



# Training Need Perception of Extension Personnel and Farmers with Regard to Winter Maize Production Technology in Bihar

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## ABSTRACT

The perception of extension personnel about training needs of marginal, small and medium categories of farmers in ten selected areas with respect to winter maize cultivation was studied to provide direction and thrust to the training efforts. A list of major component/thematic area was proposed. Under each major component, specific and relevant training need items were collected and systematically incorporated into the interview schedule and administered. The training needs of farmers on the production measured by average choice score formula suggested by Alam (2006). Results showed that the use of high yielding varieties was perceived by the extension personnel as the most needed area for marginal farmers and integrated nutrient management for small and medium categories of farmers. These were strong degree of agreement among rank pattern of extension personnel v/s different categories of farmers indicated maximum correlation among the views of extension personnel and small farmers (r-value 0.9000). In case of marginal farmers r-value was slightly low (r-value 0.8000) and for medium farmers, it was highly significant (r-value 0.6500) means medium farmers are more or less adequate resources and more knowledge.

**Key Words:** Extension personnel, training need, winter maize.

## INTRODUCTION

Maize is an important food and feed crop of the world after wheat and rice, sharing about one third of total cereal production. In India, it occupied 9.22 Mha area with productivity of 3.12 t/ha (USDA, 2018). Bihar is the third largest maize producing state contributing around 10 per cent to national production. Around 0.65 Mha is presently under maize cultivation, which is about 7 percent of gross cropped area (GCA) in the state and over 13 lakh farmers are engaged in maize cultivation. The average grain yield is 4 to 5 t/ha at farmers' field compared to 9 to 11 t/ha at demonstration plot. Therefore, there is possibility of further increase in substantial productivity with better management. Training is a critical input for the rapid transfer of agricultural technology (Prasad and Mrutangey, 1992). According to Sajeev and Singh (2010) all research should concentrate on farmers needs capacity building through KVK. Relatively, the

present study aims to assess the training needs perception of extension personnel in respect of scientific maize production for farmers.

## MATERIALS AND METHODS

The study was conducted in purposely selected Samastipur district in view of its importance in terms of area and total production of rabi maize. Two blocks *i.e.* Kalyanpur and warisnagar and were randomly selected (Two villages from each block). A list of farm families engaged in winter maize cultivation was prepared on the basis of their cultivated land and a total of 200 farm families were selected for the study under different land holding size. Data collection from randomly selected respondents was made by using pre-tested structured schedule through personal interview method. For this purpose, an interview schedule was constructed for data collection from respondents in the light of the objectives of the study the selected respondents

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were personally interviewed at their place by the investigators and their responses were recorded in the schedule.

For the present study, a list of 10 major thematic area was prepared on the basis of responses of the respondents, priorities was ranked as I, II and III choice which was tabulated to find out within the group, variability in ranking training need. Average Choice Score (ACS) was calculated by using formula as suggested by Singh (1980).

$$ACS = \frac{(CI \times 3) + (CII \times 2) + (CIII \times 1)}{3}$$

Where, CI, CII and CIII are the first, second and third choice respectively

In order to study the association of variables under study, correlation analysis was done. Training needs assessment methods, tools and technique. (Barbarete,2006).

### RESULTS AND DISCUSSION

The perception of extension personnel about training needs of three categories of farmers in selected main areas viz. land preparation, use of HYVs, Seed treatment, improved cultural practices, integrated nutrient management, weed control,

integrated pest management, water management and post-harvest technologies of winter maize cultivation. In this study, the training need perception of extension personnel in winter maize for three categories of respondents allow to understand the training priorities in the eyes of extension personnel and extent of ability of their perceptual experiences for resemblance with the expressed need the three categories of farmers. The results (Table 1) showed that the perception of extension personnel about training needs of three categories of farmers in the selected areas of winter maize cultivation.

(Figures in parentheses indicate the rank order assigned by each category of farmers)

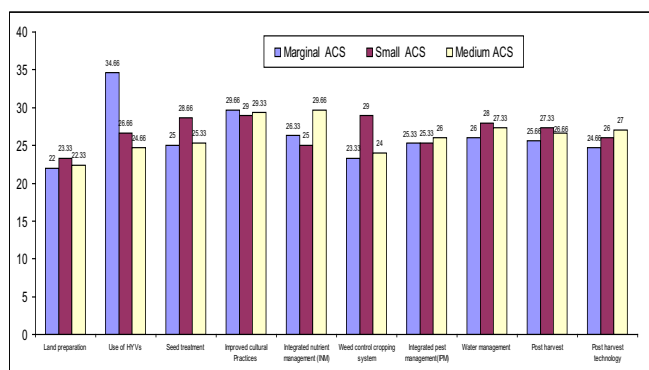


Fig.1: Training need as perceived by extension personnel for farmers

Table 1. Differential training need perception for three different categories of farmer for rabi maize cultivation.

Sr. No.	Main area of training	Marginal		Small		Medium	
		ACS	Rank	ACS	Rank	ACS	Rank
	Land preparation	22.00	X (7)	23.33	X (9)	22.33	X (9)
	Use of HYVs	34.66	I (2)	26.66	V (3)	24.66	VIII (6)
	Seed treatment	25.00	VII (6)	24.66	IX (10)	25.33	VII (7)
	Improved cultural Practices	29.66	II (1)	28.66	II (1)	29.33	II (1)
	Integrated nutrient management (INM)	26.33	III (3)	29.00	I (2)	29.66	I (4)
	Weed control	23.33	IX (10)	25.00	VIII (8)	24.00	IX (8)
	cropping system	25.33	VI (9)	25.33	VII (7)	26.00	VI (10)
	Integrated pest management (IPM)	26.00	IV (5)	28.00	III (5)	27.33	III (3)
	Water management	25.66	V (4)	27.33	IV (4)	26.66	V (2)
	Post harvest technology	24.66	VIII (8)	26.00	VI (6)	27.00	IV (5)

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The data clearly exhibited the top most priority of training need was to use the HYVs by extension personnel, whereas the marginal farmer had it as their second preference of this component. The marginal farmer appears to show first preference to cultural practices as training need which was accorded second rank by the extension personnel. Integrated nutrient management was observed to be equally good by both extension personnel and farmers and was ranked third. Integrated pest management, seed treatment, weed control and water management were accorded more or less equal importance by both extension personnel as well as farmers. The cropping system was more emphasized by extension personnel whereas the land preparation was preferred by the farmers. Training on post-harvest technology was more or less least needed by the farmers as well as extension personnel and was ranked eighth position.

On analyzing the perception of extension personnel and small farmers about the training needs of different components of winter maize production technology, it was observed that extension personnel preferred perception in integrated nutrient management as most important ranked as first position followed by cultural practices ranking second whereas, the farmers showed more emphasis on improved cultural practices by ranking it first while the second preference was accorded to integrated nutrient management (Sharma *et al*, 2008). The integrated pest management occupied third preference whereas; use of HYVs was ranked fifth by the extension personnel. In case of small farmers, reverse ranking positions were observed. The data clearly exhibited the common position of training need in the area of water management, post-harvest technology, cropping system and weed control by both extension personnel as well as small farmers with ranking at 4<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> positions respectively. The extension personnel perceived ninth preference to seed treatment whereas; tenth preference was accorded to land preparation.

The perception of extension personnel about the training needs of medium farmers, the first position

was accorded to integrated nutrient management whereas the farmers expressed it as the fourth position. The farmers expressed need for training on improved cultural practices as the first position, whereas; the extension personnel viewed it in second position. The integrated pest management was observed equally good by extension personnel as well as farmers ranking it third in position. The post-harvest technology was perceived more or less equally good by ranking it in fourth position by farmers and fifth position by extension personnel. The medium farmers gave vital importance to water management ranking second in position while the extension personnel did not show such importance according fifth in position. A wide gap was observed in perception in relation to cropping systems ranking tenth both by farmers and extension personnel. Weed control was given slight importance by ranking ninth among the extension personnel and eighth by the farmers. Seed treatment was given equal importance by extension personnel as well as farmers by according it as the seventh position.

**Table 2. Rank order correlation indicating degree of agreement amongst rank pattern of main area of training as perceived by extension personnel vs. different categories of farmers on rabi maize technology.**

Sr. No.	Between the categories	r-value
	Extension personnel vs marginal farmers	0.8000*
	Extension personnel vs small farmers	0.9000*
	Extension personnel vs medium farmers	0.6500**

\*\* : Significant at 1% level; \* : Significant at 5 % level

The rank order correlation as shown in table 2 brings to conclusion that there exists a very strong degree of agreement in the rank pattern of extension personnel and the three categories of farmers; it means that both the sets of respondents (Extension personnel and farmers) perceived the training priority in similar direction. While concluding the

perception of extension personnel and different categories of farmer about the components of training in winter maize production, the improved cultural practices was observed equally good and most important area by each category of farmers ranking in first position while the perception of extension personnel exhibited training need in second position for all categories of farmer. The extension personnel perceived about training need in use of HYVs ranking first for marginal farmer while integrated nutrient management was perceived the first rank for small and medium farmers. The small farmer expressed training need of integrated nutrient management in second position whereas; the marginal farmers expressed it in third position and medium farmers in fourth position. A critical analysis on training needs of farmers about mustard production technology of marginal farmers (Pandey, 2015 and Choudhary, 1999). The extension personnel considered it in first position while the farmers expressed the need in second position. However, in case of small farmer, this component did not carry vital responses according to third preference by farmers and fifth preference by the extension personnel. In contrary, the observation of medium farmers was still less ranking eighth by extension personnel and sixth by the farmers.

Weed control was comparatively considered less important recording tenth rank by marginal farmers and eighth position respectively by small as well as medium farmers. The land preparation was perceived to be least important by extension personnel as well as all categories of farmers. The medium farmer attributed vital importance to water management ranking the perception in second position, while the marginal and small farmers provided it the fourth position. The integrated pest management was perceived to be in third position by medium farmers, whereas, it was accorded fifth position by marginal as well as small farmers. The data in this case also exhibited similar views of extension personnel irrespective of the categories of farmers.

### Correlation values

The correlation values indicate the degree of agreement amongst rank pattern of main area of training as perceived by extension personnel viz., different categories of farmers indicated maximum correlation among the views of extension personnel and small farmers (r-value 0.9000). The correlation exhibited a common view of both with respect to components of training.

In case of marginal farmers, the r-value was slightly low (r-value 0.8000). Hence, the small as well as marginal farmers perceived more or less similar as compared to perception of extension personnel. The r-value being least (0.6500) although highly significant was recorded in case of medium farmers. This indicates a wider difference in perception of extension personnel as well as medium farmers. The result is obvious as the medium farmers having more or less adequate resources and more knowledge was found critical thus recording somewhat different views in comparison to extension personnel.

### CONCLUSION

The importance of training as an indispensable resource for human resource development cannot be overemphasized. It aims in helping each individual to reach his maximum potential by way of increased knowledge, improved skills and changed attitudes enabling him to perform his job according to established standards. The present study revealed that medium farmers have given similar perceptions like that of marginal and small farmers in training need on improved cultural practices and accorded it as the most preferred area of training. It was also interesting to observe that the medium farmers have shown more interest in training on water management and integrated pest management have accorded at second and third rank respectively in order of priority. The pooled data also revealed that there was common consciousness on having training need on improved cultural practices for training in winter maize cultivation as the most preferred area by all the three categories of farmers followed by

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integrated nutrient management and use of high yielding varieties. The correlation values indicated the degree of agreement amongst rank pattern with respect to the main area of training as perceived by extensional personnel viz., different categories of farmers indicated maximum correlation among the view of extension personnel and small farmers

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