

Impact of Krishi Vigyan Kendra's trainings on knowledge and adoption of cotton production technologies

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ABSTRACT

The study was conducted in Sriganganagar on trainees trained by ZARS Krishi Vigyan Kendra Sriganganagar. A sample of 120 farmers was selected among the trainees who has under gone trainings in KVK from Sriganganagar block. Knowledge improvement and adoption of technologies was studied after the season. The result of the study pointed out that there was significant increase of KVK beneficiaries after the start of KVK. The study revealed that KVK trainings were effective and significantly increased knowledge levels of farmers about cotton production technologies. The areas in which knowledge gained recorded high, included improved varieties, seed rate, use of manures and fertilizers, plant spacing etc. Regarding adoption of recommended practices of cotton production, KVK trainees reported 25 to 30 percentage of adoption than the pre-training season. Favourable response was noticed towards different KVK trainings by the trainees.

INTRODUCTION

Increasing general awareness about new agricultural technologies among farmers and their adoption in their fields have been a prime task of Krishi Vigyan Kendra in India (Singh, 1991 and Meena, 1999). The performance of Krishi Vigyan Kendra is judged through impact of trainings of various production technologies on farmers' knowledge and adoption in actual field situation. The ZARS-Krishi Vigyan Kendra, Sriganganagar started in December 2000 at Agricultural Research Station, Sriganganagar (Rajasthan). Cotton is remaining a prime crop in this zone of North-Western Rajasthan. Most of the trainings in *Kharif* season were based on cotton and its various packages of practices. It was felt that knowledge and adoption of package of practices of cotton should be judged as an impact of Krishi Vigyan Kendra. Keeping this view a study was undertaken to find out the knowledge and adoption of farmer before and after the KVK training regarding cotton production technologies and the following objectives were taken under this study to study the personal characteristics and source of information of trainees, to find out the knowledge and adoption among trainees and to know the general impression of the trainees regarding KVK's training programmes.

Key words :

KVK, Training,
Impact,
Knowledge,
Adoption

METHODOLOGY

Present study was conducted in the year 2005. A sample of 120 farmers was selected among the trainees who had under gone trainings in KVK from Sriganganagar block. Knowledge improvement and adoption of technologies were studied after the season. The knowledge score was assessed at pre-training and post training in on campus trainings programme. The adoption of the cotton production technologies was assessed after the end of that season in which farmers actually adopted them in their farms. Data were collected through pre-tested schedules by interviewing farmers and conducted a knowledge test. Similarly, for general impression, a separate schedule was used to collect trainee's response. Appropriate statistical methods (techniques) were used for analysis of data.

RESULTS AND DISCUSSION

The findings obtained from the present study are presented below:

General information about trainees:

A brief summary of characteristics of the trainees of Krishi Vigyan Kendra trainings has been presented in Table 1.

From Table 1 it is clear that majority of

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Table 1 : Personnel characteristics of trainees (N=120)

Sr. No.	Particulars	No.	Percentage
1.	Age		
	Young (20-25 yrs)	40	33.33
	Middle (26-45 yrs)	50	41.67
2.	Older (above 45 yrs)	30	25.00
	Caste		
3.	Dominant	90	75.00
	Backward/ scheduled	30	25.00
4.	Education		
	Literate	12	10.00
	Primary/ Middle	48	40.00
	Secondary	42	35.00
5.	Graduation	18	15.00
	Family occupation		
6.	Cultivation	120	100.00
	Subsidiary	102	85.00
7.	Land holding		
	Marginal	24	20.00
	Small	42	35.00
	Large	54	45.00

farmers those were trained by Krishi Vigyan Kendra belonged to middle and young age groups, which showed that agricultural operations were mostly-carried out by young and middle aged farmers. It was also clear that about 75% of trainees belonged to the dominant caste of the area. The education level of farmers showed that 75% trainees got schooling up to primary and secondary level. Among them only 15% were degree holders. This is positive points for Krishi Vigyan Kendra that educated

farmers have better understanding about recent technologies in agriculture. Majority of trainees had dairy as subsidiary occupation along with farming. When asked about land, majority (55%) of trainees belonged to marginal and small category.

From Table 2 it is clear that there is significant improvement in the knowledge about all aspects of cotton production after the training programme. From pre-training and post training knowledge score analysis it is clear that almost 90 per cent farmers were better acquainted with high yielding varieties of cotton (Narma Kapas). Knowledge regarding soil treatment was low (42.50 per cent) before training, it was increased to 56.66 per cent at the end of training. There was significant increase in knowledge after training about seed treatment, plant spacing, weed control practices, use of manures and fertilizers and picking method. Increase was low in IPM as compared to other practices.

This showed that Krishi Vigyan Kendra's on campus trainings were effective and significantly increased knowledge levels of farmers about cotton production technology.

Regarding adoption of cotton production technologies (Table 3), it was found that 60 per cent farmers were using high yielding cotton varieties in the following season after the training which was 33.33 per cent farmers using HYVs before training. Regarding seed treatment while 25 per cent respondents were doing soil treatment while they were 15 and 30 per cent before training. The other technologies in which adoption was high were recommended seed rate 70% full and 22.5% partial, seed treatment 55% full and 35% partial, plant spacing 60%

Table 2 : Knowledge gained by trainees in cotton production technology

Sr. No.	Particulars	Knowledge score					
		Before training			After training		
		L	M	H	L	M	H
1.	Awareness about improved varieties	38 (31.66)	60 (50.00)	22 (18.33)	9 (7.50)	70 (59.16)	40 (33.33)
2.	Practice of soil treatment	51 (42.50)	57 (47.50)	12 (10.00)	21 (17.50)	68 (56.66)	31 (25.83)
3.	Seed rate	45 (37.50)	61 (50.83)	14 (11.66)	8 (6.66)	64 (53.33)	48 (40.00)
4.	Seed treatment	60 (50.00)	42 (35.00)	18 (15.00)	12 (10.00)	61 (50.83)	47 (39.16)
5.	Plant geometry (spacing)	41 (34.16)	57 (47.50)	28 (23.33)	12 (10.00)	65 (54.16)	43 (35.83)
6.	Application of manures and fertilizers	55 (45.83)	47 (39.16)	18 (15.00)	14 (11.66)	57 (47.50)	49 (40.83)
7.	Weed control herbicides	64 (53.33)	35 (29.16)	21 (17.50)	18 (15.00)	48 (40.00)	54 (45.00)
8.	Awareness about insects and diseases	46 (38.33)	51 (42.50)	23 (19.16)	9 (7.50)	62 (51.66)	49 (40.83)
9.	IPM control of insect-pests insecticides fungicides organic/ biological methods	62 (51.66)	43 (35.83)	15 (12.50)	16 (13.33)	57 (47.50)	47 (39.16)
10.	Harvesting/ picking time/ methods	32 (26.66)	52 (43.33)	36 (30.00)	7 (5.83)	63 (52.50)	50 (41.66)

Figures in parentheses are percentages

Table 3 : Adoption of cotton production technology by the farmers before and after season training (N=120)

Sr. No.	Particulars	Knowledge score					
		Before training			After training		
		Full	Partial	No	Full	Partial	No
1.	Use of improved varieties	40 (33.33)	60 (50.00)	20 (16.67)	72 (60.00)	40 (33.33)	8 (6.67)
2.	Soil treatment	28 (15.00)	36 (30.00)	66 (55.00)	30 (25.00)	54 (45.00)	36 (30.00)
3.	Recommended seed rate	60 (50.00)	45 (37.50)	15 (12.50)	84 (70.00)	27 (22.50)	9 (7.50)
4.	Seed treatment	50 (41.67)	40 (33.33)	30 (25.00)	66 (55.00)	42 (35.00)	12 (10.00)
5.	Plant spacing	54 (45.00)	48 (40.00)	18 (15.00)	72 (60.00)	36 (30.00)	12 (10.00)
6.	Use of manure and fertilizer	60 (50.00)	48 (40.00)	12 (10.00)	84 (70.00)	30 (25.00)	6 (5.00)
7.	Weed control	42 (35.00)	48 (40.00)	30 (25.00)	48 (40.00)	54 (45.00)	18 (15.00)
8.	Practice of IPM	30 (25.00)	42 (35.00)	48 (40.00)	42 (35.00)	60 (50.00)	60 (50.00)
9.	Picking	60 (50.00)	48 (40.00)	12 (10.00)	66 (55.00)	54 (45.00)	0 (0.00)

Figures in parenthesis are percentages

full and 30% partial adoption was observed. Regarding fertilizer application 70% farmers fully adopted and 25% partial adopted by of recommended practices. In case of weed control 40% and 45% respondents had full and partial adoption of recommended weed control practices, respectively. This study showed that 35% and 50% farmers were using IPM practices for controlling insect/ diseases in cotton. From these findings, it may concluded that adoption of cotton production technologies has increased after trainings.

Responses of trainees regarding different aspects of training programmes were recorded from the trainees who attended on campus training at KVK's. The responses were recorded on three point continuum viz., fully satisfied, satisfied and unsatisfied. Analysis of the responses is presented in Table 4. The results clearly indicates that in case of course content, about 70% respondents were fully satisfied followed by 20% satisfied respondents. Regarding involvement of trainees during discussion, 75% farmers were found fully satisfied followed by 20.83% satisfied. It is also evident from Table 4 that 72.5% farmers were fully satisfied with field visit, 70.83% with physical facility and 69.16% about timing of training. The high responses (full/ satisfaction) showed that trainings conducted by KVK's were effective and well organized. They had good impact on knowledge as well as adoption of improved technologies by the farmers.

When asked about suggestions for making trainings programme more effective, it was told by the trainee's farmers that transport facilities should be provided and low cost technology should be advocated by the scientists.

Conclusion:

The result of the study pointed out that there was significant increase of Krishi Vigyan Kendra beneficiaries after the start of Krishi Vigyan Kendra. The study revealed that Krishi Vigyan Kendra trainings were effective and significantly increased the knowledge levels of farmers about cotton production technology. The areas in which knowledge gained recorded high include improved varieties, seed rate, use of manures and fertilizers, plant spacing etc. Regarding adoption of recommended practices of cotton production, Krishi Vigyan Kendra trainees reported 25 to 30 percentage of adoption than the pre-training season. Favourable response was noticed towards different Krishi Vigyan Kendra trainings by the

Table 4 : Response of the trainees regarding KVK's training programme (N=120)

Sr. No.	Particulars	Fully satisfied	Satisfied	Unsatisfied
1.	Training methodology	70 (58.33)	35 (29.16)	15 (12.50)
2.	Course content	85 (70.83)	23 (19.16)	12 (10.00)
3.	Resource persons	82 (68.33)	27 (22.50)	11 (9.16)
4.	Practical input/ orientation	72 (60.00)	37 (30.83)	11 (9.16)
5.	Participation of trainees in discussion	90 (75.00)	25 (20.83)	5 (4.16)
6.	Field visits	87 (72.50)	22 (18.33)	11 (9.16)
7.	Physical facilities	85 (70.83)	29 (24.36)	11 (9.16)
8.	Time/ season	83 (69.16)	21 (17.50)	16 (13.33)
9.	Coordination	75 (62.50)	34 (28.33)	11 (9.16)
10.	Literature support	62 (51.16)	33 (27.50)	25 (20.83)

Figures in parentheses are percentages

trainees. Overall it can be concluded that trainings conducted by ZARS-KVK were helpful to trainees in gaining knowledge which ultimately increased the adoption level in cotton production technologies.

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