

EVALUATION OF FRONT LINE DEMONSTRATION ON CASTOR

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ABSTRACT

Technologies generated by the scientist are of no use unless adopted by the farmers. The present study was undertaken with a view to know the extent of adoption of castor production technologies as a result of FLD. Majority of the castor growers adopted the improved varieties, seed rate, sowing method, spacing, use of certified seed, method of fertilizers application, weed control, inter culturing and irrigation as per the recommendation after conducting the FLD. The use of sulphur, application of plant protection measures, use of FYM and use of basal fertilizers were adopted by the very few farmers before FLD; which was increased significantly as a result of FLDs. The FLDs showed positive impact on the yield of castor.

INTRODUCTION

India has been self sufficient in food grains, but production of oil seed crops remain static during last 30 to 40 years. There is an urgent need to increase the production of oil seeds. The production of oil seeds can be accelerated, provided farmers adopt all the latest technologies. The farmers will only adopt the technologies when they are convinced about its contribution to increase yield. Front Line Demonstration (FLD) is considered to be an effective extension method to convince the farmers about usefulness of a technology or set of technologies. As such, to accelerate the adoption of new recommended technologies of castor, FLDs were organized by KVK Deesa. Latest recommended package of practices of castor crop was demonstrated on the farmers' fields. The present research study was undertaken to evaluate the FLD with the following specific objectives:

1. To evaluate FLD in terms of adoption of recommended castor production technology.

2. To study the impact of FLD in terms of increase in yield and productivity.

METHODOLOGY

The two talukas namely Deesa and Dantiwada of Banaskantha district were purposively selected for the present study as the FLDs on castor were conducted in both the talukas. Rampura village of Deesa taluka and Chodungari village of Dantiwada Taluka were selected purposively as the FLDs were conducted in these villages during the years 1999-2000 and 2000-2001 respectively. Thirty farmers from the each village, on whose field the FLD on castor was conducted, were randomly selected. Thus, in total, sixty farmers were selected for the present study.

For the study purpose, fifteen production technologies of castor crop had been identified. The status of adoption of the selected technologies before FLD were collected from the office records of the FLDs. Responses of respondent farmers were collected with the help of specially structured interview schedule. The data were collected

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Table 1 Extent of adoption of recommended package of practices of castor crop before FLD and after FLD. N=60

Sr. No.	Practices	Level of Adoption of recommended practices			
		Before No.	FLD Per cent	After No.	FLD Per cent
1	Improved varieties	18	30.00	42	70.00
2	Seed rate	34	56.67	44	73.33
3	Sowing method (Dibbling)	39	65.00	52	88.87
4	Spacing (GCH-4 : 3' x 2') (GCH-5 : 5' x 2.5')	29	48.33	40	66.67
5	Use of certified seed	36	60.00	46	76.67
6	Time of sowing	19	31.67	34	50.67
7	Use of FYM (20-25 tons/ ha.)	10	16.67	20	33.33
8	Use of basal fertilizers	06	10.00	24	40.00
9	Use of Sulphur	03	05.00	12	20.00
10	Use of top dressing fertilizers	09	15.00	28	46.67
11	Method of fertilizers application	35	58.33	44	73.33
12	Weed control (Cultural method)	32	53.33	42	70.00
13	Inter culturing	36	60.00	48	80.00
14	Irrigation	27	45.00	36	60.00
15	Plant protection measures	04	06.67	14	23.32

Calculated $t = 10.20$ Table $t = 1.96$

during year 2000. The yield levels were also recorded. The data were then tabulated, analyzed and interpreted in light of the objectives of the present study.

RESULT AND DISCUSSION

Extent of adoption

The results of adoption of recommended package of practices before and after the FLD are presented in Table 1.

The data in the Table 1 indicated that majority (70.00 per cent) of the respondents had adopted the improved variety of castor. The other recommended production technologies of castor namely seed rate (73.33 per cent), sowing method (88.87 per cent), spacing (66.67 per cent), use of certified seed (76.67 per cent), method of fertilizer application (73.33 per cent), weed

control (70.00 per cent), inter culturing (80.00 per cent) and irrigation (60.00 per cent) were adopted by the good numbers of respondents after conducting the FLD.

There was little less impact of FLD on practices like use of sulphur (20 per cent), plant protection measures (23.32 per cent) and use of FYM (33.33 per cent). The results may be due to the fact that the impact of use of sulphur might would not been clearly visualized by the farmers. The less use of FYM may be in view of insufficient quantities of FYM available with the respondents or they may not be economically capable to procure it from market.

Yield of Castor

The yields of castor obtained by the respondents before FLD and after FLD were compared and presented in Table 2.

Table 2 Yield of castor before and after FLD

Yield of castor (kg/ ha)	Before FLD	2510=00
	After FLD	3150=00
	Increase in per cent	25.50

$t = 10.73^*$ (*significant at 0.05 level of probability)

Table 3 Economics of castor production

Sr. No.	Criterion	Before FLD	After FLD
1.	Cost inputs	580.00	1044.00
2.	Yield of castor (Qtl. /ha.)	25.10	31.50
3.	Market price (Rs. /qtl.)	1500.00	1500.00
4.	Gross income (Rs. /ha.)	37,650.00	47,250.00
5.	Net profit (Rs. /ha.)	37,070.00	46,206.00

The data in the Table 2 revealed that the yield of castor per hectare was increased by 25.50 per cent after FLD. The significant value of calculated "t" test also indicated the significant difference between two groups at 5 per cent level of significance.

Profitability of FLD castor

The cost of inputs was calculated for before and after FLD castor. The yield data of castor was also recorded for before conducting FLD and after conducting the FLD. Based on the market price, the income for before & after FLD as well as profitability per hectare was calculated.

Data in Table 3 revealed that there was nearly 20 per cent increase in the yield of castor as a result of FLD. Though, the cost of inputs was doubled for FLD; the increase in net profit was to the tune of more than 14 per cent.

CONCLUSION

Since the farmers did not know the key production technologies of castor crop, its level of adoption was less. After conducting the FLD of castor on the farmers' field, most of the respondents became aware about the usefulness of these production technologies of castor and adopted most of the production technologies of castor even after the FLD. The yield of castor was increase by 25.50 per cent after FLD over previous yield level. As a result of higher adoption of recommended technologies, there was net increase of 25.50 per cent in yield levels over the yields before conducting the FLDs. This clearly indicates the positive impact of FLD on adoption of new technologies of castor as well as on yield level of castor.
