

Research Article

Evaluation of front line demonstrations of the average yield of mustard in Anand, Gujarat

■ **GIRISH DESHMUKH, H.B. PATEL, NETRAVATHI G. AND KRUNAL D. GULKARI**

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SUMMARY : Rapeseed-Mustard group of crops is one of the major oilseed crops of India. Under the All India Coordinated Research Project on Rapeseed-Mustard (AICRPRM), the technologies developed through research activities are demonstrated under actual field conditions of the farmers through Front line demonstrations. From these demonstrations evaluation of each of the selected improved technology is possible. This paper attempted to study average yield of mustard crop obtained by beneficiary and non-beneficiary mustard growers through FLDs. The data on front line demonstrations (FLDs) conducted under AICRPRM in KVK Devataj of Anand district is used in the study. The study indicated that more than half (40 %) of beneficiary mustard growers had high yield (above 3000 kg/ha) and in case of non-beneficiary mustard growers, more than half (53.33 %) of them had lower yield (below 2500 kg/ha). The study further focused on there is a need to extend the updated information regarding high yielding with wilt and root rot resistant varieties, timely financial and technical assistance and regular supply of electricity for irrigation purpose to the beneficiary and non-beneficiary farmers for further increase the rapeseed-mustard production.

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KEY WORDS :

Beneficiaries, Non-beneficiaries, Front line demonstrations

BACKGROUND AND OBJECTIVES

Oilseeds are the second largest agricultural commodity in India after cereals sharing 14% of the gross cropped area and accounting for nearly three per cent of gross national product and 10% value of all agricultural products. Mustard is one of the most important oilseeds crop in India, which plays a major role in supplementing the income of small and marginal farmers. One of the major constraints of traditional mustard farming is low productivity due to non-adoption of recommended package of practices and improved varieties. Rapeseed and mustard production in India had achieved three fold increases in the last two decades.

The technology development with regard to improved varieties and other inputs have played important role in raising productivity (Singh 2003). The main contributors to such transformations have been (i) availability of improved oilseeds

production technology and its adoption, (ii) expansion of cultivated area, (iii) price support policy and (iv) institutional support, particularly establishment of technology mission on oilseeds in 1986 (Hegde, 2004).

Rajasthan, UP, MP, Gujarat and Haryana are the major rapeseed-mustard producing states. The technology mission on oilseeds (TMO), established in 1986 was aimed at attaining self reliance in oilseeds. The benefits accrued from TMO were further strengthened through the ad hoc project on front line demonstrations in oilseed 'crops' launched from *Kharif* 1990-91 sponsored by Department of Agriculture and cooperation, Government of India. Under the All India Coordinated Research Project on rapeseed mustard, the technologies developed through research activities are demonstrated under actual field conditions of the farmers through front line demonstrations. The results of the front line demonstrations revealed that still nearly 40-50%

Author for correspondence :

KRUNAL D. GULKARI

Department of
Extension Education,
B.A. College of
Agriculture, Anand
Agricultural University,
ANAND (GUJARAT) INDIA
Email: kdgulkari@gmail.

Send of the article for
authors' affiliations

realizable yield potential exists. A targeted and focused approach in spreading the awareness about the improved technologies shall increase the rate of adoption and raise the productivity of the crop. But still vast yield gaps persist between beneficiary and non-beneficiaries farmers of FLDs. It is need to extend the updated information to the non-beneficiary farmers to further increase the rapeseed-mustard production. This paper attempted to study the distribution of respondents according to their average yield of mustard between beneficiaries and non-beneficiaries under different categories and also attempts to seek the suggestions offered by the mustard growers to increase the yields of mustard.

RESOURCES AND METHODS

The present investigation was carried in 10 villages of Petlad, Tarapur and Sojitra talukas of Anand district during 2011-2012. Purposely KVK Devataj was selected for the study because maximum number of FLDs was conducted on mustard crop in 2006 to 2010. A sample of 120 respondents was taken comprising 60 beneficiary and 60 non-beneficiary farmers. For selection of beneficiary farmers a list of farmers where FLDs were conducted during preceding four years was prepared and for taking the equal representation, six beneficiary farmers from each one of the selected 10 villages making 60 beneficiary respondents were selected randomly. For the other half of the sample (60 non-beneficiary farmers), 60 farmers were selected randomly from the locality adjacent to KVK Devataj where FLDs were not conducted by any organizations. The bench mark used to compare average yield of mustard between beneficiary and non-beneficiaries mustered, average yield

obtained through front line demonstrations in Gujarat and actual yield of mustard in farmers field was considered in term of kg/ha.

OBSERVATIONS AND ANALYSIS

The results obtained from the present investigation have been discussed in the following sub heads:

Average yield of mustard crop obtained by beneficiary and non-beneficiary mustard growers through FLDs:

Yield means that crop producing capacity which can be increased through defined farm management practices. An attempt was made to study average mustard yield obtained by beneficiary and non beneficiaries across the four year. Results in Table 1 indicated that 40 per cent of beneficiary mustard growers had high yield levels (above 3000 kg/ha), followed by 33.33 per cent and 26.67 per cent of them had medium and lower yield, respectively. In case of non-beneficiary mustard growers, more than half (53.33 %) of them had lower yield (below 2500 kg/ha), followed by 38.33 per cent and 08.33 per cent of them had medium (between 2500 to 3000 kg/ha) and high level of yield, respectively. It can be concluded FLD beneficiaries mustard growers having more yields.

The results indicate that the front line demonstration has given a good impact over the farming community of Anand district as they were motivated by the new agricultural technologies applied in the FLD plots. From that yield of mustard increased successively which clearly speaks of the positive impact of FLD over existing practices of mustard cultivation.

Table 1 : Distribution of respondents according to their average yield of mustard crop (n=60)

Sr. No.	Level of yield	Category of mustard growers			
		Beneficiaries		Non-beneficiaries	
		Number	%	Number	%
1.	Low yield (Below 2500 kg/ha)	16	26.67	32	53.33
2.	Medium yield (Between 2500 to 3000 kg/ha)	20	33.33	23	38.33
3.	High yield (Above 3000 kg/ha)	24	40.00	05	08.33
	Total	60	100.00	60	100.00

Table 2 : Suggestions offered by the mustard growers to increase the yields of mustard (n=60)

Sr. No.	Suggestions	Category of mustard growers			
		Beneficiaries		Non-beneficiaries	
		Mean	Rank	Mean	Rank
1.	Timely technical guidance should be provided.	1.033	IV	1.650	I
2.	Regular supply of electricity for irrigation purpose.	1.300	VI	1.333	VI
3.	Provision of reasonable price of the produce.	1.666	I	1.516	III
4.	Develop high yielding, wilt and root rot resistant varieties.	1.500	II	1.483	IV
5.	Availability of certified seed from co-operative society and government agency.	1.133	V	1.450	V
6.	Crop loan should be provided at proper time.	1.416	III	1.566	II

Suggestions offered by the mustard growers to increase the yields of mustard:

Table 2 reveals that major suggestions given by demonstration beneficiary mustard growers in this regards were provision of reasonable price to the produce, develop high yielding, wilt and root rot resistant varieties, crop loan should be provided at proper time, timely technical guidance should be provided, availability of certified seed from co-operative society and government agency and regular supply of electricity for irrigation purpose.

Incase of non-beneficiary mustard growers, timely technical guidance should be provided, crop loan should be provided at proper time, provision of reasonable price to the produce, develop high yielding, wilt and root rotresistant varieties, availability of certified seed from co-operative society and government agency and regular supply of electricity for irrigation purpose were major suggestions given by them to further increase the yields of mustard.

Conclusion:

The study shows that there was wide variation of mustered yields between beneficiary and non-beneficiary farmers. 40 per cent of beneficiary mustard growers had high yield levels (above 3000 kg/ha) and more than half (53.33 %) non-beneficiary mustard growers had lower yield (below 2500 kg/ha). But both beneficiary and non-beneficiary farmer were

suggesting improving high yielding with wilt and root rot resistant varieties, timely financial and technical assistance through extension activities and regular supply of electricity for irrigation purpose for further increase in the mustered production. From the study conducting front line demonstrations of proven technologies, yield potential of mustard can be increased to a great extent. This will substantially increase the income as well as the livelihood of the farming community. Still there is a need to adopt multi-pronged strategy that involves non-beneficiaries to enhance mustard production through improved technologies in Anand district. This should be brought to the access of farmers through transfer of technology centres like KVKs.

Authors' affiliations :

GIRISH DESHMUKH, H.B. PATEL AND NETRAVATHI G.,
Department of Extension Education, B.A. College of Agriculture, Anand
Agaricultural University, ANAND (GUJARAT) INDIA

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