Impact of Trainings on Adoption of Chickpea (*Cicer arietinum L.*) Production Technology

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ABSTRACT

The study was conducted in Sihora block of Jabalpur district of Madhya Pradesh to identify the impact of Krishi Vigyan Kendra (KVK) training programmes on extent of adoption of chickpea (*Cicer arietinum L.*) production technology. six villages were selected randomly among chickpea cultivated villages. Out of which, 60 trained farmers and 60 untrained farmers were selected randomly from the similar village so total 120 respondents were taken for investigation. The study revealed that trained farmers had higher extent of adoption of chickpea production technology and untrained farmers had medium extent of adoption of chickpea production technology

Key words : Adoption, recommended practices, economic motivation

INTRODUCTION

A large number of illiterate farmers in the country are in the habit of sticking with old farm practice. They are poorly educated having low credit flow from institutions which adversely affect the adoption of farm practices. Thus majority of the illiterate farmers need to have proper field training for increasing farm production and also for improving their economic condition with the help of adopting the modern farm practice. Through up-gradation in skill the farmers can able to understand the new practices of agricultural technology and get benefits.

Training of farmers has been considered as a critical input for accelerating agriculture production and transfer of process technical know-how form the core of agricultural development. The ICAR has launched several frontline transfer of technology projects in the country. The Krishi Vigyan Kendra (KVK) is one of such schemes being acted as a development centre to serve as the "Light House" for rapid agricultural development and providing training to the participating farmers, farm women, rural youth and other field functionaries in the field of agriculture and allied sectors. After getting the training, the attitude of the farmers not only gets sharpened but also moulded the ever-changing needs of society and farming community. The KVKs are going to play a decisive role in the rural development. The results of training conducted by KVKs and other training programmes revealed that trained farmers produced higher yield of crops than the untrained farmers.

Chickpea (*Cicer arietinum L.*) is the important pulse crop of Madhya Pradesh which contains mainly 21.1 per cent protein, 61.5 per cent carbohydrate and 4.5 per cent fat. In India, Chickpea is mainly used as human food in form of dal, chhole, and vegetables. Being a leguminous crop, it not only requires less input in terms of nitrogenous fertilizer but adds atmospheric nitrogen to the soil . Hence it is more profitable crop than other foodgrain. The production and productivity of chickpea has shown an increasing trend in Madhya Pradesh. The incomplete knowledge may be one of the significant reasons for low adoption. A number of transfer of technology programmes were undertaken in the past. Madhya Pradesh is the largest chickpea producing state with an area of 3,112 thousand ha. and production of 2,687 thousand tonnes with productivity 864 kg/ha. In Madhya Pradesh, Jabalpur is one of the important chickpea-growing district with area of 69,400 ha, production 76,302 tonnes and productivity 1130 kg/ha. Keeping these points in view, an attempt was made to find out the major constraints in KVK training on knowledge and adoption of chickpea production

METHODOLOGY

The present study was carried out in Sihora block of Jabalpur district of Madhya Pradesh. Six villages were adopted by KVK, Jabalpur from Sihora block with a total 150 villages were selected with the help of random sampling technique. A list of trained farmers were taken from KVK who have, already taken training on chickpea production technology. Out of which, 60 trained farmers and 60 untrained farmers were selected randomly from the similar village. This sample consisted of farmers who had undergone trainings conducted by Krishi Vigyan Kendra in selected crop. Their selection was made from the list of trained farmers prepared for each village through simple random method. Ten farmers selected

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from each village. Thus, a total of 60 trained and 60 untrained farmers were selected from six selected villages under this sample.

RESULTS AND DISCUSSION

The finding on the impact of Krishi Vigyan Kendra KVK trainings on extent of adoption of chickpea production technology are presented in Table 1.

Table 1: Frequency and percentage distribution of extent of adoption of improved chickpea production technology.

n=120

Adoption Categories	Participating farmers		Non-participating farmers		Calculated 'Z' value
Low	15		20		
(Up to 24)	(24.44)	Mean	(33.33)	Mean	2.13**
Medium	18	40.59	29	35.20	
(25 to 30)	(31.11)	SD	(48.88)	SD	
High	27	14.16	11	9.30	
(Above 30)	(44.45)		(17.79)		

Figures in parentheses indicate percentages
** = Significant at 0.01 level

The extent of adoption of improved chickpea production technology by participating and non-participating farmers Table 1 showed that the overall mean adoption scores were 40.59 and 35.20, respectively. The calculated 'Z' value was higher than the Table value, which clearly indicated the difference in extent of adoption between participating and non-participating farmers.

Distribution of respondents according to their adoption of improved chickpea production technology clearly indicated that out of 60 participating farmers, 44.45 per cent indicate a high level of adoption, followed by 31.11 per cent medium and 24.44 per cent low adoption of improved chickpea production technology. It is to notice here that comparatively higher percentage of non-participating farmers were observed in medium and low level of adoption, but their representation in high level of adoption was very low, *i.e.* only 17.79 per cent as against 44.45 per cent of participating farmers.

It is inferred from the overall mean adoption score that the respondents have not adopted the recommended practices of chickpea crop fully. However, there was considerable adoption gap between participating and non-participating farmers, which may be attributed as the impact of KVK trainings. Still, a lot is left and KVK needs to make intensive efforts through its training to increase adoption of improved practices of chickpea among the farmers.

The data given in Table 2 revealed that the level of education, land holding, annual income, social participation, number of trainings received, scientific orientation, economic motivation, utilization of different sources of information, contact with development agencies of farmers had significant relationship, while age had non-significant relationship with adoption.

Table 2 : Correlation coefficient of profile of trained farmers with impact of trainings in terms of adoption.

n=60

Variables		'r' values Trained farmers
X_1	Age	0.184
X_2	Education	0.523**
X_4	Land holding	0.756**
X_5	Annual income	0.537**
X_6	Social participation	0.414**
X_7	Number of trainings received	0.865**
X_8	Scientific orientation	0.454**
X_9	Economic motivation	0.358**
X_{10}	Utilization of different sources of information	0.712**
X_{11}	Contact with development agencies	0.361**

* Significant at 0.05 level of probability
** Significant at 0.01 level of probability

It is evident from Table 3 that profile of untrained farmers like education, land holding, annual income, social participation, scientific orientation, economic motivation, contact with development agencies had the significant relationship, while age and utilization of different sources of information showed the non-significant relationship.

Table 3 : Correlation coefficient of profile of untrained farmers with impact of trainings in terms of adoption.

n=60

Variables		'r' values Untrained farmers
X_1	Age	0.021
X_2	Education	0.453**
X_4	Land holding	0.458**
X_5	Annual income	0.404**
X_6	Social participation	0.031
X_7	Number of trainings received	-
X_8	Scientific orientation	0.121
X_9	Economic motivation	0.231*
X_{10}	Utilization of different sources of information	0.151
X_{11}	Contact with development agencies	0.358**

* Significant at 0.05 level of probability
** Significant at 0.01 level of probability

Overall extent of knowledge level of improved chickpea production technology (ICPT)

The extent of knowledge in respect of improved chickpea production technologies was studied by adding individual scores received on different practices. On the basis of the total score, they were categorized and the results revealed that the majority of the respondents had medium knowledge of ICPT. A negligible percentage of the respondents, *i.e.* 15.84 per cent and 7.50 per cent had low and high knowledge respectively. The results indicate

a need for greater extension effort to provide know-how of the improved sugarcane production technologies to the respondents, so that their knowledge is enhanced. Moreover, it was observed that farmers with more economic resource and extension agents contact were able to adopt more production technologies than others.

CONCLUSION

Out of 60 participating respondents, 44.45 per cent had high extent of adoption, whereas 24.44 per cent had low extent of adoption. Comparatively higher percentages of non-participating respondents were observed in medium and low level of adoption. Overall mean adoption score indicates that respondents have not fully adopted the recommended practices of chickpea crop. Difference in extent of adoption between participating and non- participating respondents was highly significant.

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