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Effect of Green Gram FLDS on Income of the Among Green Gram Growers in Dewas District (M.P.)

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Abstract: Green gram is an important pulse crop in our country after chickpea and pigeon pea, cultivated in three different seasons' viz., Kharif, Rabi and summer. India is the largest producer of a green gram that accounts for 54% of the world production and covers 65% of the world acreage and it is grown on about 3.70 million hectares with annual production of 1.57 million tons. Green gram is grown in the Dewas district (M.P.). the study was conducted in Dewas district, where FLD was conducted by ATMA Dewas M.P. during 2015-16, six villages and 120 green gram growers had benefited from this program. All the beneficiaries were selected purposively for the study. The mean income of beneficiaries after FLD was Rs. 28.69 thousand which was found significantly higher than mean income of beneficiaries before FLD (Rs.15.56 thousand). The majority of the beneficiaries after FLD were in high-income level category whereas beneficiaries before FLD in low-level income category.

Keywords: ATMA Agriculture Technological Management Agency, FLD- Front Line Demonstration.

INTRODUCTION

Green gram is an important pulse crop in our country after chickpea and pigeon pea, cultivated in three different seasons' viz., kharif, rabi and summer. India is the largest producer of a green gram that accounts for 54% of the world production and covers 65% of the world acreage and it is grown on about 3.70 million hectares with annual production of 1.57 million tones. Green gram is grown in the Dewas district (M.P.). The district occupies 4000 hectares area under a green gram and the total production was 2200 tones with an average productivity of 5.5 quintals per hectare. For the development of production and productivity of green gram in Dewas district, FLDs are being executed by personnel of ATMA program from 2007.

For the development of production and productivity of green gram in Dewas district, FLDs are being executed by personnel of ATMA program from 2007. The Agricultural Technology Management Agency (ATMA) is a society of key stock holders involved in agricultural activities for sustainable agricultural development in the district. It is a focal point for integrating research and extension activities and decentralizing day to day management of the public Agricultural Technology System. It is a registered society responsible for technology dissemination at the district level. It is fact that the effective extension activities like training and field demonstrations would result in increasing the income of the beneficiaries.

In this study, an attempt has been made to evaluate a various aspect of green gram production through front line demonstrations. The findings of this study could be gainfully utilized by the administrators, policy maker scientists and extension workers to know about the status of green gram growers and importance of front line demonstration to make the cultivation of green gram more profitable and economical.

Objective:

1. To measure the effect of green gram FLDs on the income of the beneficiaries.

REVIEW OF LITERATURE

Srinivas *et al.* (2014) studied the yield gap analysis of sorghum through Front Line Demonstrations in Tribal area of East Godavari District, Andhra Pradesh. In their study, the results indicated an increase in yield and yield attributes in the demonstration package compared to the farmer's practice. Average net returns of Rs.19,500/- with a benefit-cost ratio of 2.05 was obtained in demonstration compared to Rs.8, 400/- per hectare of farmers practice with a benefit-cost ratio of 1.6.

Shrinivas (2015) reported that The improved technology gave higher gross (Rs.32,690/-) and net returns (Rs. 27,000/-) with higher benefit cost ratio of 5.74 than the farmer’s practice.

Meena *et al.* (2016) carried out the study on technological and extension yield gaps in green gram in Pali district of Rajasthan, reported that improved technology recorded a mean yield of 982 kg/ha which was 35.5% higher than obtained with farmers’ practice (755 kg/ha).

Swaroopaa *et al.* (2016) studied the Impact of FLD’s on the yield of green gram in the tribal belt of East Godavari district of Andhra Pradesh. Reported that higher yield of 947 kg/ha compared to 732 kg/ha in farmers’ local practice. In spite of the increase in yield of pulses, technological gap, extension gap, and technology index existed. The improved technology gave a higher gross return, net return with higher benefit/cost ratio than farmers’ practices.

Singh (2017) reported that adoption of an improved package of practices in wheat cultivation recorded higher B:C ratio (1.92) as compared to FP (1.63). Yield enhancement and higher net returns observed under FLDs of improved technologies in wheat. Thus, the productivity of wheat could be increased with the adoption of recommended improved package of practices. The study resulted to convincing the farming community for higher productivity and net returns.

METHODS & MATERIALS

For fulfillment of these objectives, the study was conducted in Dewas district, where FLD was conducted by ATMA Dewas M.P. during 2015-16, six villages and 120 green gram growers had benefited from this program. All the beneficiaries were selected purposively for the study. The list of FLDs beneficiaries was provided by ATMA. The data were collected using survey method through a pre-tested interview schedule and responses were recorded.

RESULT & DISCUSSION

Effect of green gram FLDs on the income of the beneficiaries.

Table:1.0 Distribution of beneficiaries according to their income from before FLD on green gram production technology and after FLD on green gram production technology:

Income of beneficiaries from green gram (in thousands of Rs.)	After FLD No. of beneficiaries	Before FLD No. of beneficiaries	‘Z’ value
Low (less than 15)	19(15.83)	75(62.5)	10.277*
Medium(15-30)	45(37.5)	39(32.5)	
High (more than 30)	56(46.66)	6(0.05)	
Mean income	28.69	15.56	
Standard deviation	11.42	8.09	

Note: Figures in parentheses indicated percentages

Z = 10.277, *Significant at 1% level

Z_c = 2.58 (Critical value of Z)

Table 1.0 presents the percentage distribution of the beneficiaries according to their income level.

In the case of beneficiaries after FLD 15.83 percent, beneficiaries were found in the low-income category while 37.5 percent were in medium category and 46.66 percent in the high category.

Similarly, 62.5 percent of the beneficiaries before FLD were in low-income category, 32.5 percent in medium and 0.05 percent were in high-income level category.

The mean income of beneficiaries after FLD was Rs.28.69 thousand whereas that of beneficiaries before FLD was Rs.15.56 thousand. The mean income of beneficiaries after FLD was considerably higher than before FLD beneficiaries.

The “z-test” indicated that the mean income of both categories of beneficiaries varied significantly from each other.

Thus we can conclude that majority of the beneficiaries after FLD were in high-income level category whereas beneficiaries before FLD in low-income category.

Income from green gram and adoption behaviour:

Table -1.1 Association between income from a green gram of beneficiaries and their adoption behavior.

S. No.	Income from green gram	Adoption behaviour			Total
		Low	Medium	High	
1.	Low	5(26.32)	6(31.58)	8(42.11)	19(100.00)
2.	Medium	6(13.33)	32(71.11)	7(15.56)	45(100.00)
3.	High	14(25.00)	17(30.36)	25(44.64)	56(100.00)
Total		25(20.84)	55(45.83)	40(33.33)	120(100.00)

Note: Figures in parentheses indicate percentages

$\chi^2 = 18.8521$, significant at 0.05 level of probability with 4 d.f.

Table value is 9.488

Table 1.1 revealed that out of 19 green gram beneficiaries belonged to low income from green gram group, the higher number of green gram beneficiaries (42.11%) showed a high level of adoption followed by (31.58%) showed a medium level of adoption and (26.32%) showed a low level of adoption respectively.

Out of 45 medium income from green gram group of green gram beneficiaries, the higher number of green gram growers (71.11%) showed a medium level of adoption followed by (15.56%) showed a high level of adoption and (13.33%) showed a low level of adoption respectively.

Again out of 56 high income from green gram group of green gram beneficiaries, the higher number green gram growers (44.64%) showed a high level of adoption followed by (30.36%) showed a medium level of adoption and (25.00%) showed a low level of adoption respectively.

The calculated Chi-square value 18.8521 at 5 percent level with 4 d.f. was found to be significant. Hence, the conclusion can be drawn that there was a significant association between income from a green gram of the beneficiaries and their adoption behaviour of green gram cultivation practices.

Effect of green gram FLDs on income of the beneficiaries

The majority of the beneficiaries after FLD were in high-income level category whereas beneficiaries before FLD in the low-income category. The probable reasons for the majority of beneficiaries earning higher income from green gram after FLD was the adoption of improved technologies which significantly increased the yield as well as yield attributing traits of crop and also the net returns to the farmers. This finding is in conformity with the findings as reported by Gautam *et al.* (2007), Srinivas *et al.* (2014), Meena *et al.* (2016), Swaroopa *et al.* (2016) and Singh (2017).

Income from green gram:

The income from green gram was found to be significantly associated with adoption level of beneficiaries. High income of farmers enhanced the purchasing power of them and farmers could take a risk and use improved technology. Hence, it can be concluded that income from green gram had an influence on the level of adoption of green gram production technology.

Conclusion

The mean income of beneficiaries after FLD was Rs. 28.69 thousand which was found significantly higher than mean income of beneficiaries before FLD (Rs.15.56 thousand). Majority of the beneficiaries after FLD were in high-income level category whereas beneficiaries before FLD in low-level income category

The average income level of beneficiaries after FLD and average income level of beneficiaries before FLD were Rs. 28.69 thousand and Rs. 15.56 thousand respectively.

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