



TECHNOLOGY TRANSFER TO FARMERS AND ITS IMPACT ON THEIR LIVELIHOOD

Dimpy Raina*

Krishi Vigyan Kendra Ferozepur, Punjab

*Corresponding Author's E-mail: dimpy.raina@gmail.com

ABSTRACT : The present study was focused on technology transfer to farmers by Krishi Vigyan Kendra Ferozepur and their impact on self employment and up gradation of their livelihoods. Krishi Vigyan Kendra Ferozepur had conducted vocational/short term trainings for rural youth/farmers and extension functionaries on cultivation of button and dhingri mushroom, bee keeping, dairy farming, preservation of fruits and vegetable, protected vegetable cultivation. A total of 167 trainees were selected as the respondents of the trainings. The findings revealed that more than 41.31% respondents were belonging to 30-40 years age group and about 67.66 per cent respondents were educated. Half of the respondents were belong to schedule caste families and landless. About 27.1 per cent of the trainees had training on bee keeping, 24.9 per cent on dairy farming, and 23.3 per cent on cultivation of button and dhingri mushroom, 15.0 per cent of the trainees received training on preservation of fruits and vegetable. Majority of the trainees had adopted the skills on self sustainable level/household level with highest adoption in cultivation of button and dhingri mushroom (69.0%), 58% in bee keeping followed by 36.0 % in dairy farming, 20% in fruits and vegetable preservation. The number of adoption of protected vegetable cultivation was lowest but found highest adoption at commercial level. Economic impact of trainings at self sustainable level/household level is quite visible in terms of income generation as trainees had started and adopted skills as subsidiary or main occupation.

Keywords : Impact, adoption, vocational training, sustainable level, household level.

Agricultural innovations and diffusion of new technologies are key drivers to attain food security in the country besides providing farmers a competitive edge over traditional farming, thus facilitating better standards of living. To realize their true potential, farmers must have access to the state-of-the-art technologies, necessary inputs and related information in all the segments, be it crop, livestock, forestry or fisheries. To cater to the needs of farmers and for transfer of technology from lab to land, Krishi Vigyan Kendras (KVKs) have been established by various State Agriculture Universities SAUs as well as Government under Indian Council of Agricultural Research ICAR system in all the states. KVKs are the real carriers of frontline technologies and impart knowledge and critical input support for the farmers. The KVKs have twin roles – one is training of farmers in new technologies and another is demonstration. Training means to bring about continuous improvement in quality of work performed by the individuals and an important tool to bring improvement in the skills of the individual and apply it to the performance of his or her specific work situation. One of the important mandates

of KVK's is to impart trainings to rural youth/farm women so that they can become self-employed and raise the socioeconomic standard of their family, ultimately of the society. Impact assessment has emerged as an important aspect to measure the effectiveness of training programmes for the improvement of livelihood and living standards of people in order to bring a more sustainable change. Along with qualitative effects of programmers it also measures the extent to which its goals are attained, so that suitable changes can be made to make the programme more effective (Sara, 3). Keeping in view, the present study was undertaken at KVK Ferozepur with objectives to know the socio personal characteristics of the trainees and to find out impact of various vocational training programmes conducted in the discipline of horticulture, Mushroom, dairy farming, home science and bee keeping.

MATERIALS AND METHODS

KVK Ferozepur organized different trainings for the farmers, farm women and rural youth like mushroom cultivation, vegetable cultivation under low tunnel technology, Preservation of fruits and vegetables, dairy farming and bee keeping etc. and an

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ex-trainees sammelan were organized at KVK, Ferozepur, in which trainees who had acquired vocational trainings on above said fields were invited. The data regarding the impact of various agricultural training was collected from 167 extrainees through pre structured questionnaire. Impact was studied in terms of adoption of the occupation at small and large scale and income generated from the occupation. The collected data were processed, tabulated, classified and analyzed in terms of percentage in light of the objective of the study.

RESULTS AND DISCUSSION

It was revealed from the Table 1 that majority (41.31%) of the trainees were belonged to age category 30-40 years and 26.94 per cent of the trainees were in 20-30 years age group and 22.75 per cent trainees were in 40-50 and only 8.98 per cent were of old age category. It clearly shows that the risk taking and enthusiasm for new innovation adoption always lies within the middle and young generation of the society. Around half (59.28%) of the respondents were from scheduled caste category and 40.71% of the respondents belonged to general category. As depicted from the Table 1, about 67.66 per cent of the respondents were educated and only 32.33 per cent of the trainees were illiterate. A majority (74.85%) of the respondents were married while 25.14% of the respondents were unmarried. More than one third of the respondents (62.87%) were indulged in farming while 37.12% of the respondents were either doing service or into business. Regarding the land holding of the respondents, 55.68% were small farmers having land upto 4 acres and only 44.31% of the respondents were landless. Around two third of the respondents (64.67%) were living in joint families while 35.32% were from the nuclear families. As regards their family income, 34.13% of the respondents had income between fifty thousand to one lakh, followed by 40.71% respondents having income from one to two lakhs, whereas the remaining had income between upto fifty thousand.

Table 1 : Socio-personal profile of trainees.

n=167

Characteristics	No. of trainees	Percentage
Age (years)		
20-30	45	26.94
30-40	69	41.31
40-50	38	22.75
50 and above	15	8.98

Caste		
General	68	40.71
Scheduled Caste	99	59.28
Education		
Illiterate	54	32.33
Educated	113	67.66
Marital status		
Married	125	74.85
Unmarried	42	25.14
Occupation		
Farming	105	62.87
Others (Service, business etc.)	62	37.12
Land holding		
Landless	74	44.31
Small (upto 4 acres)	93	55.68
Type of family		
Nuclear	59	35.32
Joint	108	64.67
Family income		
Upto 50K	42	25.14
50K – 1 lakh	57	34.13
1 lakh- 2 lakh	68	40.71

As it is revealed from the Table 2, most of these trainees had received one or more trainings on different aspects. About 27.1 per cent of the trainees had training on bee keeping, 24.9 per cent trainees received training on dairy farming, 23.3 per cent of them had training on Cultivation of button and Dhingri mushroom cultivation, around 15.1 per cent of the trainees received training on preservation of fruits and vegetable.

Table 2 : Training received by the trainees.

S. No.	Title of the Training course	No. of respondents n=167	%age
1.	Bee keeping	53	27.1
2.	Dairy farming	33	24.9
3.	Cultivation of button and Dhingri mushroom cultivation	61	23.3
4.	Preservation of fruits and vegetables	20	15.1

Table 3 : Training adopted at commercial/self sustainable level by the trainees.

Name of specific technology/skill transferred	No. of participants	No. of adoption	% of adoption	Self sustainable level/ household level		Commercial scale	
				Nos.	%age	Number	%age
Cultivation of button and Dhingri mushroom cultivation	61	42	69	36	86	6	14
Preservation of fruits and vegetables	20	4	20	3	75	1	25
Dairy farming	33	12	36	9	75	3	25
Bee keeping	53	31	58	21	63	10	39

As evident from the Table 3 that majority of the trainees had adopted the vocational training on domestic level. Data in table revealed that about 69 per cent of the trainees who have received mushroom training had adopted the occupation more for self sustainable level means for his house hold level (86 %) and only 14 per cent had adopted as commercial level because they have less knowledge of market availability and resources. Same trend of 58 per cent of adoption was seen in bee keeping trainee with highest adoption at domestic level (63.0%) and lowest (39.0) adoption at commercial level due to less space availability to accommodate boxes, problem in migration of bees and lower man power. The adoption rate of dairy farming was 36 per cent with small dairy units around 75% to fulfill household requirements of milk, milk products and other dairy products as they couldn't afford more than 2-3 dairy animals and cost of their maintenance. Commercial scale adoption (25.0%) in dairy farming was seen among trainees who are more educated, with financial income around 1-2 lakh and more than 6-12 dairy animals. Individuals with trainings of preservation of fruits and vegetables and Stitching of garments trainings were seen with 20 percent of adoption with highest 75% at household level than commercial level 25%. Thus it is indicated that these training had positive monetary impact on the life of the trainees as they started earning money (who adopted on commercial scale) and others added to their family income by saving money by doing their own work rather than getting it done by others. It has also been reported by Joseph and Padaria (1) that the KVK training programme had a positive impact in enhancing the maize yield. Kijima (2) reported impact of trainings on enhancing the rice production in Uganda. Schreinemacher (4) also found that 31% of the trained farmers who had initially adopted the technology experienced significant income gains from the training.

training has a significant positive impact on agricultural production diversity and sustainable agriculture practices in both the short and long term.

Table 4 : Economic Impact of technology at Self sustainable level/household level.

Training	Economic Impact of technology at Self sustainable level/household level
Cultivation of button and Dhingri mushroom cultivation	₹ 6000-15000/per season (sept-march) from compost of 3 quintals wheat busa for dhingri mushroom production.
Preservation of fruits and vegetables	₹ 3000-4000 per month at domestic level
Dairy farming	₹ 10,000-12,000 per month/ 3-4 dairy animals
Bee keeping	₹ 10,000-1 lac / 5-50 boxes/ per annum

Impact of these vocational trainings is quite visible in terms of income generation as after getting training as trainees had started and adopted vocational trainings as subsidiary or main occupation. The data tabulate in Table 4 showed that trainees are practicing cultivation of button and Dhingri mushroom cultivation thereby earning ₹ 6000-15000/per season, Preservation of fruits and vegetables trainees reported income generation only ₹ 3000-4000 per month at domestic level, Dairy farming ₹ 10,000-12,000 per month/ 3-4 dairy animals and Bee keeping ₹ 10,000-1 lac / 5-50 boxes/ per annum at household level and thereby earning to meet livelihood. To further increase the adoption, KVK Ferozepur is trying to remove hindrances in adoption of this enterprise (e.g. uneasy availability of loan from banks, lesser availability of equipments etc.) by close association with district administration, line departments and other stakeholders.

CONCLUSION

From the sample of 167 respondents most of had received more than one training. As majority of respondents were of 30-40 years old, educated and landless so percentage of adoption was higher at self sustainability level to meet and manage their livelihood. Most of these trainees had received one or more trainings on different aspects. Adoption rate was highest in mushroom cultivation and bee keeping vocational trainings. Implication of agricultural technologies trainings at scientific grounds after and in income generation at self sustainability level and commercial level depicted that these vocational training had positive monetary impact on the life of the trainees as they started earning money and others added to their family income by saving money by doing their own work rather than getting it done by others. Thus, KVK Ferozepur has played pivotal role in imparting vocational trainings to farmers, farm women and rural youth through its well equipped operational demonstration unit at KVK Ferozepur.

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