

KNOWLEDGE OF BENEFICIARY AND NON- BENEFICIARY FARMERS REGARDING MAIZE PRODUCTION TECHNOLOGY

D. Solanki*, J.P. Lakhera**, K.C. Sharma ** and S.K. Johari ***

ABSTRACT

This study was conducted in Four Panchayat Samittees of Bhilwara district of Rajasthan having major area under maize cultivation. From each Panchayat Samittee two villages were selected randomly and from each village ten beneficiary farmers were selected randomly who participated in ATMA programmes on maize crop & ten non-beneficiary farmers were also randomly selected who did not participated in ATMA programme. This way a total of 160 farmers were interviewed for the study. The knowledge of beneficiary and non-beneficiary farmers with regard to improved package of practices was measured in terms of Mean Percent Score (MPS). As many as 11 important maize production technologies were included to assess the knowledge of maize growers. From the findings it is concluded that majority of maize growers had good knowledge about improved practices of maize cultivation. Beneficiary and non-beneficiary farmers possessed comparatively more knowledge about harvesting threshing and storage, field preparations, minimum knowledge possessed in practices like intercropping, high yielding varieties and plant protection measures. There was rank order correlations between knowledge possessed by beneficiary and non-beneficiary farmers. There were practice wise as well as overall significant differences in existing knowledge of beneficiary and non-beneficiary farmers about maize production technology.

INTRODUCTION

Maize is most important cereal crop. In India maize covers an area of 8.33 m.ha. with production of 16.88 m.tonnes with the productivity of 2435 kg/ha (2009-10). Maize ranks fifth in area and sixth position in production. In state of Rajasthan it covers an area of 1.05 m.ha with production and productivity of 1.95 m.tonnes and 1737 kg/ha, respectively (2010). In Rajasthan, Bhilwara district is major maize growing area covering 1,79,714 ha. with production of 2,80,903 tonnes and productivity 1,563 kg/ha. The productivity of this crop in the country, state and district appears meager in front of world average productivity (4200 kg/ha). This observation of poor performance in the country and state is really discouraging and requires thorough consideration to raise the contribution of the crop in the national food basket. To study the level of knowledge of respondents regarding maize production technology would become definitely the guide lines

in mailing the efforts to bridge up the existing gap in the areas of technology wherever it is very wide. Looking into the above facts the present study was undertaken with following specific objectives :

1. To measure and compare the level of knowledge of beneficiary and non-beneficiary farmers regarding maize production technology.

RESEARCH METHODOLOGY

Bhilwara district of Rajasthan was purposively selected for study because is ranks 1st in area and 2nd in production of maize crop. Bhilwara district is divided into eleven panchayat samittees. Four panchayat samittees namely, Mandalgarh, Kotri, Mandal and Suwana were selected from the district having higher area under maize crop. Two villages were randomly selected from each panchayat samittee, thus in total eight villages were selected.

For selection of farmers, village wise list of maize growers was prepared with the help of

* PG Scholar, College of Agriculture, Bikaner.

** Associate Professor (Extn.Edu), DEE, SKRAU, Bikaner.

*** Associate Professor (Stat.), College of Agriculture, Bikaner.

Agriculture Supervisor from all the selected villages. From the list so prepared 10 maize growing farmers from each village were also selected randomly who participated in ATMA programme on maize crop. These farmers were called as beneficiary farmers and 10 maize growing farmers from each village were selected randomly who did not participate in ATMA programme on maize crop. These farmers were called as non-beneficiary farmers. This way a total number of 160 farmers were interviewed for the study, out of which 50 percent i.e. 80 were beneficiary farmers and remaining 80 were non-beneficiary farmers. To gather the information related to knowledge level of farmers regarding maize production technology, eleven major practices of maize cultivation were included in the test. Each practice had several questions for knowledge assessment. Thus, the test

included 11 practices of maize production technology and 105 questions. For measurement of adoption of farmers the adoption scale developed by Yogita Ranawat (2011) was adopted with slight modifications. The responses were recorded as per the scale and the scores were awarded accordingly.

RESULTS AND DISCUSSION

(A) Comparative Knowledge of beneficiary and non-beneficiary farmers regarding maize production technology.

The knowledge of beneficiary and non-beneficiary farmers with regard to improved package of practices was measured in terms of Mean Percent Score (MPS). As many as 11 important maize production technologies were included to assess the knowledge of maize growers.

Table1. Comparative knowledge of beneficiary and non-beneficiary farmers regarding maize production technology

S. No.	Package of Practices	Beneficiary (n=80)		Non-Beneficiary (n=80)		Pooled (n=160)	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Field Preparation	88.25	II	80.25	II	84.25	II
2.	High Yielding Varieties	53.44	IX	52.50	VI	52.97	IX
3.	Inter Cropping	52.16	X	41.02	X	46.59	X
4.	Seed Treatment	65.89	VII	41.07	IX	53.48	VIII
5.	Time of sowing	83.61	IV	78.19	III	80.90	III
6.	Seed rate & spacing	80.94	V	51.25	VIII	66.09	V
7.	Fertilizer application	61.67	VIII	57.22	V	59.44	VII
8.	Irrigation management	84.58	III	62.92	IV	73.75	IV
9.	Weed management	68.33	VI	52.76	VII	60.52	VI
10.	Plant protection measure	40.83	XI	38.33	XI	39.58	XI
11.	Harvesting, threshing & storage	88.28	I	89.38	I	88.83	I
12.	Overall	69.82		58.62		64.22	

rs = Rank correlation ; ** Significant at 1% level of significance

$r_s = 0.81^{**}$
 $t = 4.16$

If we look table-1 irrespective of beneficiary and non-beneficiary farmers data shows that farmers had very good amount of knowledge (above 80%) in practices like harvesting, threshing and storage; field preparation; time of sowing with 88.83, 84.25 and 80.90 MPS , respectively. Farmer's possessed good amount of knowledge (above 50%) in the practices like irrigation management; seed rate and spacing; weed management; fertilizer application; seed treatment; fertilizer application; high yielding varieties and assigned IV, V, VI, VI, VII, VIII and IX ranks respectively. They possessed poor

knowledge regarding inter cropping and plant protection measures.

Table-1 further shows that beneficiary farmers possessed very good knowledge (above 80%) regarding harvesting, threshing and storage; field preparation; irrigation management; time of sowing and seed rate and spacing with 88.28, 88.25, 84.58, 83.61 and 80.94 MPS respectively. Similarly, they had good amount of knowledge regarding weed management, seed treatment, fertilizer application, high yielding varieties and inter cropping. The beneficiary farmers possessed poor knowledge

regarding plant protection measures.

Data of Table-1 also indicates that non-beneficiary farmers had very good amount of knowledge in two practices i.e. harvesting, threshing & storage and field preparation with 89.38 and 80.25 MPS respectively. They had good knowledge in the package of practices like time of sowing, irrigation management, fertilizer application, high yielding varieties, weed management and seed rate & spacing of maize production technology with 78.19, 62.92, 57.22, 52.50, 52.76, 52.50 and 51.25 MPS respectively. The farmers also possessed poor knowledge in seed treatment, inter cropping and plant protection measures.

An effort was also made to find out the correlation between existing knowledge of maize

Table 2. Comparison of level of knowledge of beneficiary and non-beneficiary farmers about maize production technology

S. No.	Beneficiary (n=80)		Non-beneficiary (n=80)		“Z” Value
	Mean	S.D.	Mean	S.D.	
1.	6.49	1.06	5.73	0.80	3.81**

* Significant at 1% level of significance.

The data reveal that level of knowledge of both beneficiary and non-beneficiary farmers incorporated in table-2 shows that calculated "Z" value was higher than the tabulated value at 1 per cent level of significance. This calls for rejection of the null hypothesis and acceptance of alternative hypothesis, leading to the conclusion that there is significant difference in knowledge with regard improved practices of maize cultivation in beneficiary and non-beneficiary farmers. In other words, there is no similarity between the extent of knowledge of beneficiary and non-beneficiary farmers regarding maize production technology.

The higher knowledge level of maize production technology among the beneficiary in comparison to non-beneficiary farmers may be because of the reason that the beneficiary farmers participated in programmes conducted by Project Director, Agriculture Technology Management Agency (ATMA), Bhilwara and they have also provided necessary guidance and training, whereas, the non-beneficiary farmers did not participate in programmes of ATMA.

These findings are in line with the findings of

growers of both categories i.e. beneficiary and non-beneficiary farmers.

The value of rank order correlation (rs) was 0.81 which shows positive correlation. The significance of rs was tested by 't' test and it was observed that 't' value calculated (4.16) was higher than its table value. This leads to the conclusion that there was relationship in ranking of knowledge possessed by beneficiary and non-beneficiary farmers about maize production technology. Although there was difference in magnitude of Mean Percent Score of beneficiary and non-beneficiary farmers.

(B) Comparison of level of knowledge of beneficiary and non-beneficiary farmers about maize production technology.

Mahavar (1998), Chandawat (2002) and Agarwal (2008).

CONCLUSION

1. Majority of maize growers had good knowledge about improved practices of maize cultivation. Beneficiary and non-beneficiary farmers possessed comparatively more knowledge about harvesting, threshing storage and field preparation. Minimum knowledge possessed in practices like intercropping, high yielding varieties and plant protection measures. Practice wise as well as overall significant differences in existing knowledge of beneficiary and non-beneficiary farmers was observed about maize production technology.

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