

IMPACT OF MUSHROOM CULTIVATION TRAINING ON HORTICULTURE OFFICERS

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ABSTRACT

The present study was conducted to know the impact of training on knowledge gain about mushroom cultivation amongst the horticulture officers. The study revealed that before participation in the training programme, majority of the horticulture officers (60%) belonged to medium level of knowledge about mushroom cultivation followed by low level (32%) and no knowledge (8%). After participation in the training, all the officers in the no & low knowledge level categories (8 & 32%) shifted to high level knowledge category. The study further revealed that the highest mean knowledge gain was achieved in no knowledge level category (60.76%).

Key words: Impact; Mushroom cultivation; Knowledge gain

INTRODUCTION

Transfer of technology through training has become a common and major extension activity in the field of agriculture. This method of transfer of technology is being used to either make the Research and development (R&D) staff more efficient in his present job or to train the staff in new job. The R&D organizations and state departments get their employees trained in various emerging enterprises with a view to introduce new enterprise amongst the farmers in his area of operation. The expenditure made on training can be best justified when the trainee get himself enriched/proficient in his new area of work, and skill learnt/upgraded during the training, percolates amongst the ultimate clients. Therefore, it is essential that trainee officers must be assessed in terms of learning took place after the training programme. The present study was conducted with following objectives:

1. To study the impact of training on knowledge gain about mushroom cultivation amongst the horticulture officers.
2. To study the relationship of selected variables with knowledge gain about mushroom cultivation amongst the horticulture officers.

METHODOLOGY

The present study was conducted on 25 horticulture officers of Haryana state. Before and after research design was adopted. To know knowledge gain through training programme, pre and post tests were conducted with help of objective type question paper containing 50 questions with total 65 correct alternatives/fill in the blanks. Each right answer was allotted one score. By summing up the score of all the right answers, total knowledge score for each individual was calculated and thereby knowledge gain was obtained using standard formula. In order to study the relationship of dependent variable with independent variables, simple correlation coefficient was worked out.

RESULTS AND DISCUSSION

Keeping in view the objectives, the present study was divided into four parts viz; profile of horticulture officers, distribution of horticulture officers with respect to knowledge levels, knowledge gain in the various aspects of mushroom cultivation and relationship of knowledge gain with personal independent variables.

Profile of horticulture officers: To understand the background of horticulture officers, a total number of five characteristics viz; age, education, area of specialization, nature of duties and service length were chosen for study. Results are presented in Table-1. The data reveal that majority of the Horticulture Officers (64%) were in the middle age group (37-49 years), while 20 percent in the young (<37 years) and 16 percent old (>49 years) age groups.

Majority of the officers (60%) were graduate followed by postgraduate (28%) and doctorate (12%). As far as specialization required for the post of horticulture officers is concerned, there was a lot of variation. Highest percentage of horticulture officers (32%) were having specialization in major field (horticulture) followed by non-related field (28%), major & related fields (16%), major & non-related fields (16%) and major, related & non-related fields (8%). Horticulture officers were found to perform mainly two types of duties - extension and administrative. Almost all the horticulture officers (92%) were performing extension work. Only 4% officers were involved in administrative duties and an equal percentage of officers (4%) were doing both type of work. The data on service length reveals that fifty two percent officers had served between 10 to 24 years. Only 36 per cent officers had completed less than 10 years of service and the rest 12 per cent had served for more than 24 years.

Table1. Profile of horticulture officers.

S.N.	Variable	Frequency	Percentage
1.	<i>Age</i>		
	a) Young (<37)	05	20
	b) Middle (37- 49)	16	64
	c) Old (>49)	04	16
2.	<i>Education</i>		
	a) Graduate	15	60
	b) Post graduate	07	28
	c) Doctorate	03	12
3.	<i>Specialization</i>		
	a) Major, related & non related fields	02	08
	b) Major field only	08	32
	c) Major & related fields	04	16
	d) Major & non-related field	04	16
	e) Non-related field only	07	28
4.	<i>Nature of duties</i>		
	i. Administrative	01	04
	ii. Extension	23	92
	iii. Both	01	04
5.	<i>Service length</i>		
	i. Low (<10)	09	36
	ii. Medium (10-24)	13	52
	iii. High (>24)	03	12

Knowledge of horticulture officers : In order to study the extent of knowledge gained by horticulture officers and change in knowledge levels due to training, the horticulture officers were categorized into four knowledge levels on the basis of obtainable score as zero knowledge, low level knowledge (up to 21), medium level knowledge (22-43) and high level knowledge (44-65). The results obtained are presented in Table-2.

Table2. Distribution of horticulture officers according to knowledge levels with their respective mean knowledge gain about mushroom cultivation

S.No.	Level	Knowledge (Per centage)		
		Pre-training	Post-training	Gain
1.	No knowledge	08.00	00.00	60.76
2.	Low knowledge (upto <21)	32.00	00.00	31.91
3.	Medium knowledge (21-43)	60.00	56.00	22.05
4.	High knowledge (44-65)	00.00	44.00	00.00

The data given in Table 2 reveal that before participation in the training programme, majority of the horticulture officers (60%) belonged to medium level of knowledge about mushroom cultivation followed by low level (32%) and no knowledge (8%). None of them had high-level knowledge of mushroom cultivation prior to training.

After participation in the training programme, there were drastic changes in knowledge levels of horticulture officers of no and low knowledge level categories. All the officers in the no and low knowledge level categories (8 and 32%) were shifted themselves into high level knowledge category. 4 percent officers of medium knowledge level category moved in high

level category due to training. Bhagat and Singh (1995) also reported similar kind of trend. It indicates that trainee (horticulture officers) with no knowledge of mushroom were more seriously involved in training as compared to officers with low and medium level of knowledge. The data further reveal that the highest mean knowledge gain was achieved in no knowledge level category (60.76%) followed by low knowledge level (31.91%) and medium level (22.05%).

Knowledge gain in various aspects of mushroom cultivation: In order to know the knowledge gain in various aspects of mushroom cultivation, the whole mushroom production process were divided into eight areas like climate, spawn production, compost & substrate preparation, spawning & spawn run, casing & case run, fructification & harvesting, insects and diseases management, and post harvest technology. The significance of difference in mean knowledge gain in various aspects was tested by 't' test. The results are presented in Table 3.

Table 3. Knowledge gain in mushroom cultivation by the horticulture officers

S.N.	Practices	Maximum obtainable scores	Mean scores obtained		Knowledge gain in %	't' test	Rank Value
			Pre-	Post-			
1	Climate	10	2.36	5.24	28.80	7.374**	IV
2	Spawn production	09	1.6	5.12	39.10	6.377**	I
3	Compost & substrate preparation	12	6.40	9.00	21.66	4.702**	VII
4	Spawning & spawn run	06	3.68	5.36	28.00	4.232**	V
5	Casing & case run	05	2.68	3.88	24.00	4.168**	VI
6	Fructification & Harvesting	08	3.00	4.28	16.00	3.333**	VIII
7	Insect & disease management	09	1.64	4.72	34.22	7.958**	III
8	Post Harvest Technology	06	3.16	5.32	36.00	5.046**	II
9	Overall	65	24.52	42.93	28.31	7.833**	-

** Significant at 1% level of significance.

The data given in Table 3 reveal that horticulture officers gained highest knowledge in the area of spawn production (39.10%) with rank I followed by post harvest technology (36.00%) ranked II, insects & diseases management (34.22%) with rank III, climate (28.80%) with rank IV, spawning & spawn run (28.00%) with rank V, casing & case run (24.00%) with rank VI, compost/substrate preparation (21.66%) with rank VII and fructification & harvesting (16.00%) with rank VIII. The overall knowledge gain was 28.31 per cent, which was also significant at 1 percent level of significance. It indicates that there was significant increase in knowledge in all the individual aspects of mushroom cultivation due to training.

Table 4. Relationship between independent variables and knowledge gain about mushroom cultivation of horticulture officers (N = 25)

S.N.	Independent variables	'r'
1.	Age	0.5117**
2.	Education	0.1406
3.	Service length	0.4430*
4.	Pre-training knowledge about mushroom cultivation	-0.7734**
5.	Area of specialization	-0.2386

** Significant at 1% level of significance.

* Significant at 5% level of significance

Relationship between knowledge gain and selected personal characteristics of horticulture officers: The data presented in Table 4 reveal that dependent variable knowledge gain about mushroom cultivation was found to be significantly and positively correlated with age and service length of horticulture officers, while it was significantly but negatively correlated with pre-training knowledge about mushroom cultivation. The negative relationship of dependent variable with pre-training knowledge may be due to the reason that horticulture officers with no pre-training knowledge about mushroom might have strong curiosity and eagerness to learn more and more about mushroom cultivation on the one hand, but on the another, the officers having pre-training knowledge might not be serious

during the training which resulted into low knowledge gain.

The positive relationship of knowledge gain with age and service length indicates the fact that trainee officers had greater exposure of mushroom cultivation as they had attended a number of trainings in mushroom cultivation in the past. In contrast to this finding, Rahman *et. al.* (1993) reported higher service experience & age as constraining factors in achieving better academic course performance.

CONCLUSION

The present study revealed that the trainee horticulture officers, after attending the training programme had significantly enhanced their overall knowledge about mushroom cultivation. The knowledge gain in all the aspects viz; climate, spawning & spawn run, casing & case, composting/substrate preparation, fructification & harvesting, diseases & insects management, and post harvest management was also significantly high. In view of these findings, it is concluded that the training programme has been effective in achieving the desired outcome in terms of change in the existing knowledge level of horticulture officers about mushroom cultivation. Further, it is suggested that such training programme should be organised time to time to transfer mushroom cultivation technology to extension functionaries.

REFERENCES

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