



TRAINING NEEDS OF SCIENTIFIC MUSHROOM CULTIVATION IN DISTRICT BARABANKI OF UTTAR PRADESH

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ABSTRACT

The study was conducted in Haidergarh block District Barabanki, to identify the training needs of the mushroom cultivators. Seven Villages were selected randomly under Haidergarh block and finally 90 households were selected based on proportionate random sampling produced. A list of 10 major areas of training needs in relation to improved package of practices of mushroom cultivation was prepared. The training areas were ranked based on Training Importance. Scores were measured on three point continuum as Most Essential, Essential and Not Essential by giving scores of 3, 2 and 1 respectively. The primary data were collected using a pre-tested structured interview schedule by conducting personal interview. Findings revealed that majority of the farmers had medium level of training needs. Mushroom cultivation, subject matter relating to loan and intercultural operation were the top most training needs of the farmers and the least training need was identified in the subject related to nursery raising. The variable age and cultivation experience had negative and significant relationship with the training needs. The present study suggested that young having less exposure in requisite training related to improved package of practices of paddy and wheat cultivation may be given preference for imparting training in the prioritized areas of training as identified.

Key Words : Training needs; Babanki District; Mushroom cultivation.

Training is a process of acquisition of new skills, attitude and knowledge in the context of preparing for entry into a vocation or improving ones productivity in an organization or enterprise. It plays an important role for imparting knowledge and updating skills of the

farmers. To make training meaningful and effective, it is very much important to identify the training needs of the farmers based on which a suitable training module can be designed. It is essential to organize an appropriate training to the right people, in the right form, at the right

time. Mushrooms are macro fungi with distinctive fruiting bodies large enough to be seen by naked eyes and have significant nutritive value. They are rich in fiber and have high Vitamin B₁₂ and folic acid content. They are ideal food for patients suffering from hypertension, diabetes and obesity. Hence utilization of alternative locally available substrates for successful cultivation was investigated. Many report are availability on the suitability of various substrates for the production of oyster mushroom (Gogoi and Adhikary 2002). Mishra and Shukla (2007) attributed the oyster mushroom growth and yield to temperature substrate and Relative Humidity (moisture regime). Some of the agro wastes could be used as an alternative substrate for mushroom cultivation. Favorable climatic condition and availability of paddy straw offers tremendous scope for cultivation of oyster mushroom in Barabanki District of Uttar Pradesh. However, the farmers are ignorant about the commercial cultivation of mushroom. Keeping the above in view, the present study was undertaken to identify the main areas of training in relation to scientific way of mushroom cultivation. The study was undertaken to know the relationship of selected personnel, socio-economic and psychological characteristics of the respondents with their training needs in relation to commercial mushroom cultivation.

MATERIALS AND METHODS

The present study on training needs analysis of the farmers and rural youths of District-Barabanki was conducted by the Krishi Vigyan Kendra, Haidergarh Barabanki district. 90 farmers from 12 villages of Haidergarh block were purposively selected for the study. The selected respondents were personally interviewed. A list of 10 major component/thematic areas in relation to improved package of practices of mushroom cultivation was prepared. The major training

components identified for the study were Advantage of growing oyster mushroom, Preparation or procurement of spawn, Substrate preparation, Substrate supplementation, Spawning of substrate, Crop management, Water management, Crop protection measures, Finance and Harvesting. Training needs of farmers in mushroom cultivation was worked out with the help of a Training Need Quotient (TNQ) developed by Sidhu (1973). The formula for calculating Training Needs Quotient is $TNQ = \frac{\sum OTig}{\sum MTS} \times 100$; where OTig = Sum of the observed training scores of the items of the ith respondent. MTS = Sum of maximum scores attributed to the items rated by the ith respondents. Based on the TNQ scores obtained, the respondents were categorized into three groups viz. High, Medium and Low levels using mean (m) ± sd values. The Training Importance Score (TIS) of each item was calculated with the help of the following formula as suggested by Tantry (1989) as: $TIS = \frac{\text{Cumulative training importance score over all respondents}}{\text{Total number of respondents}}$. The training areas were ranked based on TIS values. In the present study, training importance score of each area was measured on three-point continuum as Most Essential, Essential and Not Essential by giving scores of 3, 2 and 1 respectively. The primary data collected through pre-tested structured interview schedule were tabulated, classified and analyzed by percentage, mean, standard deviation, simple correlation analysis etc. using SPSS software.

RESULTS AND DISCUSSION

Training needs in relation to improved package of practices of scientific mushroom cultivation: Table 1 revealed that majority (62.22) of the respondents in Haidergarh block had medium level of training need in relation to improved scientific mushroom cultivation practices, followed by high level of training need

Table 1 : Training needs in relation to improved package of practices of Scientific Mushroom Cultivation. (N = 90)

Sr. No	Level of training needs	Score range	N / Frequency	Percentage
1.	Low	Up to > 20	12	13.33
2.	Medium	20 – 50	56	62.22
3.	High	< 50	22	24.44
Mean = 35.00			Sd = 3.69	

Table 2 : Important training needs areas identified with respect to improved scientific mushroom cultivation practices

Sr. No.	Training needs	Mean score	Rank	Overall MS	Rank
A.	Advantage of growing oyster mushroom				
i.	Choice of species	0.8	IV		
ii.	Simple cultivation technologies	1.03	III	1.32	VII
iii.	Longer shelf life	1.95	I		
iv.	Highest productivity	1.50	II		
B.	Preparation or procurement of spawn				
i.	Wheat grain	1.06	II		III
ii.	Rice grain	1.90	I	1.15	
iii.	Jowar grain	0.70	IV		
iv.	Bajra grain	0.95	III		
C	Substrate preparation				
i.	Stem pasteurization	0.65	IV		
ii.	Hot water treatment	1.80	II	1.35	VI
iii.	Sterile Technique	1.02	III		
iv.	Chemical sterilization	1.95	I		
D	Substrate supplementation				
i.	Wheat bran	1.90	I	1.49	IV
ii.	Rice bran	1.09	III		
iii.	Mustard seed cake	1.50	II		
E	Spawning of substrate				
I	Freshly prepared (20 – 30 days old)	1.04	III		
ii.	Old spawn (3-6 month old) stored at room temperate (20 – 30 °C)	0.80	IV	1.36	V
iii.	Spawn mixed 300 g in 10 – 12 kg substrate	1.60	II		
iv.	Spawn put in side layer 400 gm in 10 – 12 kg substrate	2.00	I		
F	Crop management				
i.	Incubation	0.85	VI		
ii.	Fruit body induction	1.02	IV		
iii.	Temperature	1.85	II		
iv.	Relative humidity	2.00	I	1.03	X
v.	Light	1.40	III		
vi.	Hydrogen ion concentration (pH)	0.90	V		
vii.	Oxygen and Carbon dioxide requirement	0.65	VII		
G.	Water management				
i.	Spray of water time to time	1.75	II		
ii.	Spray of water after open the bags	2.00	I	1.59	II
iii.	Excess of water	1.04	III		
H.	Crop protection measures				
i.	Identification of diseases and their control measures	0.99	III		
ii.	Identification of pests and their control measures	1.07	II		
iii.	Proper handling techniques of sprayer / other crop protection equipment	1.35	I	1.14	IX
I	Finance				
I	Financing agencies and types of loan available for farming community	1.45	II	1.66	I
ii.	Exposure about procedures for availing loan with terms and condition for repayment	1.86	I		
J	Harvesting				
i.	Optimum time of harvesting	1.09	II		
ii.	Economic and efficient method of harvesting	1.25	I	1.17	VIII

Table: 3 Relation between the selected independent variables and the dependent variable Training Needs of the respondents in relation to improved package of practices of scientific mushroom cultivation.

Sr. No.	Selected independent variables	Correlation coefficients 'r'	't' value
1.	Age	-0.883	5.197
2.	Education	-0.936	3.788
3.	Family size	-0.870	7.140
4.	Economic status	-0.938	4.629
5.	Mushroom Unit size	-0.930	1.050
6.	Cultivation experience	-0.943	2.366
7.	Social participation	-0.901	3.993
8.	Information sources	-0.947	1.035
9.	Training exposure	-0.939	7.097
10	Knowledge level	-0.921	1.743

comprising of 24.44 per cent of the respondents and only 13.33 per cent of them low level of training need.

Important training need areas identified with respect to improved of scientific mushroom cultivation practices: Table -2 revealed that training needs of the farmers based on overall mean score obtained was found most essential in the finance having mean score of 1.66 and ranked I, followed by subject matter relating to water management mean score of 1.59 having rank II. Training was found as essential in the area of subject relating to preparation or procurement of spawn with mean score of 1.52 having rank III followed by substrate supplement with mean score of 1.49 having rank IV. The area of spawning substrate with mean score of 1.36 was ranked V followed by substrate preparation and advantage of growing oyster mushroom with mean scores of 1.35 and 1.32 having VI and VII rank respectively. The area of harvesting with means score of 1.17 and were ranked VIII. The areas of crop protection measures and crop management had the mean scores of 1.14 and 1.03 and were ranked IX and X respectively. Thus it may be inferred that the highest rank in order of training needs of the scientific mushroom cultivation in Haidergarh block of Barabanki District was found in respect of finance and the lowest rank was found in the area of crop management. This may be due to the fact that the selected scientific mushroom cultivation was not exposed to relevant trainings. The finding also revealed that only 23.11 per cent of the respondents had the exposure of undergoing one day training related to scientific mushroom cultivation. These findings were in agreement with the findings of Selvarani

and Manoharan (2003).

Relationship between the selected independent variables and the dependent variable training needs of the respondents in relation to improved package of practices of scientific mushroom cultivation: It was evident from Table 3 that independent variables age, and cultivation experience had negative and significant association with the training needs of the respondents. The negative and significant association of these variable implied that higher the age and cultivation experience of the farmers lower is the level of his training needs. It can be further explained that young aged farmers need more training in relation to improved package of practices of scientific mushroom cultivation, because they are enthusiastic and new to the farming profession and they also lack requisite farming experience. This was in agreement with the findings of Bhaskaran and Mahajan (1968), Saini and Satnam (1996), Padmarathi et.al (1998) Chawang, J.K et.al (2010).

CONCLUSION

It may be concluded that majority of the respondents in Haidergarh block had medium level of training need in relation to improved mushroom cultivation practices. Most important training need areas was identified in the field of mushroom cultivation followed by the areas of sanction of loan and intercultural operation respectively. Farmers were found ignorant about identification of mushroom therefore suffered loss in their farming enterprise. They were also ignorant about provision of appropriate crop loan schemes and procedure to obtain the same. Through farmers were

found adopting improved package of practices, they lacked exposure and expertise in relevant intercultural operations. Independent variables age, and cultivation experience had negative and significant association with the training needs of the respondents. Thus young farmers having less exposure in requisite training in relation to improve package of practices of mushroom cultivation.

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