IMPACT OF FRONT LINE DEMONSTRATION ON GAIN IN KNOWLEDGE ABOUT MUSTARD PRODUCTION TECHNOLOGY AMONG FARMERS

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ABSTRACT

The present study was conducted in purposively selected Bharatpur district of Rajasthan as National Research Centre on Rapeseed Mustard (NRCRM), Sewar is located in Bharatpur district. Three panchayat samities were selected from identified district, because Front Line Demonstration on mustard were conducted in these three panchayat samities only by the NRCRM. All 12 villages where FLDs conducted were included in the present study. Fifty-one beneficiary respondents were selected on whose farm FLDs were conducted by NRCRM. Like wise, a sample of 51 non-beneficiary respondents on whose farm FLDs not conducted were also selected. Thus, total study sample comprised of 102 respondents. The results of the study indicated that majority of the beneficiaries and non-beneficiaries possessed medium level of knowledge about mustard production technology. The extent of knowledge about all the improved package of practices ranged from 28.60 to 99.33 per cent among beneficiary respondents, whereas in case of non-beneficiary farmers it was ranged from 18.80 to 91.67 per cent in the study area. The average knowledge score of beneficiary respondents was found to be substantially higher than the non-beneficiary respondents and overall knowledge difference between beneficiary and non-beneficiary farmers was found more than 15 per cent. It was further observed that a significant knowledge difference was existedwith regards to all the practices of mustard production technology between beneficiary and non-beneficiary respondents. It means there was positive impact of FLDs conducted by NRCRM on gain in knowledge about mustard production technology among beneficiary farmers in the study area.

Key words : Front Line Demonstration, Beneficiaries Non-beneficiary.

INTRODUCTION

The result of demonstrations had been remaining the effective medium of extension in India since 1952 when the community development programme was started. The first line demonstration on oilseeds and pulses is an important method of transfer of latest package of practices in totality to farmers and the main objective of this programme is to demonstrate newly released crop production and protection technologies and management practices at the farmer's field under different agroclimatic regions and farming situations. Through it, farmers learn latest technologies of oilseeds and pulses production under real farming situation at their own field, which may lead to higher knowledge.

Considering the importance of rapeseed-mustard group of crops in Indian economy and the urgent need for undertaking the basic and strategic research for stabilizing and increasing the production and productivity in the country, the National Research Centre on Rapeseed Mustard came into operation in October 1993 at Bharatpur (Rajasthan). This centre is regularly conducting the front line demonstrations for promotion of rapeseed mustard in the villages around the centre. Thus, the present study entitled "Impact of front line demonstration on gain in knowledge about mustard production technology among farmers" was undertaken with following specific objectives:

1. To assess the level of knowledge of beneficiary and non-beneficiary farmers about improved mustard production technology.
2. To compare the knowledge among beneficiary and non-beneficiary respondents about improved mustard production practices.

METHODOLOGY

The present study was conducted in purposively selected Bhatarpur district of Rajasthan as National Research Centre on Rapeseed Mustard (NRCRM), Sewar is located in Bharatpur district. Out of the 10 panchayat samities, only 3 panchayat samities namely, Sewar, Kumher and Deeg were selected from identified district, because Front Line Demonstrations on mustard were conducted in these three panchayat samities only by the NRCRM. Total 51 FLDs were conducted by NRCRM, Sewar in 12 villages of the 3 panchayat samities. These all 12 villages were included in the present study. 51 beneficiary respondents were selected on whose farm FLDs were conducted by NRCRM.

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Likewise, a sample of 51 non-beneficiary respondents on whose farm FLDs not conducted were also selected randomly. These, 51 non-beneficiary respondents were selected randomly from 12 another villages. Thus, total study sample comprised of 102 respondents. For measurement of knowledge of the respondents, the investigator developed the interview schedule. Data were collected by personal interview technique. The data so collected, classified, tabulated and analyzed in the light of the objectives. Inferences were drawn after subjecting the data to the statistical analysis.

RESULTS AND DISCUSSION

In the present study, an effort was made to measure the knowledge of beneficiaries and non-beneficiaries. The respondents were categorized into low, medium and high knowledge groups. These categories were made on the basis of M.S. and S.D., which were calculated with the help of scores obtained by an individual.

Table 1. Distribution of respondents according to their level of knowledge about mustard production technology (N=102)

S. No.	Level of knowledge	Beneficiary		Non-beneficiary		Total	
		F	%	F	%	F	%
1.	Low (18)	0	0.00	13	25.50	13	12.74
2.	Medium (18-29)	33	64.70	38	74.50	71	69.61
3.	High (³ 29)	18	35.30	0	0.00	18	17.65
	Total	51	100.00	51	100.00	102	100.00

F = Frequency, % = per cent

Table 1. reveals that majority of the beneficiary respondents (64.70%) were having medium level of knowledge regarding improved agricultural practices of mustard production technology followed by 35.30 per cent having high level of knowledge, while the majority of the non-beneficiary respondents (74.50%) were having medium level of knowledge regarding improved agricultural practices of mustard production technology followed by 25.50 per cent having low level of knowledge. Data of table further indicate that the majority of total respondents (69.61%) were having medium level of knowledge regarding mustard production technology followed by 17.65 per cent having high level of knowledge and 12.74 per cent having low level of knowledge.

Comparative view of the data pertaining to these two groups of respondents clearly bring to light that these had been a massive upward movement in the knowledge of the farmers after conducting FLD at the farmer's field.

The findings were supported by the findings of Singh (1998) who also found that majority of the respondents were in medium knowledge category regarding mustard production technology.

Individual Practice Wise Knowledge of Respondents–In order to find out the extent of knowledge of the beneficiary and non-beneficiary respondents, a total of eleven major practices were taken in account and mean per cent score (MPS) of each major practice was calculated.

Table 2. Extent of knowledge of beneficiary and non-beneficiary farmers regarding mustard production technology (N = 102)

S. No.	Package of practices	Beneficiary (N=51)		Non-beneficiary (N=51)	
		MPS	Ranks	MPS	Rank
1.	High yielding varieties	98.52	2	75.00	2
2.	Soil treatment and field preparation	55.66	9	33.33	9
3.	Seed treatment	70.66	7	38.57	8
4.	Time of sowing	99.33	1	91.67	1
5.	Seed rate and spacing	76.33	4	64.00	5
6.	Fertilizer application	67.65	8	56.29	6
7.	Irrigation management	75.38	5	64.70	4
8.	Weed management	32.67	10	28.00	10
9.	Plant protection measures	72.83	6	52.45	7
10.	Physiological aspects	28.60	11	18.80	11
11.	Harvesting, threshing and storage	78.33	3	66.67	3
	Overall	**68.72**		**53.59**	

r_s = 0.96, t = 10.28*

r_s = Rank correlation, * = Significant at 5% level

Table 2. shows that beneficiary and non-beneficiary respondents possessed maximum knowledge regarding time of sowing and high yielding varieties of mustard crop. Similarly, they possessed poor knowledge regarding the physiological and weed management aspects of mustard cultivation.

The table further indicates that knowledge of beneficiary farmers regarding other aspects like harvesting and storage, seed rate and recommended spacing, irrigation management, plant protection measures, seed treatment, fertilizer application, soil treatment and field preparation were found to be 78.43, 76.33, 75.38, 72.83, 70.66, 67.65 and 55.66 MPS, respectively.

Whereas, in case of non-beneficiary farmers 66.67, 64.70, 64.00, 56.29 and 52.45 per cent knowledge were reported with regard to harvesting & storage, irrigation management, seed rate & spacing, fertilizer application and plant protection measures, respectively.

The observations in the practices like seed treatment and soil treatment and field preparation have been quite

different from that of beneficiary farmers were only 38.57 and 33.33 MPS, respectively was recorded. The correlation between the ranks of existing knowledge of respondents was calculated by applying Spearman's rank correlation rs. The result has been presented in Table 2.

The value of rank order correlation rs was 0.96, which showed positive correlation. The significance of rs was tested by 't' test and it was observed that 't' value calculated (10.28) was higher than its table value. This led to conclusion that there was correlation in ranking of knowledge possessed by beneficiary and non-beneficiary farmers about improved mustard cultivation practices.

Table 3. Comparison of knowledge between beneficiary and non-beneficiary respondents about mustard production technology (N=102)

S. No.	Package of practices	Beneficiary (N = 51)		Non-beneficiary (N = 51)		'Z' value
		Mean	±SD	Mean	±SD	
1.	High yielding varieties	3.94	0.31	3.00	1.36	4.83*
2.	Soil treatment and field preparation	1.67	0.78	1.00	0.00	6.07*
3.	Seed treatment	2.12	0.88	1.14	0.52	6.85*
4.	Time of sowing	2.98	0.14	2.75	0.44	3.56*
5.	Seed rate and spacing	2.29	0.67	1.92	0.71	2.71*
6.	Fertilizer application	4.73	1.40	3.94	1.15	3.11*
7.	Irrigation management	1.50	0.35	1.29	0.46	2.59*
8.	Weed management	0.98	0.14	0.84	0.36	2.52*
9.	Plant protection measures	4.36	1.06	3.15	1.82	4.10*
10.	Physiological aspects	1.43	1.09	0.94	0.80	2.59*
11.	Harvesting, threshing and storage	2.35	0.55	2.00	0.59	3.10*
	Overall	**28.35**	**4.48**	**21.97**	**3.42**	**8.08***

* Significant at 5% level of significance.

Aspect wise comparison of knowledge between beneficiary and non-beneficiary respondents–The data related to level of knowledge of both beneficiary and non-beneficiary respondents incorporated in Table 3 show that calculated 'z' value was higher than the tabulated value at 5 per cent level of significance in all the package of practices of mustard production technology. Thus, it was inferred that there was difference in possession of knowledge of beneficiary and non-beneficiary farmers regarding mustard production technology.

CONCLUSION

From the above results, it could be concluded that the majority of the beneficiaries (64.70%) and non-beneficiaries (74.50%) were found to have medium level of knowledge of mustard production technology. The average knowledge score of the beneficiary respondents was found to be substantially higher than the non-beneficiary respondents and overall knowledge difference between beneficiary and non-beneficiary respondents was found more than 15 per cent. It was further revealed that there existed a significant difference with regards to all the practices of mustard production technology between beneficiary and non-beneficiary respondents. Therefore, it may be concluded that there was positive impact of FLDs conducted by NRCRM on gain in knowledge about mustard production technology among beneficiary farmers in the study area.

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