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Training Needs of Horticulture Extension Personnel in Jammu Region of J&K State, India

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ABSTRACT

Effective extension work depends upon competent and well-trained extension personnel. Horticulture extension personnel (Horticulture Development Officers and Horticulture Technicians) occupy the focal position in transfer of technologies to the orchardists in Jammu and Kashmir. Given this a study entitled "Training needs of horticulture extension personnel in Jammu region of Jammu and Kashmir" was undertaken. Data was collected from 200 horticulture extension personnel (30 horticulture development officers and 170 horticulture technicians) working at gross root level in all ten districts of Jammu region. Training need important score was categories in to three categories viz. least important, important, most important by using mean \pm S.D technique. The finding reveals that horticulture development officer and horticulture technicians' categories Pests /disease identification and their control measures as most important training areas in technical skills where time and methods of planting was placed as least important. Similarly in case of communication skills demonstration technique was rated highest important training need area and script writing as least important. Motivation technique and programme planning were also categories as most important training need areas of supervisory skills by horticulture development officers. Two factors viz. trainings attended and information utilization sources were significantly affecting the training needs of horticulture extension personnel.

Key words : *Training; Training needs; Horticulture; Extension personnel; Jammu.*

Jammu & Kashmir is well known for its horticultural produce at national and international level. At the same time, it is difficult to maintain quality and increasing market demand in horticulture. There is a rising need to develop competency among horticulture extension personnel to make use of innovative approaches and best practices. Training is one of the effective and tested tools for performance enhancement, as well as up gradation of knowledge and skills of the personnel. Increased knowledge and skill make the

employees more productive in their workplace and thus more valuable to the organization. The ability of extension personnel to guide farmers from the awareness stage to sustained adoption of agricultural innovations depends on his trainings, experience in agriculture and skills using extension methods (Obibuaku, 1983). Training needs for extension personnel can be defined in terms of gap between job requirement and job performance (Mishra, 1990). A training need is the shortages of skills and abilities which could be reduced by education and

development (Saleh. *et al.* 2016). Study conducted by Singh *et al.* (2011) revealed that age, service experience, attitude towards agricultural profession and information sharing behaviour were most important factors to affect the training needs assessment. Further, study reveals that age and attitude towards agricultural profession were most important factors for predicting the training need assessment of Assistant Agricultural Officers of Manipur. The findings of the study conducted by Kharde *et al.* (2014) indicate that out of five broad training areas viz., Teaching, Research, Extension and training, Administration and Human relations, Frontier areas of agriculture science the training content with highest training need index were Experiential learning methods (62.40%), Research project management techniques, monitoring and evaluation (52.60%), Impact assessment of training programme (60.00%), Performance based appraisal (42.90%) and Climate change (53.30%) respectively. It was observed that the variables like scientific orientation, contribution in publication, job involvement, and achievement motivation were having significant and positive correlation with the training needs. Hence training need assessment is based on the requirement of the client system is vital for designing the training programme. Such a proactive approach to in-service training will enhance the abilities of the extension personnel to do their job and keep them up to date. Keeping in view a study entitled training needs of horticulture extension personnel in Jammu region of J&K was undertaken with two objectives viz.

1. To study the perceived training needs of horticulture extension personnel (HEP) in fruit production technology.
2. Factor influencing the training needs of the horticulture extension personnel.

METHODOLOGY

This study was conducted in Jammu region of Jammu and Kashmir. For the study sample of 200 horticulture extension personnel (30 Horticulture Development Officers and 170 Horticulture technicians) were selected by proportionate stratified random sampling method. Training needs were calculated by using training need importance score (TNIS) formula as used by Kalita (2014).

On the basis of training need importance score, items were distributed in three categories viz. least

important, important and most important by using mean \pm S.D technique separately for HDOs and Horticulture technicians, respectively. Linear regression model was employed to find out the factors influencing the training needs of the horticulture extension personnel.

RESULTS AND DISCUSSION

Importance of perceived training needs of horticulture extension personnel in technical and communication skills : Based on the training need importance score (TNIS) the items were put into three categories viz. most important, important, and least important. It is apparent from the table that, out of 22 items from both technical and communication skills, horticulture development officers rated 5 items (23%) as “most important”, 13 items (59%) as “important” and 4 items (18%) as “least important”. The mean training needs important score (TNIS) of all 22 items was 2.3023 with a standard deviation of 0.2668.

Similarly, horticulture technicians rated 3 items (14%) as “most important” 17 items (77%) as “important” and 2 items (9%) as “least important”. The mean training needs the important score of all 22 items in the case of horticulture technicians was 2.3400 with a standard deviation of 0.2703.

Table 1. Importance of training needs in technical and communication skills

TNIS categories	No.	%
<i>Horticulture development officers</i>		
Least important (up to 2.03)	4	18
Important (2.03–2.56)	13	59
Most important (Above 2.56)	5	23
<i>Horticulture technicians</i>		
Least important (up to 2.07)	3	14
Important (2.07–2.61)	17	77
Most important (Above 2.61)	2	09
Mean=2.3023	S.D=0.2668	Mean=2.3400 S.D=0.2703

Training need importance score (TNIS) of horticulture extension personnel in technical and communication skills : In the case of HDOs with regards to technical skills varieties, identification and nursery raising were found to be “most important” training need areas with training need important scores (TNIS) 2.73 and 2.60 respectively. This may be due to fact that the old traditional varietal plantation is being replaced by improved and hybrid varieties which is a new introduction in the field of horticulture. Hence may

Table 2. TNIS of horticulture extension personnel in technical and communication skills

Training areas and	Horticulture Development Officers (n= 30)		Horticulture Technicians (n=170)	
	TNIS	Categories	TNIS	Categories
Technical skill				
Identification of varieties	2.73	Most important	2.44	Important
Soil treatment	2.30	Important	2.56	Important
Nursery raising.	2.60	Most important	2.25	Important
Time of planting	1.93	Least important	1.7	Least Important
Method of planting	1.96	Least important	1.8	Least important
Spacing technique	2.16	Important	2.12	Important
Plant propagation	2.53	Important	2.33	Important
Training and Pruning	2.60	Most important	2.47	Important
Irrigation	2.16	Important	2.21	Important
Nutrient management	2.53	Important	2.5	Important
Insect/pest/ diseases identification	2.73	Most important	2.83	Most important
Control measures for insect/pest and diseases	2.57	Most important	2.82	Most important
Harvesting and handling of fruits.	2.23	Important	2.31	Important
Rejuvenation of old trees	2.40	Important	2.41	Important
<i>Communication skills</i>				
Individual contact	2.26	Important	2.15	Important
Mass contact	2.36	Important	2.52	Important
A.V. Handling	2.13	Important	2.38	Important
Computer handling	2.16	Important	2.35	Important
Demonstration technique	2.40	Important	2.42	Important
Script writing	1.76	Least important	2.07	Least important
Preparation and use of simple aids	2.00	Least important	2.52	Important
Talking ability	2.16	Important	2.32	Important

have been perceived as the “most important” training need by the H.D.Os. Similarly, for identification of insect pests (2.73 and 2.83) and their control measures (2.57 and 2.82) were also found most important skills by both horticulture development officers and horticulture technicians. The probable reason for considering this statement as most important may be because day by day new pests emerge in the horticultural crops due to ecological and environmental factors and with time, it is difficult to recall the identification of the pests. This is pertinent to mention that the horticulture development officers have wide knowledge gap (53%) in the identification of pest and their control measures. This may be a probable reason for perceiving it as the “most important” training need by the HDOs. Earlier, *Bhagat and Khurana (1991)*, *Parshad et al (2000)*, *Yadav et al (2011)* have also reported plant protection as the most important training area in their respective studies.

Similarly, other practices viz. soil treatment, spacing technique, nutrient management, plant propagation, irrigation, harvesting of fruits and

rejuvenation of old trees were found as only “important” areas of training by both HDOs and horticulture technicians. On the other hand time and method of planting were found to be the “least important” training need area of technical skill with (TNIS) 1.96 and 1.93 by the HDOs and 1.7 and 1.8 by horticulture technicians respectively (Table 2). Even though in most of the technical skills horticulture technicians possess 35 to 52 per cent knowledge gap but they perceived it only “least important” to “important” training need. It may be due to the fact that the majority (42%) of horticulture technicians had high service length, 29 to 38 years and believe that they have sufficient knowledge about these practices hence opted for “least important” and “important” training needs.

With regards to communication, extension personnel need to be efficient in thinking, with psychological reasoning to understand farmers’ problems and how to tackle them. During the present study, horticulture extension personnel perceived that training need was categorized as “important” in demonstration

techniques, developing individual and mass contacts, computer handling, A.V. handling and talking ability. This may be due to fact that extension personnel better know that they could perform better their jobs if, measures were taken to enhance their communication competencies. Preparation and use of simple aids is the cheapest and easy way of transferring the messages and is perceived as “important” by the horticulture technicians with TNIS 2.52 and “least important” by the HDOs with TNIS 2.00, because the majority of technicians were of 10th standard and never prepared such type of aids on other hands HDOs who were graduate, have prepared and used these aids during their pre-service and in-service pieces of training. The result of the investigation conducted by *Payne (2005)* indicated that employees with higher output and better performance were equipped with better communication skills. *Hanif and Waman (2013)* in their study indicated communication skills, computer and internet handling as important training need areas for an agricultural assistant.

Importance of perceived training needs of HDOs in supervisory skills : Training need for supervisory skills was responded only by HDOs and is discussed in table 3, which shows that out of 6 items of supervisory skills, respondents rated 2 items (33%) as “most important”, 3 items (50%) as “important” and 1 item (17%) as “least important”. The mean training need important score (TNIS) of all 6 items of supervisory skills was 2.2917 with standard deviation 0.0956

Table 3. Importance of training needs of HDOs in supervisory skills

TNIS categories	No.	%
Least important (up to 2.19)	1	17
Important (2.19 – 2.38)	3	50
Most important (Above 2.38)	2	33
Mean=2.2917	S.D=0.0956	

Training need importance score (TNIS) of HDOs in supervisory skills : Table 4 reveals that motivation techniques and programme planning were “most important training” need of supervisory skill with (TNIS) 2.4 each respectively. Whereas boosting the morale of subordinates followed by coordination techniques and human relations with (TNIS) 2.30, 2.26 and 2.23 were found “important” training needs of supervisory skill. It may be due to the fact that one important requirement of a successful supervisor is, recognizing problems

before they emerge into something more serious. Supervisors are responsible for planning the work. A good listener supervisor is a proactive supervisor. The study is in line with the study of *Zahrani et al (2017)* who stated that the most important areas in which extension workers wanted training to improve their competencies are the teaching-learning process, ability to motivate farmers, communication, programme planning and development.

Table 4. Training Need Importance Score (TNIS) of HDOs in supervisory skills (N=30)

Supervisory skills	TNIS	Categories
Motivation techniques	2.4	Most Important
Human relations	2.23	Important
Rapport Building	2.16	Least important
Programme planning	2.4	Most Important
Coordination techniques	2.26	Important
Boosting moral of subordinates	2.30	Important

Table 5. Factors influencing the perceived training needs of HEPs

Variables	B	Std. error	t-value	P-value
Constant	53.783	3.924	13.707	.000
Age	.000	.104	-.006	.996
Education	.777	.610	1.274	.204
Family background	-.824	1.985	-.415	.679
Service length	.029	.094	.308	.758
Trainings attended	.485	.199	2.436*	.016
Information utilization	-.544	.239	-2.274*	.024
Information dissemination	-.276	.227	-1.216	.226
Knowledge	-.035	.050	-.708	.480

R²=.080 F=2.073 p-value=0.040

* Significant at 5 per cent level of probability

Factors influencing the perceived training needs : Transfer of learning is critical to recognizing a positive rate of return, but many experts fail to realize most of the influencing factors are out of the learner’s control. However, whether or not a learner is able to successfully transfer his or her knowledge to the workplace is not wholly dependent upon the learner. Instead, there are many different types of influential factors that affect job training, and, in fact, most of them do not depend on the learner. In the present study, a linear regression model was employed to find out the factors influencing the training need of horticulture extension personnel. Eight variables viz age education family background,

service length, pieces of training attended, information utilization sources, information dissemination sources and knowledge were taken to know the effect on training need. It was evident from the Table 5 that two factors viz. training attended and information utilization sources were significantly affecting the training need of the horticulture extension personnel with t-value 2.436 and -2.274, p-value 0.016 and 0.024, respectively. This means that extension personnel who had attended training desire to attend more another training programme. This is due to fact that the individual who attends training better knows the importance of the training. On the other hand, the personnel with high utilization of information sources perceived less training need. It may be due to fact that the persons with high information utilization sources perceive that they possess sufficient knowledge and attending training is seen as a waste of time and valuable resources.

CONCLUSION

The present conclusions are based on the earlier

discussion presented in this article. It is concluded that the overwhelming majority of the sample respondents perceived training as an important tool for improving their knowledge and skill in all three aspects viz. technical, communication and supervisory. As far as concerned technical and communication skills, both horticulture development officers and horticulture technicians perceived the identification of insects, pests and their control measures as “most important” training areas whereas, time and method of planting, scriptwriting were perceived as “least important”. Similarly, in the case of supervisory skills, motivation techniques and programme planning were the most important training areas for the job of horticulture development officers. Moreover, two factors viz. training attended and information utilization sources were significantly affecting the training needs of the horticulture extension personnel.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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