

IMPACT OF TRAINING PROGRAMMES ON ENHANCEMENT OF KNOWLEDGE AND SKILL OF AGRICULTURE EXTENSION FUNCTIONARIES

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ABSTRACT

SAMETI is a part of ATMA and provides need based trainings to extension functionaries to enhance their knowledge and skill so that they can do their job more efficiently and effectively. SAMETI-Kashmir conduct its training programme at Directorate of Extension, SKUAST-Kashmir. The present study has been done to know the impact of the training programme in terms of increase in knowledge and increase in skill with 110 trainees who were trained under SAMET-Kashmir and revealed that there was an overall medium (70.6 and 47.06 %) impact of the training programmes on knowledge and skill of the trainees respectively. The study also investigates the problems that were faced by the trainees during the training programmes and indicated that majority of 58.82 per cent of the trainees reported that there were fewer field visits and demonstrations. The results further showed the relation of socio personal attributes of the trainees with the selected indicators of impact of training programme and reported that educational qualification, scientific orientation, cosmopolitaness, mass media exposure, achievement motivation had positive and significant relation with the knowledge of the trainees whereas age, experience of service, cosmopolitaness and trainings received had positive and significant correlation with the skill of the trainees. These findings suggested that a greater number of trainings should be organized by SAMETI-Kashmir to enhance the knowledge and skill of extension functionaries which in turn will help the farmers in Kashmir.

Keywords: correlation coefficient, impact, training, knowledge, skill, extension functionaries, SAMETI

INTRODUCTION

SAMETI (State Agriculture Management & Extension Training institute) is an autonomous body with greater flexibility in structure and functioning and is responsible for organizing need-based training programmes for agriculture and allied sectors (Haneef *et al.*, 2020). SAMETI push the reforms through capacity building of extension functionaries by organising need-based training programmes (Sankangoudar and Toragal, 2020).

SAMETI-Kashmir is entrusted with capacity building and human resource development of extension functionaries of line departments of government of Jammu and Kashmir to carry forward the technologies and research inputs generated to the main extension system and was started during 2009. SAMET-Kashmir is working under the overall guidance and administrative control of Directorate of Extension, SKUAST-Kashmir. The working of the institute is being managed by the Deputy directors. The expertise of Faculty of Agriculture; Faculty of Horticulture; Faculty of Veterinary Science and Animal Husbandry; Faculty of Basic Sciences SKUAST-Kashmir and other institutes of

Government of India is utilized for imparting trainings and skills to the real clientele (Anonymous, 2015).

Training is the process of systematically developing the knowledge and expertise in people for the purpose of improving performance. Technically training involves change in attitude, skills and knowledge of extension functionaries with the resultant improvement in the behaviour. For training to be effective it has to be a planned activity conducted after a thorough need analysis and target at certain competencies, most important it is to be conducted in a learning atmosphere. Perfect blending of extension functionaries, training and technology may lead to maximize the agricultural production for improving the livelihoods (Chand *et al.*, 2003).

Training is of paramount importance particularly in developing countries like India, as, training is a key strategy for human resources development and in achieving organisational objectives (Pineda, 2010). The new developmental programmes call for better and competent extension functionaries and this can be achieved by training which not only helps in increasing one's skill but also in updating their knowledge (Lande and Tripathi, 2006).

Training of extension functionaries is extremely important for state like Jammu & Kashmir, where the developmental efforts have to be strengthened for sustainable livelihoods (Slathia *et al.*, 2009).

OBJETIVE

To know the impact of training programmes on enhancement of knowledge and skill of agriculture extension functionaries conducted by sameti, skuast-kashmir

METHODOLOGY

The study was carried out in Kashmir division of Union Territory Jammu and Kashmir to know the impact of training programmes on agriculture extension functionaries conducted by SAMETI, SKUAST-Kashmir. A list of trainees and training programmes was obtained from SAMETI-Kashmir. On the basis of the list, three training programmes viz., ‘methods in profitable honey bee keeping’, ‘skill development module for kitchen gardening and home lawns’ and ‘disease and pest management for fruits and vegetables’ were selected for the study. A sample of 34 trainees were selected for the study.

Increase in knowledge and skill was measured by using well structured interview schedule containing five statements for each training programme. The statements for knowledge were quantified by 2 score for full knowledge, 1 score for partial knowledge and zero score for no knowledge. Also, the statements for skill were quantified by 2 score for high competent and 1 score to less competent. The statements covered all the training programmes that were attended by the trainees. Based on difference in score obtained on pre-training and post-training, increase in knowledge and skill was calculated. Data was analysed using SPSS software.

Descriptive statistics were used to come at conclusion.

RESULTS AND DISCUSSION

The age of the extension functionaries in the study ranged from 28-46 years and majority (61.76 per cent) extension functionaries were middle aged (39-46 years). This implies that young extension functionaries may be encouraged to participate in training programmes. Most (85.29 per cent) of the extension functionaries have post graduate degree. Majority (88.24 per cent) of the extension functionaries were male, therefore there is a need to embolden the participation of female extension functionaries in the training programmes and 79.41 per cent of extension functionaries have medium experience (7-16 years) of service. Designation of the extension functionaries showed that 61.76 per cent of the extension functionaries were Agriculture Extension Assistant (AEA), 20.59 per cent of the extension functionaries were Subject Matter Specialist (SMS), 14.71 per cent of the extension functionaries were Junior Agriculture Extension Officer (JAEO) and 02.94 per cent of the extension functionaries were Agriculture Extension Officer (AEO) from agriculture department. This indicates that AEO and JAEO may be encouraged to participate in the training programmes. Majority (79.41 per cent) of the extension functionaries had no social participation, therefore there is a need to motivate the extension functionaries to participate in the social organisations. Majority (67.65 per cent) of them have high cosmopolitaness. Majority of 67.65 percent of the extension functionaries had medium mass media exposure and 67.65 per cent of extension functionaries have medium achievement motivation. About 47.06 per cent of trainees had participated in 6-10 training programmes.

Table 1: Socio-personal attributes of selected extension functionaries

(n=34)

Sr. No.	Attributes	Category	Frequency	Percentage
1	Age	Young (28-38 years)	08	23.53
		Middle (39-46 years)	21	61.76
		Old (above 46 years)	05	14.71
2	Gender	Male	30	88.24
		Female	04	11.76
3	Education	Graduate	04	11.76
		Post graduate	29	85.29
		Doctorate	01	02.94
4	Designation	SMS	07	20.59
		AEO	01	02.94
		JAEO	05	14.71
		AEA	21	61.76
5	Experience in service	Low (up to 6 years)	05	14.71
		Medium (7 – 16 years)	27	79.41
		High (above 16 years)	02	05.88

Sr. No.	Attributes	Category	Frequency	Percentage
6	Social participation	No organisation	27	79.41
		One organisation	03	08.82
		More than one organisation	04	11.76
7	Cosmopolitaness	Low (below 2 score)	0	00.00
		Medium (3-4 score)	11	32.35
		High (above 4 score)	23	67.65
8	Mass media exposure	Low (below 6 score)	02	05.88
		Medium (7-10 score)	23	67.65
		High (above 10 score)	09	26.47
9	Achievement motivation	Low (up to 24 score)	03	08.82
		Medium (25 - 27 score)	23	67.65
		High (above 27 score)	08	23.53
10	Trainings received	Below 5	07	20.59
		6-10	16	47.06
		11-15	05	14.71
		16-20	02	05.88
		Above 20	04	11.76

Analysis of data in Table 2 showed that majority (70.6 per cent) of trainees had medium impact on knowledge. Impact on knowledge was higher for 23.5 percent of trainees whereas 5.9 percent of trainees had low impact on knowledge due to training programmes.

Table 2: Distribution of trainees based on the impact on knowledge through training programmes (n=34)

Categories	Frequency	Percentage
Low impact (below 4)	02	5.9
Medium impact (5-12)	24	70.6
High impact (13 and above)	08	23.5
Mean	9.09	
Standard deviation	4.51	

The data in Table 3 depicted the increase in knowledge of trainees in different training programmes. The increase in knowledge of trainees in the area 'integrated disease management of stone and nut fruits' was by 42.60 per cent followed by knowledge of trainees in 'management of rodents in fruit ecosystem' has increased by 39.74 per cent, knowledge of trainees in 'management of chilli wilt and corn rot management' has increased by 38.22 per cent, knowledge of trainees in 'judicious use of fungicides for plant disease

management' has increased by 35.30 per cent and knowledge of trainees in 'integrated pest management in vegetables' has increased by 35.28 per cent. This showed that there was an overall increase in knowledge of trainees from the training programme "disease and pest management for fruits and vegetables".

The result also showed that the increase in the knowledge was seen in the area of 'recent advances in nursery raising of vegetable crops', 'vertical garden in context to vegetable cultivation', 'kitchen gardening for attaining nutritional security', 'lawn making and their maintenance' and 'nutrient management of kitchen garden' by 47.05, 45.54, 38.27, 36.77 and 35.30 per cent respectively. This indicated that there is overall increase in knowledge of trainees from the training programme "module for kitchen gardening and home lawns".

The result further showed that there was an increase in knowledge of trainees in the area of 'bee disease management' by 51.44 per cent. The result also depicted that in the area of 'use of different species of honey bees, bee hives and bee keeping equipment', the knowledge of the trainees have increased by 42.60 per cent. Similarly, the knowledge of trainees in the area of 'winter management of honey bee colonies' has increased by 39.70 per cent followed by 'colony inspection and seasonal management of honey bee colonies' (38.22 %) and 'bee keeping and rearing' (35.28 %). This implied that there was an overall increase in knowledge of trainees from the training programme "methods in profitable honey bee keeping".

Table 3: Impact on knowledge of the trainees through training programmes

(n=34)

Sr. No.	Training programmes	Pre-training knowledge (%)	Post-training knowledge (%)	Increase in knowledge (%)
I	Disease and pest management for fruits and vegetables			
1	Judicious use of fungicides for plant disease management	45.60	80.90	35.30
2	Management of chilli wilt and corn rot management of capsicum	44.12	82.34	38.22
3	Integrated disease management of stone and nut fruits	42.70	85.30	42.60
4	Management of rodents in fruit ecosystem	47.06	86.80	39.74
5	Integrated pest management in vegetables	47.06	82.34	35.28
II	Module for kitchen gardening and home lawns			
1	Recent advances in nursery raising of vegetable crops	39.71	86.80	47.09
2	Vertical garden in context to vegetable cultivation	36.80	82.34	45.54
3	Kitchen gardening for attaining nutritional security	48.53	86.80	38.27
4	Lawn making and their maintenance	48.53	85.30	36.77
5	Nutrient management of kitchen garden	45.60	80.90	35.30
III	Methods in profitable honey bee keeping			
1	Use of different species of honey bees, bee hives and bee keeping equipment	42.70	85.30	42.60
2	Bee disease management	30.90	82.34	51.44
3	Colony inspection and seasonal management of honey bee colonies	45.60	83.82	38.22
4	Bee keeping and rearing	47.06	82.34	35.28
5	Winter management of honey bee colonies	44.12	83.82	39.70

The data in Table 4 depicted that majority (47.06 per cent) of the trainees had medium impact on knowledge followed by 35.29 per cent of the trainees had high impact on knowledge whereas 17.65 per cent of trainees had low impact on knowledge because of training programmes.

Table 4: Distribution of trainees based on the impact on skill through training programmes

(n=34)

Categories	Frequency	Percentage
Low impact (below 6)	06	17.65
Medium impact (7-13)	16	47.06
High impact (14 and above)	12	35.29
Mean	10.59	
Standard deviation	3.89	

The data in Table 5 reported that there was an increase in skill of trainees in the area of “management of chilli wilt and corn rot management” by 39.71 per cent followed by ‘rodents in fruit ecosystem’ (36.80 %), ‘integrated disease management of stone and nut fruits’ (36.74 %), ‘integrated pest management in vegetables’ (35.30 %) and ‘judicious use of fungicides for plant disease management’ (35.28 %). This indicated that there was overall increase in skill of trainees from the training programme “disease and pest management for fruits and vegetables”.

The results also showed that the maximum increase in skill was seen in ‘vertical garden in context to vegetable cultivation’ followed by ‘recent advances in nursery raising of vegetable crops’, ‘nutrient management of kitchen garden’, ‘lawn making and their maintenance’ and ‘kitchen gardening for attaining nutritional security’, by 36.80, 36.74, 35.30, 35.21 and 30.80 per cent respectively. This indicated that there was overall increase in skill of trainees from the training programme “module for kitchen gardening and home lawns”.

The results further indicated that there was an increase in skill of trainees in the area of 'bee disease management' by 36.80 per cent. In the area of 'use of different species of honey bees, bee hives and bee keeping equipment', the skill of the trainees have increased by 36.74 per cent. Similarly, the skill of trainees in the area 'colony inspection and

seasonal management of honey bee colonies' has increased by 35.30 per cent followed by 'winter management of honey bee colonies' (35.29 %) and 'bee keeping and rearing' (33.86 %). This implied that there was overall increase in skill of trainees from the training programme "methods in profitable honey bee keeping".

Table 5: Impact of training programme on skill of the trainees from agriculture department

(n=34)

Sr. No.	Training programmes	Pre-training skill (%)	Post-training skill (%)	Increase in skill (%)
I	Disease and pest management for fruits and vegetables			
1	Judicious use of fungicides for plant disease management	55.90	91.18	35.28
2	Management of chilli wilt and corn rot management of capsicum	50.00	89.71	39.71
3	Integrated disease management of stone and nut fruits	51.50	88.24	36.74
4	Management of rodents in fruit ecosystem	52.94	89.71	36.80
5	Integrated pest management in vegetables	54.41	89.71	35.30
II	Module for kitchen gardening and home lawns			
1	Recent advances in nursery raising of vegetable crops	51.50	88.24	36.74
2	Vertical garden in context to vegetable cultivation	50.00	86.80	36.80
3	Good cultivation practices for kitchen gardening	54.50	85.30	30.80
4	Lawn making and their maintenance	54.50	89.71	35.21
5	Nutrient management of kitchen garden	52.94	88.24	35.30
III	Methods in profitable honey bee keeping			
1	Use of different species of honey bees, bee hives and bee keeping equipment	51.50	88.24	36.74
2	Bee disease management	50.00	86.80	36.80
3	Colony inspection and seasonal management of honey bee colonies	52.94	88.24	35.30
4	Bee keeping and rearing	52.94	86.80	33.86
5	Winter management of honey bee colonies	50.00	85.29	35.29

The data in the Table 6 revealed the problems that were faced by the extension functionaries during the training programme. The problems expressed by the trainees were tabulated along with frequency, per cent and ranks.

In order of priority, majority of 58.82 per cent of the trainees reported that there were less field visits and demonstrations, followed by 55.88 per cent of trainees reported that there were no lodging and boarding facility, 50.00 per cent of trainees indicated the communication gap

between trainees and training organisation, 41.18 per cent of the trainees said that latest techniques were not incorporated, 29.41 per cent of trainees reported about the odd timings of the training programmes, 26.47 per cent of trainees reported that some trainers were not communicable, 23.53 per cent of trainees indicated short duration training, 20.59 per cent of trainees reported that transportation allowance were not paid and 14.71 per cent of trainees reported that training programmes were conducted during the winter season.

Table 6: Distribution of trainees according to the problems faced during the training programme

(n=34)

Sr. No.	Problems	Frequency	Percentage	Rank
1	Less field visits and demonstration	20	58.82	I
2	No Lodging and boarding facility	19	55.88	II
4	Transport allowance not paid	07	20.59	VII
5	Communication gap between trainees and training organisation	17	50.00	III
6	Some speakers are not communicable	09	26.47	V
7	Latest techniques not incorporated	14	41.18	IV
8	Short duration training	08	23.53	VI
9	Odd timings of training	10	29.41	V
10	Training programmes are organised in winter season	05	14.71	IX

From Table 7, it is clear that the socio-personal characteristics of trainees *i.e.*, education, cosmopolitaness, mass media exposure and achievement motivation had positive and significant relation with the impact on knowledge but age, experience of service, social participation and trainings received had no correlation with the impact on knowledge

of the trainees whereas the socio-personal characteristics *i.e.*, age, experience of service, cosmopolitaness and trainings received had positive and significant correlation with the impact on skill but education, social participation, mass media exposure and achievement motivation had no correlation with the impact on skill of the trainees.

Table 7: Correlation for knowledge and skill with socio-personal characteristics

(n=34)

Socio-personal characteristics	Knowledge		Skill	
	Correlation coefficient ('r' value)	'p' value	Correlation coefficient ('r' value)	'p' value
Age	0.252	0.151	0.716**	0.000
Educational qualification	0.507**	0.002	0.086	0.628
Experience of service	0.024	0.893	0.399*	0.020
Social participation	-0.151	0.394	-0.480	0.004
Cosmopolitaness	0.371*	0.031	0.387*	0.024
Mass media exposure	0.536**	0.001	0.306	0.078
Achievement motivation	0.362*	0.035	0.333	0.054
Trainings received	0.208	0.238	0.545**	0.001

* Significant at 0.05

** Significant at 0.01

CONCLUSION

It is evident from the study that the training programmes had significant impact on enhancement of knowledge and skill of the trainees. The reason might be that SAMETI-Kashmir is conducting need-based training programmes to upgrade the knowledge and skill of extension functionaries. The results also showed that majority of trainees reported that there were fewer field visits and demonstrations.

It was clear from the results that the independent variables; educational qualification, scientific orientation, cosmopolitaness, mass media exposure, achievement motivation had positive and significant relation with the knowledge but age, experience of service, social participation,

and trainings received had no correlation with the knowledge of the trainees.

The result further revealed that the socio-personal variables age, experience of service, cosmopolitaness and trainings received had positive and significant correlation with the skill but educational qualification, social participation, scientific orientation, mass media exposure, achievement motivation had no correlation with the skill of the trainees.

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