pre-exposure and post exposure. First phase data were collected before starting the experiment. Thereafter, these selected farmers were exposed to mushroom cultivation technology through seven combinations of extension methods. After that second phase data were collected from these exposed farmers. The collected data were compiled, tabulated and analysed. Knowledge gain about mushroom cultivation was measured by common formula.

### RESULTS AND DISCUSSION

The data collected were interpreted in two ways like mean and overall knowledge gain in various aspects of mushroom cultivation under each selected

combination of extension methods, and knowledge gain level under selected combination of extension methods. The results are given in table 1. and 2.

**(i) Average and overall knowledge gain in various aspects of mushroom cultivation under selected combinations of extension methods**—In this study, white button mushroom cultivation package was divided into five major aspects like climate requirements, compost preparation, spawning and spawn run, casing and case run, and fructification and harvesting. However, the aspect wise information on knowledge gain could not be furnished in case of

mushroom pathashala on AIR and its combination with training due to some limitations. The results are given in table 1.

The data given in table 1 revealed that amongst all the seven combinations of extension methods, the farm visit of farmers to mushroom unit supported with printed literature followed by training and on-farm demonstration was found best combination because of highest overall knowledge gain (77.90%) through this combination. Sagar (2002) also reported 73.64 % increase in mean knowledge score of farmers due to training in mushroom cultivation.

**Table 1. Mean and over all knowledge gain under selected combinations of extension methods with respect various aspects of mushroom cultivation**

S. No.	Aspect of Mushroom Cultivation	AV. Knowledge Gain (%)						
		Training + Demonstration	Farm Visit + Demons tration	Farm Visit + Training+ Demonstration	Farm Visit + Training	Demonstration	Mushroom pathashala on A.I.R.	Mushroom pathashala on AIR+Training
1.	Climate	36.67	50.00	80.00	66.67	29.99	-	-
2.	Compost preparation	56.00	20.00	58.50	54.55	14.00	-	-
3.	Spawning & spawn run	75.00	28.33	90.00	71.21	09.99	-	-
4.	Casing & Case Run	58.00	42.00	80.00	72.73	18.00	-	-
5.	Fructification & harvesting	61.43	75.69	90.00	79.22	40.00	-	-
6.	Over all	59.36	40.65	77.90	67.45	20.32	41.29	67.01
7.	Rank	IV	VI	I	II	VII	V	II

The mean knowledge gain in individual aspects of mushroom cultivation under this combination was ranging between 58 to 90%. The mushroom pathashala on AIR followed by training and farm visit with printed literature followed by training were ranked second best combinations wherein overall knowledge gain in both the combinations was found second highest values (67.45 & 67.01 %). The fourth important combination was training followed by on-farm demonstration with 59.36% overall knowledge gain. The mean knowledge gain in all the individual aspects of mushroom cultivation except climate requirement were varying between 56 to 75 per cent. The rest of the extension methods and their combinations viz. mushroom pathashala, and farm visit with printed literature followed by on-farm demonstration were also said to be effective with overall knowledge gain 41.29 and 40.65 per cent, respectively. On-farm demonstration alone was not found at all effective on the basis of overall as well as mean knowledge gain. However, Kokate et. al. (1996) reported 56.25 % gain in knowledge through demonstration on rayda cultivation.

**(ii) Knowledge gains level under selected combinations of extension methods**—In order to study the knowledge gain level with respect to each selected

combination of extension methods, obtainable knowledge gain score of individuals were divided into three categories as low level (up to 34), medium level (> 34-67) and high level (> 67-100). On the basis of obtained knowledge gain score, farmers under each combination were placed in the respective categories. The results are presented in table 2.

The data given in the table show that an overwhelming majority of the farmers (90%) under the combination-farm visit with printed literature + training +on-farm demonstration belonged to high level knowledge gain (> 67-100) while reverse trend was observed in case of on-farm demonstration alone where 90 % farmers were in low knowledge gain category. In farm visit with printed literature followed by on-farm demonstration, 80% farmers gained medium level knowledge and the rest 20 % belonged to low knowledge gain level. Farm visit with printed literature followed by training and mushroom pathashala followed by training showed more or less similar trend. Fifty five and 45 per cent farmers under both this combinations were distributed in medium and high level knowledge gain categories, respectively.

Under training + on-farm demonstration combination, 50 per cent farmers had high level

**Table 2. Distribution of farmers under selected combinations of extension methods with respect to knowledge gain levels**

S. No.	Knowledge gain level	Percentage of farmers						
		Training + Demonstration	Farm Visit + Demonstration	Farm Visit + Training + Demonstration	Farm Visit + Training	Demonstration	Mushroom pathashala on A.I.R.	Mushroom pathashala on AIR+Training
1.	Low level (upto 34)	20	20	00	00	90	39.40	00
2.	Medium Level (>34-67)	30	80	10	45	10	45.45	45.45
3.	High Level (>67-100)	50	00	90	55	00	15.15	54.55

knowledge gain and the rest 20 & 30 per cent belonged to low and medium levels, respectively. In case of mushroom pathashala on AIR, a major percentage of farmers (45.45 %) were in medium level category followed by low 39.40 %) and high level (15.15%).

On the basis of knowledge gain level, the combinations- farm visit with printed literature + training + on-farm demonstration, and farm visit with printed literature + on-farm demonstration could be considered best. Mushroom pathashala on AIR + training, farm visit with printed literature + training and training + on-farm demonstration were certainly better combinations. Mushroom pathashala on AIR could be adjudged good and the rest on-farm demonstration alone can be rated as poor extension method for transfer of mushroom cultivation technology. However, Tripathi and Pandey (1967) found radio as moderately effective and demonstration as most effective extension method on the basis of adoption and diffusion ratio of innovations.

## CONCLUSION

Findings of the study indicate that integration of extension methods enhances the power of presentation of individual methods as compared to their use in separation. Farm visit integrated with training & on-farm demonstration proved most effective in increasing the knowledge gain about mushroom cultivation amongst the participating farmers. Similarly, training followed by on-farm demonstration and mushroom pathashala on AIR followed by training had significant impact over knowledge level of farmers. Mushroom pathashala on AIR and on-farm demonstration in isolation could not contribute significantly in enhancement of knowledge about mushroom cultivation. In view of these facts, it is concluded that integration of extension methods/ TOT tools in general to specific order/ sequence would have great impact on farmers knowledge and would also help in mobilizing them towards adoption of mushroom cultivation.

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