Training needs of wheat growing farmers in Agra District of Uttar Pradesh

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Abstract

Training needs is essential to induce motivation, create confidence and inculcate efficiency in an individual and also inevitable for imparting new knowledge and updating the skills of the farmers. Training of farmers had assumed further importance and urgency in the context of the high yielding varieties and improved practices in agriculture and allied fields. The present study was conducted in purposively selected Agra district which has fifteen blocks, out of which four blocks were selected for the study purposely area under wheat cultivation. From each selected block two villages were selected by applying random sampling procedure. From each village 20 respondents were selected randomly. Thus, data was collected from 160 respondents through interview method. Results revealed that 70.62 per cent of respondents had small size of land holding, whereas 19.38 per cent and 16.00 per cent of respondents had medium and large size of land holding, respectively regarding recommended wheat production technology. Among the selected 09 recommended aspects of wheat, respondents had high training need index score for seed treatment (8.19%) followed by irrigation (7.61%), whereas low training need index was observed in weed control (5.34%). There is a considerable scope for enhancing the production of wheat subject to the need based training imparted to the growers so that they could reap the benefits by adopting the improved package of practices. Family type, social participation, farm implements & machineries, sources of credit and level of aspiration of the respondents were found to be positive and significantly related with training needs of wheat growers. There is a considerable scope for enhancing the production of wheat subject to the need based training imparted to the growers so that they could reap the benefits by adopting the improved package of practices.

Keywords: Recommended wheat production technology, mean per cent score, training needs

Introduction

Modernization of Indian agriculture greatly depends on creation of farm technology and its dissemination. India is well equipped in agricultural technology, but full use of available technology is not being made in many area of the country. By and large, the results remain unused in laboratories and research to the farmers. Besides this, agricultural technology is changing at an increasing rate. The Farm Science Centre known as Krishi Vigyan Kendra (KVKs) are functional in various districts of our country. To solve the problem of un-employment in the rural areas of their respective district by providing training and advisory services, To strengthen the allied enterprises other then crop production in the area as a source of subsidiary business or main source of income for diversification of agriculture and increase of farmers income per unit area, to increase the production and productivity in the area of main crops and other enterprises, to educate the farming community and making them economically and socially sound, to disseminate new, proven and economically viable technologies in the area and to get the feedback to know the problems of the farming community in the area and to resolve these by use of technology and increase the production level. The KVK being an educational institution of the farmers offers a very real opportunity by organizing trainings to work closely with trainees in developing a more skilled and educated work force. The training programmes of KVK are multipurpose one to cover not only the various needs

of farmers but also the entire needs of village and community (Sharma *et al.*, 2013 and Gupta *et al.*, 2018).

India has achieved an impressive growth in food production after adoption of green revolution technology which made the country self-sufficient in basic foods. Wheat is one of the most important food grain crop grown in the world. Amongst cereals, wheat is the most important staple food-grain crop in Indian diet and main source of protein and calories for a large section of population and is usually accorded a premier place among cereal because the vast acreage devoted to its cultivation (Shikarwar *et al.*, 2018). In India, wheat is cultivated over 29.58 million ha with a production of 99.70 million tons having an average productivity of 3.4 tons/ha. The total wheat growing area, production and productivity in Uttar Pradesh is 9.75 million ha, 32.98 million tons and 3.2 tons/ha, respectively (Agricultural Statistics at a Glance, 2018).

Training plays an important role in the advancement of human performance in a given situation. Training provides a systematic improvement of knowledge and skill which in turn helps the trainees to function effectively and efficiently in their given task on completion of the training. Training is the process of acquiring specific skills to perform a job better Farmer training is directed towards improving their job efficiency in farming. Effective training cannot be planned without knowing training needs of farmers (Manhas and Slathia, 2019). Thus the present study is being undertaken to know about the "Training needs of wheat farmers of Agra District of Uttar Pradesh".

Methodology

The present study was conducted in purposively selected Agra district of Uttar Pradesh. The Agra district has fifteen community development blocks, out of which four development blocks were selected for the study purposely area under wheat cultivation. From each selected block two villages were selected by applying random sampling procedure. From each village 20 respondents were selected randomly. Respondents were those who were cultivating wheat. Thus, data was collected from 160 respondents through interview method with the help of well structured and pre tested interview schedule consisting of 09 recommended practices of wheat. To measure the extent of adoption of wheat growers, nine main as well as sub recommended practices/areas *viz.* knowledge about HYVs, preparation of land and soil testing, treatment

of the seeds, sowing time, use of manure and fertilizers, irrigation and water management, weed management, harvesting and threshing and storage of grain were considered. Further, all the 160 respondents were stratified in to three strata according to their size of holdings, *viz.* small (up to 1 ha.), medium (1 to 2 ha.) and large (above 2 ha). Further, to determine the training needs, mean score for each item was worked out and ranked accordingly. Mean score was calculated by using following formula:

$$\text{Mean score} = \frac{\text{Total score obtained}}{\text{Number of respondents}} \times 100$$

The statistical methods used in the analysis of data regarding wheat production technology were frequency distribution, percentage, arithmetic mean, standard deviation and two sample Z-test were used for setting meaningful conclusion based on the study. The significance of relationship among variables was tested through linear correlation and multiple linear regression analysis, to determine the contribution of independent variables to the dependent variables.

Results and discussion

To get an overview of training needs, the respondents were classified in small, medium and large farm size groups, based on area of operational holdings and are presented in Table 1.

Table 1: Distribution of respondents according to their land holding about wheat cultivation

N=160

Land holding	F	%
Small (up to 1 ha.)	113	70.62
Medium (1-2 ha.)	31	19.38
Large (above 2 ha.)	16	16.00
Total	160	100.00

F=frequency, %=per cent, n=sample size

Data presented in Table 1 depicted that majority (70.62%) of the total respondents had small size of land holding in recommended wheat production technology followed by 19.38 per cent had medium size of land holding and remaining 16.00 per cent respondents had large size of land holding. Similar findings were also reported by Manhas and Slathia (2019) for maize crop. From the above results it could be concluded that small farmers had more land holding for recommended wheat production technology over

medium and large farmers. It might be due to the fact that small farmers are less knowledge of wheat production technology, have less extension contacts and mass media exposure and participate less in extension programmes. Furthermore, 35.38 per cent respondents were found in medium to large size of land holding whereas 90.00 per cent farmers were found in small to medium size of land holding.

Further, different aspect of wheat cultivation technology was also analyzed separately. The relative importance of all the nine aspects of wheat cultivation technology were highlighted by ranking them in descending order on the basis of their mean per cent score and data have been presented in table 2.

Table 2: Training needs of farmers in various aspects of wheat production technology

N=160

Area of training needs	M.P.S.*	Rank
High yielding varieties	6.11	VII
Land preparation	6.69	IV
Seed treatment	8.19	I
Sowing time	6.12	VI
Manure &Fertilizers	7.39	III
Irrigation	7.61	II
Weed control	5.34	IX
Harvesting & threshing	5.56	VIII
Storage	6.28	V

* Mean Per cent Score

The data presented in Table 2 revealed that seed treatment (8.19) was perceived as the most priority area of training needs by the wheat growers and assigned I rank by them in the ranking hierarchy. This might be due to the reason that although majority of the respondents were aware about the seed treatment but they do not know how to practice it. This was followed by irrigation (7.61), manure and fertilizers (7.39) and land preparation (6.69) and recorded II, III and IV ranks by the respondents. Further analysis of table indicates that respondents also reported training needs on storage (6.28), sowing time (6.12) and high yielding varieties (6.11) and also noted V, VI and VII ranks. However, harvesting and threshing (5.56) and weed control (5.34) were perceived as less priority areas of training needs by the respondents and were assigned VIII and IX ranks by them. Similar findings were also reported by Yadav *et al*., (2019) for maize crop.

Table 3: Relationship between selected independent variables and training needs of wheat growers

Independent variables	'r' value
Age	0.033
Education	0.054
Caste	0.208
Occupation	0.223
Family type	0.526*
Social participation	0.672*
Source of irrigation	-0.266
Farm implements & machineries	0.438*
Sources of credit	0.324*
Sources of information	0.471
Mass media exposure	0.215
Level of aspiration	0.617*
Risk orientation	-0.254
Knowledge score	-0.123*

* Significant at 0.05 level of significance

It is evident from Table 3 that family type, social participation, farm implements & machineries, sources of credit and level of aspiration of the respondents were found to be positive and significantly related with training needs of wheat growers. Social participation has positive and significant relationship with type of the family. The reason behind this may be as the size of the family increases, there are more people to work at home and respondents get more time to participate in wheat cultivation. As the farm implements & machineries increases, their knowledge has to increase due to higher awareness and also as their extension participation increases they get more knowledge about scientific cultivation due to training needs, hence the result. Also as the Sources of credit increases, their income increases due to which they go in search of new technologies of the credit and use to short term credit for different practices of wheat production technology over long term credit. There is positive and significant relationship found between Level of aspiration and training needs. This is might due to the farmers which had high level of the aspiration, they feel the necessity of having training in some areas of wheat cultivation. Variables likes age, education, caste, occupation, sources of information and mass media exposure did not show any significant relationship with training needs of wheat growers. The knowledge score of the respondents was found to be negative but significantly associated with the training needs. The

reason behind this may be due to there were no any urgent regular training programs for identified thematic areas to fulfill the knowledge gap among the farmers which engaged wheat production technology.

Conclusion

It may be concluded that training imparted by KVK is more effective in terms of enriching both knowledge and behaviors of trainees involving in various aspect of wheat production technology. The majority of farmers (70.62 %) had small size of land holding followed by 19.38 per cent and 16.00 per cent farmers were having medium and large size of land holding, respectively regarding wheat production technology. The farmers possessed highest area (8.19 %) about the aspect "seed treatment" as compared to other aspects of wheat while, they had least area (5.34%) about the aspect "weed control" of wheat production technology. It is therefore also recommended that location specific information rather than general information for the entire region should be provided to the farmers. Training should be provided to the farmers about complete package of practices through various extension methods for better uptake and utilization.

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