



# ANALYSING PRODUCTIVITY AND KNOWLEDGE ENHANCEMENT OF WHEAT (*TRITICUM AESTIVUM* L.) FARMERS THROUGH KVK TRAINING INTERVENTION IN MADHYA PRADESH, INDIA

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## Abstract

This study was conducted in Harda district of Madhya Pradesh state during 2016-17 to analysing the productivity and knowledge enhancement of the farmers through KVK training programmes of wheat farmers. A sample of 180 farmers (90 trained and 90 Untrained) was interviewed to draw responses by tested semi-structural interview schedule. It was found that effective training programme conducted before the sowing season of crop play very significant role in upgrading the knowledge and skill level of the farmers. Trained category possessed higher level of knowledge about improved wheat cultivation techniques. Hence, farmers from trained category achieved higher productivity of wheat at their farms than to untrained one.

**Key words :** Food grain supply, knowledge extent, productivity, wheat.

## Introduction

Wheat is the important crop of food grain in India. The total food grain production of India was around 273.38 MT up to year 2016-17. Production of wheat in Madhya Pradesh during 2016-17, estimated at 93.50 million tonnes, is higher by 6.97 million tonnes than the production of 86.53 million tonnes achieved during 2014-15. Harda is one of the leading districts with production of 5.90 lakh tonnes wheat from 1.53 lakh hectares of land (Commissioner Land Records, Gwalior, MP 2016-17). This bumper production of wheat may due to establishment of KVK proving as the landmark in the history of transfer of technology in the District. KVK work with principle of “learning by doing and seeing is believing” and fulfils the technical needs of farmers and location specific requirements by training and extension programmes. By the year 2016-17 there are 680 KVKs working under administrative control of Indian Council of Agricultural Research, Pusa New Delhi in the country (<http://www.icar.org.in/en/krishi-vigyan-kendra.htm>).

Taking the above points into consideration a study on

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“Impact of KVK training programmes on knowledge level and productivity of wheat farmers” in district Harda before the commencement of Rabi season was started. Training on advance technology of wheat cultivation was imparted to 5 groups of farmers at different locations. The result obtained after completing the study were very encouraging and being presented in this research article. The production of wheat was obtained by the trained farmers was higher then to untrained one. This positively showed the impact of training programmes and the transfer of advanced wheat production technology at field level of adopted farmers.

## Methodology

This study was conducted at JNKVV, Krishi Vigyan Kendra, district Harda, Madhya Pradesh, India. The total of six village out of three blocks namely Harda, Khirkiya and Timarni two villages from each block were selected randomly for the study. The six villages of the study were as block wise namely Sautada and Bajaniyan from Timarani block, Balagaon and Chhidgaon tamoli from block Harda, Aamasel and Dedgaon from block Khirkiya were selected randomly. The sample of farmers for training

was taken through population proportionate sampling method. Where KVK Harda is working a sample of 180 farmers consisting (90 trained + 90 untrained) from six village (15 trained and 15 untrained farmers from each village) were selected under this study. For gathering the information semi-structural interview schedule was developed and tested then used for conducting this study.

After establishment of good rapport with selected farmers, the question and statements were asked. To collect the relevant information from the farmers regarding present knowledge of farming both the groups of farmers were personally interviewed to get first hand information and schedule was filled with their answers and direct observation also was made. The questions were simple and asked in their local language to make easily understandable by farmers. Ambiguous responses were not entertained. Thus, the responses of farmers were recorded and used in this study. The statistical tools to analyse the data used were frequency, percentage and arithmetic mean (X). The correlation between the different farmers' attributes responsible for farmers knowledge gain was also analysed by using correlation coefficient (r) value.

### Results and Discussion

Knowledge is defined as the set of concepts, meaning, skill, experience and routines developed over time by individuals and group through processing of information. Once the knowledge acquired, it brings about change in behaviour such as adoption. In the present study, it was hypothesized that the extension activities of KVK such as on-farm trials (OFTs), Front line demonstrations (FLDs), farm and home visits, trainings, field days, farmer's fair, exhibitions would lead to increase in knowledge level of farmers regarding the innovative technological interventions.

Table 1 reveals that the mean scores regarding knowledge of trained and un-trained farmers about the technological interventions on wheat cultivation were 97.83 and 72.56 respectively. The difference between mean scores was 25.27. This shows that the farmers from trained category possessed higher level of knowledge about improved wheat cultivation techniques

**Table 1 :** Difference in knowledge level of trained and untrained farmers under wheat cultivation.

S. no.	Category of responding farmers	Knowledge level Mean (X)	Difference in Mean (X)
1.	Trained	97.83	25.27
2.	Un-trained	72.56	

**Table 2 :** Difference in productivity of wheat between trained and untrained farmers.

S. no.	Category of responding farmers	Yield (Q/ha.) Mean (X)	Difference in Mean (X)
1.	Trained	55.71	10.86
2.	Un-trained	44.85	

than to untrained category. This could be due to exposure of the trained farmers to improved Wheat cultivation technologies through various activities of KVK, similar finding were also reported by Sahu *et al.* (2009).

The result indicated that the mean scores pertaining to the productivity of wheat by the trained and un-trained farmers were 55.71 and 44.85 respectively being indicated in table 2. The difference between the mean scores was 10.86.

Thus, it is evident that the training group of farmers who were exposed to KVK training and the development activities achieved higher productivity of wheat at their farms than to those of the un-trained one. Increase in yield or the productivity due to training exposure and extension programmes was also reported by Nisha (2003) and Sahu *et al.* (2007).

Table 3 Reveals that the majority 57.78 per cent of the framers from trained category had medium extent of knowledge, while 24.44 per cent had high extent of knowledge and 17.78 per cent low extent of knowledge. In the case of un-trained category of farmers majority 45.55 per cent of the farmers had medium extent of knowledge and, while 38.89 percent were having low extent and only 15.56 percent had high extent of knowledge. The respondents from trained category again showed higher extent of knowledge. This could be

**Table 3 :** Distribution of respondents according to their extent of knowledge about improved wheat cultivation technologies.

S. no.	Categories of Knowledge Gain	Trained Farmers		Un-trained Farmers	
		Frequency	Percentage	Frequency	Percentage
1.	Low	16	17.78	35	38.89
2.	Medium	52	57.78	41	45.55
3.	High	22	24.44	14	15.56
	Total	90	100	90	100

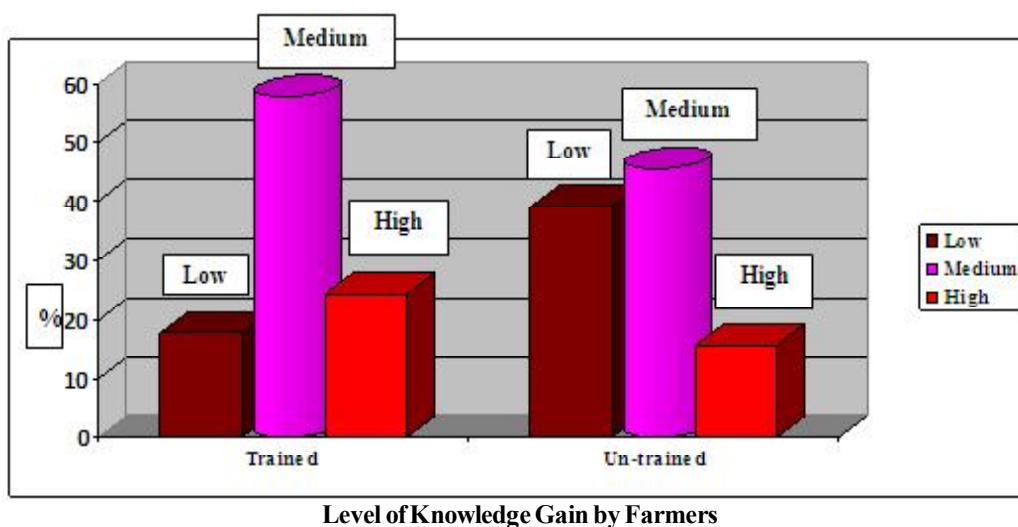


Fig. 1 : Distribution of respondents according to their extent of knowledge in percentage.

Table 4 : The correlation between the different farmers' attributes responsible for farmers knowledge gain under trained farmer's category.

S. No.	Different farmers' attributes responsible for farmers knowledge gain	Calculated Correlation Coefficient Value (r)
1	Age	0.0183
2	Education	0.2275**
3	Farmer's Occupation	0.1365*
4	Family size	-0.0534
5	Land holding	0.6916**
6	Agricultural assets possessed	0.2193**
7	Information media used	0.3672**
8	Personal cosmopolite sources used	0.2394**

\*Significant at 5% level of Significance, \*\*Significant at 1% level of Significance; n=90

exposure of the trained farmers to knowledge through on-farm-trials opportunities and hence, they showed lower extent of knowledge to these technologies. These findings were found to partially support by the reports of Reddy *et al.* (1995) and Sahu *et al.* (2009).

The correlation coefficient value (r) was worked out between the different farmers' attributes responsible for farmers knowledge gain under trained farmer's category at 5% and 1% level of significance revealed in (table 4). According to information found in table, it was observed that the farmers attributes like education, occupation, family size, land holding, agricultural assets possessed, information media used and personal cosmopolite sources used by farmers for knowledge gain or agricultural information need were found significantly and positively with farmers knowledge gain under trained category of farmers. Except farmers occupation because who was not related to farming as main occupation were not found positively correlated with knowledge gain under training

rest of the these farmers who were taking farming as main occupation for source of income showed positively correlated with knowledge gain. The family size of farmers was not found directly correlated with knowledge gain of trained farmers hence showed the negative correlation in the table 4. The middle age farmers were also showed more positive correlation rather to older and young aged group of farmers involved in agricultural occupation, respectively.

## Conclusion

The effective training programme conducted before the sowing season of wheat crop play very significant role in upgrading the knowledge and skill level of the farmers. The farmers from trained category possessed higher level of knowledge about improved wheat cultivation techniques than to untrained category. The majority 57.78 per cent of the framers from trained category had medium extent of knowledge, while 24.44

per cent had high extent of knowledge and 17.78 per cent low extent of knowledge. In the case of un-trained category of farmers majority 45.55 per cent of the farmers had medium extent of knowledge and, while 38.89 percent were having low extent and only 15.56 percent had high extent of knowledge. The trained farmers achieved higher productivity of wheat at their farms than to those of the un-trained one. The upgraded knowledge and skill in wheat cultivation subsequently helped the farmers in changing their behaviour in adoption of improved technologies at their fields which ultimately increased their production and net profit per unit area. By taking care of correlated attributes of farmers, KVK trainings intervention and extension programmes may helpful to adopt the proven technologies maximum by the farmers. Farmers, who were not very much cosmopolite and keen to learn and adopt new technologies/innovations were found poor in agricultural growth, production and management. KVK training intervention was found good to enhance farmer's technical knowledge gain and productivity of wheat crop in Harda district of Madhya Pradesh, India.

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