

An evaluation of training programmes conducted by Krishi Vigyan Kendra, Tumkur, Karnataka

**MH SHANKARA, HS MAMATHA, KM SRINIVASA REDDY and
NAGAPPA DESAI**

Krishi Vigyan Kendra, Konehally, Tumkur, Karnataka

Email for correspondence: shankrimh@gmail.com

ABSTRACT

Krishi Vigyan Kendras (KVKs) organise trainings to work closely with trainees in developing a more skilled and educated workforce. KVK has to develop and adopt on-campus and off-campus training programmes. The training programmes are multipurpose to cover not only the varied needs of a person but also the entire needs of a village or community. Trainings of two batches of 38 and 33 Bhuchethana facilitators (extension functionaries of State Agriculture Department) were conducted at KVK during 2012-13. Pre- and post-evaluation of the trainees was done to find out the level of change in their knowledge and skills after undergoing training. Cent per cent of trainees agreed that they did not have any knowledge on importance of micronutrients in plants, recommended dosages of micronutrients to plants, information on integrated nutrient management, differentiation of incidences of pests and diseases and differentiating between beneficial and harmful pests. Cent per cent of trainees had good knowledge and could develop skill in the area mentioned above. These results show the importance of trainings in the change of knowledge and skills of the personnel and in turn it helps in adoption of technologies learnt in the training programmes. It shows that the training programmes conducted by KVKs are more effective in changing the knowledge and skill of the trainees (Bhuchethana facilitators). Cent per cent changes in the knowledge and skill of the trainees were observed after conducting pre- and post-evaluation. The majority of the respondents agreed that the information given by the trainers was more informative and helped in changing their knowledge and skill.

Keywords: Training; knowledge; skill; respondents

INTRODUCTION

Training provides an opportunity to the farmers to get awareness of agricultural technologies as well as the shift in agricultural development approach through farming enterprises. Human resource is the most precious resource for any country. It is

however not the numerical but the qualitative strength of the people which forges a country ahead towards progress and prosperity. It is basically the development of human resources that brings about socio-economic or political-cultural transformation of a society. India faces the most challenging task of transferring the fast emerging

agricultural technologies to sustain and increase in farm productivity and economic viability of farming. A variety of extension programmes are implemented for creating awareness, educating and motivating the farmers, farm women and rural youth to adopt and manage the new agricultural technologies in the field. This is one of the major contributing factors for making India a food surplus country (Samanta and Gowda 2003).

India has multiple public extension systems. Mainly the Indian Council of Agricultural Research (ICAR) institutes, State Agricultural Universities and State Agricultural Departments are involved in transfer of technology. The Department of Agriculture and Cooperation under the Union Ministry of Agriculture and the provincial (state) Departments of Agriculture are primarily responsible for the transfer of technology to the farmers. National agricultural extension systems worldwide including India have undergone major changes during the past two or more decades (Swanson 2008).

The Krishi Vigyan Kendra (KVK) an educational institution offers a very good opportunity to farmers by organising trainings to work closely with trainees in developing a more skilled and educated workforce. KVK has to develop and adopt both on-campus and off-campus trainings. The training programmes of KVK are multipurpose to cover not only the varied

needs of a person but also the entire needs of a village or community. It covers agricultural technology, home crafts, childcare, family welfare, cooperation, animal rearing and management, fisheries, beekeeping, cottage industries etc depending upon the needs of an area and the people. KVKs impart trainings and education with a view to raise the level of knowledge, attitudinal changes and testing and transferring of recommended improved farm technologies so as to bridge the gap between production and productivity and also to increase self employment opportunities among the farming community. The training programmes (on- or off-campus) of KVKs are being conducted for fulfilling the KVK mandate.

Training to farmers encompasses all the roles of a farmer instead of looking at him only as a producer. Hence KVK, Tumkur, Karnataka conducts several training programmes both on-campus and off-campus every year for farmers, farm women and rural youth. The training programmes are planned so as to meet the immediate requirements of the farming community. Trainings are scheduled at appropriate time so as to impart knowledge of suitable technology before the start of the season. Because of the diversity in crop, climate and different methods of cultivation farmers are grouped as farmer interest groups so as to provide appropriate training packages to the groups. This KVK has concentrated on training to the rural

community for getting acquainted with special skills through trainings to secure some employment or practice on their farms. Efforts have also been concentrated to empower the women by giving them vocational trainings. The impact evaluation of the trainings organised by the KVK needs to be done to identify the constraints and impacts (Anonymous 2002).

With this background the pre- and post-evaluation has been conducted to know the knowledge and skills of the trainees before and after the training to understand how the training programmes have changed the knowledge and skills of the trainees. The advantage of assessing a knowledge, attitude and practice after training of farmers on a given agro-technology is one of the tools for information on the effectiveness of training (Adhikarya 1996).

METHODOLOGY

The present evaluation study was conducted at the Krishi Vigyan Kendra, Tiptur, Tumkur district of Karnataka state. The major crops of the district include cereals like paddy, Ragi and maize; pulses like green gram, red gram etc; oilseeds like groundnut, sunflower, castor etc; minor millets like foxtail millet and little millet; vegetables such as tomato, brinjal, chilli; plantation crops like coconut, areca nut; fruit crops like papaya, mango, sapota etc. A training programme of two batches of 38

and 33 Bhuchethana facilitators (extension functionaries of State Agriculture Department) was conducted at KVK during 2012-13. To understand the knowledge and skill of the trainees before and after the training programme a pre-tested questionnaire was used and the data collected were pooled from both the batches and analyzed using statistical tools.

RESULTS and DISCUSSION

Since the facilitators under Bhuchethana programme were selected based on the minimum of SSLC (10th std) qualification they could read and write. Because of this reason the questionnaire was used instead of schedule to collect the data. Majority of the respondents were well educated where 44 (62%) respondents completed maximum of SSLC, 13 (18.30%) completed PUC, 5 (7%) were educated up to JOC, 7 (9.9%) completed under graduation and 2 (2.8%) were graduated with double degree.

Data in the Table 1 depict that in the pre-evaluation test majority of the trainees opined that not having any knowledge on mandates of Bhuchethana programme (93.00%), roles and responsibilities of facilitators (93.00%), information on Krishi Vigyan Kendra (81.70%), identification of nutritional deficiency symptoms in plants (97.20%), recommendation of fertilizer dosages to crops (97.20%), information on soil and

water testing (90.15%), importance of soil and water testing (90.15%), soil sampling method for testing (97.20%), seed treatment (95.80%), method of seed production and its uses (98.50%), presence of bio-fertilizers (97.20%), use the bio-fertilizers (98.50%), integrated pest and disease management (95.80%), management of nutrients in horticulture crops (93.00%), scientific postharvest technologies (90.15%), improved practices in dairy farming (87.30%), importance and production practices in fodder for dairy farming (95.80%), importance of nutritive food (76.00%), value addition to food grains (93.00%), preparation of value added products in food crops (97.20%), Raitha Shakthi groups (78.80%) and Raitha Kshethra Patashale (97.20%). Cent per cent of trainees agreed that they did not have any knowledge on importance of micronutrients in plants, recommended dosages of micronutrients to plants, information on integrated nutrient management, differentiation of incidences of pests and diseases and differentiating between beneficial and harmful pests. The outcome of the training programme was understood by evaluating the trainees using post-evaluation questionnaire. Cent per cent of the trainees had good knowledge and could develop skill in the area mentioned above. These results show the importance of training in the change of knowledge and skills of the personnel and in turn it helps in adoption

of technologies learnt in the training programmes. This is in conformity with the study of Singh et al (2010) wherein they found that the t-values of difference between pre- and post-training mean knowledge scores of all the practices of beekeeping were significant ($p < 0.05$). In practices such as breeding of honeybees and bee enemies they had comparatively little pre-training knowledge but after training significant gain in level of knowledge was achieved in all the practices.

Data in the Table 2 indicate the opinion of the trainees regarding the information given to them by the trainers and also how the trainers information influenced the trainees. A good number of trainees said that the mandates of Bhuchethana programme (97.20%), roles and responsibilities of facilitators (98.50%), soil and water management practices (97.20%), identification of nutrition deficiency symptoms in plants and their management at critical stages (98.50%), recommendation of fertilizers based on results of soil and water testing for different crops (98.50%), importance of bio-fertilizers and seed treatment (98.50%), integrated nutrient management (95.80%), seed production practices (97.20%), improved practices in horticulture crops (98.50%), dairy farming and importance of fodder production (94.40%) and importance of Raitha Shakthi groups (97.20%) gave them more information. Cent

Table 1. Change in the knowledge and skill of Bhuchethana facilitators after going through training (n= 71)

Statement	Pre-evaluation		Post-evaluation	
	Yes	No	Yes	No
Do you know about the mandates of Bhuchethana programme	5 (7.00)	66 (93.00)	71 (100)	-
Do you know about roles and responsibilities of Anuvugararu	5 (7.00)	66 (93.00)	71 (100)	-
Do you know about the working of Krishi Vigyan Kendras	13 (18.30)	58 (81.70)	71 -	-
Do you know about the working of Dept of Agri Hort/Forestry/Animal Science etc	57 (80.30)	14 (19.70)	71 (100)	-
Do you know about identification of nutritional deficiency symptoms in plants	2 (2.80)	69 (97.20)	71 (100)	-
Do you know about recommendation of fertilizer dosages of crops	2 (2.80)	69 (97.20)	71 (100)	-
Do you know about importance of micronutrients in plants	- (100)	71 (100)	71 -	-
Do you know about recommended dosages of micronutrients to plants	- (100)	71 (100)	71 -	-
Do you know about the soil and water testing	7 (9.85)	64 (90.15)	71 (100)	-
Do you know about soil sampling method for testing	2 (2.80)	69 (97.20)	71 (100)	-
Do you know about integrated nutrient management	6 (8.50)	65 (91.50)	71 (100)	-
Do you know about seed treatment	3 (4.20)	68 (95.80)	71 (100)	-
Do you know about method of seed production and its uses	1 (1.50)	70 (98.50)	71 (100)	-
Do you know about presence of bio-fertilizers	2 (2.80)	69 (97.20)	71 (100)	-
Do you know how to use the bio-fertilizers	1 (1.50)	70 (98.50)	71 (100)	-

Statement	Pre-evaluation		Post-evaluation	
	Yes	No	Yes	No
Can you differentiate between the incidence of pest and diseases	-	71 (100)	68 (95.80)	3 (4.20)
Can you differentiate between beneficial and harmful pests	-	71 (100)	69 (97.20)	2 (2.80)
Do you know about integrated pest and disease management	3 (4.20)	68 (95.80)	71 (100)	-
Do you know about management of nutrients in horticulture crops	5 (7.00)	66 (93.00)	71 (100)	-
Do you know about scientific post harvest technologies	7 (9.85)	64 (90.15)	71 (100)	-
Do you know about improved practices in dairy farming	9 (12.70)	62 (87.30)	71 (100)	-
Do you know about importance and production practices in fodder for dairy farming	3 (4.20)	68 (95.80)	71 (100)	-
Do you know about importance of nutritive food	17 (24.00)	54 (76.00)	71 (100)	-
Do you know about value addition to food grains	5 (7.00)	66 (93.00)	71 (100)	-
Do you know about preparation of value added products in food crops	2 (2.80)	69 (97.20)	63 (88.80)	8 (11.20)
Do you know about Raitha Shakthi groups	15 (21.20)	56 (78.80)	71 (100)	-
Do you know about Raitha Kshethra Patashale	2 (2.80)	69 (97.20)	71 (100)	-

Data in the parentheses indicate percentage

Table 2. Opinion of Bhuchethana facilitators about the training programmes organized by KVK (n= 71)

Statement	Information about the contents			Knowledge gained		Nil
	More information given	Less information given	Accurate information not given	Well	Less	
Mandates of Bhuchethana programme	69 (97.20)	2 (2.80)	-	69 (97.20)	2 (2.80)	-
Roles and responsibilities of Anuvugararu	70 (98.50)	1 (1.50)	-	70 (98.50)	1 (1.50)	-
Soil and water management practices	69 (97.20)	2 (2.80)	-	69 (97.20)	2 (2.80)	-
Soil and water sampling methods and demonstration	71 (100)	-	-	71 (100)	-	-
Identification of nutritional deficiency symptoms in plants and management at critical stages	70 (98.50)	1 (1.50)	-	70 (98.50)	1 (1.50)	-
Recommendation of fertilizers based on result of soil and water testing for different crops	70 (98.50)	1 (1.50)	-	70 (98.50)	1 (1.50)	-
Improved practices in dry land farming	71 (100)	-	-	71 (100)	-	-
-Importance of bio fertilizers and seed treatment	70 (98.50)	1 (1.50)	-	70 (98.50)	1 (1.50)	-
Integrated nutrient management	68 (95.80)	3 (4.20)	-	68 (95.80)	3 (4.20)	-
Seed production practices	69 (97.20)	2 (2.80)	-	69 (97.20)	2 (2.80)	-
Improved practices in horticulture crops	70 (98.50)	1 (1.50)	-	70 (98.50)	1 (1.50)	-
Integrated pest and disease management	71 (100)	-	-	71 (100)	-	-
Dairy farming and importance of fodder production	67 (94.40)	4 (5.60)	-	67 (94.40)	4 (5.60)	-
Importance of nutrition garden	71 (100)	-	-	70 (98.50)	1 (1.50)	-
Importance of value addition to food grains	71 (100)	-	-	71 (100)	-	-
Importance of Raitha Shakthi groups	69 (97.20)	2 (2.80)	-	70 (98.50)	1 (1.50)	-
Raitha Kshethra Patashale	71 (100)	-	-	71 (100)	-	-

Data in the parentheses indicate percentage

per cent trainees agreed that soil and water sampling methods and demonstration, improved practices in dry land farming, integrated pest and disease management, importance of nutrition garden, importance of value addition to food grains and Raitha Kshethra Patashale had provided detailed information. This implies that the trainers of Krishi Vigyan Kendra and from other institutes were well versed with information and had collected enormous information to train the trainees more effectively.

Regarding facilities provided in the training programme (Table 3) as part of learning situation highest number of trainees agreed that the methods used in training programme (95.80%) such as group discussion, field visits, method demonstration etc; training aids (97.20%)

such as LCD, black board, white board, specimens, literatures etc; the facilities like boarding and lodging (88.70%) and field visits (98.50%) were very good and helped more in understanding the concept of technology. The majority of the trainees were happier about the overall arrangements of the training programme. This indicates that the importance of different training methods and aids can be helpful in achieving better learning situation and in turn help the trainees to gain more knowledge and skills which enhances the adoption of learnt technologies in real life situations.

CONCLUSION

The above findings clearly indicate that the KVKs are realising the objectives of the training programmes in terms of achieving desired outcomes and impacts.

Table 3. Opinion of Bhuchethana facilitators about the facilities provided during the training programme organized by the KVK (n= 71)

Statement	Opinion			
	Very good	Good	Fair	Not good
Training programme	68 (95.80)	2 (2.80)	1 (1.40)	-
Boarding and lodging	63 (88.70)	6 (8.50)	2 (2.80)	-
Training programme methods	68 (95.80)	2 (2.80)	1 (1.40)	-
Training aids used in training programme	69 (97.20)	2 (2.80)	-	-
Field visit	70 (98.50)	1 (1.50)	-	-

Data in the parentheses indicate percentage

More regular evaluation studies are required to determine the trainings by the KVKs and evaluation should be part and parcel of all extension programmes.

REFERENCES

- Adhikarya R 1996. Strategic extension campaign: increasing cost - effectiveness and farmers' participation in applying agricultural technologies. Retrieved April 8, 2004, from <http://www.fao.org/sd/EXdirect/EXan0003.htm>.
- Anonymous 2002. Report of the committee on streamlining the functioning of Krishi Vigyan Kendras in the country. Division of Agricultural Extension, Indian Council of Agricultural Research, Krishi Anusandhan Bhawan, Pusa, New Delhi, India.
- Samanta R and Gowda M 2003. Krishi Vigyan Kendra: the capacity builder of farmers. *Kisan World* **4**: 41-43.
- Singh K, Peshin R, Saini SK 2010. Evaluation of the agricultural vocational training programmes conducted by the Krishi Vigyan Kendras (Farm Science Centres) in Indian Punjab. *Journal of Agriculture and Rural Development in the Tropics and Subtropics* **111(2)**: 65-77.
- Swanson BE 2008. Global review of good agricultural extension and advisory service practices. FAO, Natural Resources Management and Environment Department, Rome. URL <http://www.fao.org/docrep/011/i0261e/i0261e00.htm>.

Received: 11.06.13

Accepted: 12.11.13