Knowledge Level of Farmers Regarding Package of Practices for Gram Crop

Nikulsinh.M. Chauhan

Krishi Vigyan Kendra
Vyara Distt. Tapi 394 650 (Gujarat)

ABSTRACT

The study was undertaken in Tapi district of South Gujarat. It was observed that initially 78 per cent farmers were possessing low, 16 per cent medium and 6 per cent high level of knowledge whereas after acquiring training the values were 8 per cent for low, 10 per cent for medium and 82 per cent for high level of knowledge regarding gram cultivation. It was noticed that 87.0 per cent of the farmers adopted new high yielding variety followed by land configuration (81.0 %), integrated nutrient management (83.0 %) and used recommended seed rate (82.0 %) after acquiring trainings from the KVK. It was also noticed that due to enhanced knowledge and adoption of scientific practices, the yield of gram increased by 36.7 per cent, 45.8 per cent and 46.2 per cent over the yield obtained under farmer's practices during the year 2008-09, 2009-10 and 2010-11, respectively. Thus, study suggests the need of conducting intensive trainings, FLDs and effective use of all means of extension education to educate the gram growers for achieving higher production of gram in the district.

Key words: Impact, Training ,Knowledge, Gram, Package of Practices.

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 122.173.244.76 on dated 1-Oct-2016

INTRODUCTION

A number of agricultural improvement programmes have been introduced in India to increase the agricultural production and income of the farming community, but the outcome of these programmes is not satisfactory in terms of achieving higher agricultural production. The most important factor identified for this poor outcome was lack of understanding by the farmers about various technological recommendations made by the research institutes. As a result, more emphasis on farmers training activities is being given by the ICAR, SAUs along with the respective State Department of Agriculture. It is a known fact that training to farmers increases the technical efficiency of an individual. In Tribal area of Tapi district, farmers grow gram crop on conserved moisture or after giving a light irrigation, however, get very low yields due to use of low yielding variety and poor knowledge about scientific cultivation of gram crop. KVK, Tapi made an effort and conducted 7 each on-campus as well as off-campus training programmes for the benefit of farmers and farm women. Additionally, a total number of farmers covered under front line demonstrations were 112 in 20 different villages. In order to evaluate the impact of training programmes as well as other extension activities of KVK, the present study was undertaken with the objectives to assess the knowledge and adoption level of package of practices and to find out the yield gap analysis in gram production.

MATERIALS AND METHODS

This study was undertaken in 5 villages and from each village 20 farmers were selected thus, making a total sample size of 100 tribal farmers. The data were collected through personal interview by designing a questionnaire. The data were collected, tabulated and analyzed by using statistical tools like frequency and percentage. The extension gap, technology gap and the technology index were worked out as per formulae given by the Samui *et al.* (2000). The practices followed under the front line demonstration (FLD) and farmers' practices are given in table 1.

Corresponding author e-mail: nikulsinh_m@yahoo.in

In FLDs, the practices followed are shown in table below

Particulars	Demonstration practice	Farmer's practice
Variety	GG-2	*Local*
Fertilizer	Bio-compost – 6 ton/ha	Basal – None
	Chemical Fertilizer – 20 + 40 + 00	Chemical Fertilizer-not used
Seed treatment	*PSB* and *Rhizobium* – 2l / 2 kg/ha	—Nil—

RESULTS AND DISCUSSION

In order to assess the impact of training programmes on the knowledge level of farmers regarding gram cultivation practices, the data were classified in to before and after training programme (Table 1).It was observed that initially 78 per cent farmers were possessing low, 16 per cent medium and 6 per cent high level of knowledge whereas after acquiring training the values were 8 per cent for low, 10 per cent for medium and 82 per cent for high level of knowledge. Thus, indicating that there was a considerable increase in the knowledge level of farmers who attended the KVK programmes organized both on campus as well as off campus.

Table 1. Change in knowledge level of farmers before and after training.

Knowledge Level	Before Training (%)	After Training (%)
Low	78	08
Medium	16	10
High	06	82

Similarly, all the ex trainees were interviewed about individual production technology and the data were presented in Table 2. It was evident that farmers take keen interest about the performance of different varieties or hybrids as well as all were knowledgeable about seed rate, bio-fertilizers and INM.

On perusal of the data (Table 3), it was inferred that demonstration of various production technologies resulted in the increased level of adoption, thus confirming the notion that "Seeing is believing". Though in the adoption of an enterprise number of factors is responsible but economic factor is the most important. In case of front line demonstrations, it was observed that farmers generally make use of all the required inputs at their plots but the method of application, dose or time of application is not as per recommendations. Most of the time farmers take advice from the fallow farmers. Hence, conductance of FLD programmes proved an important activity of the KVK and resulted in the increased adoption of the technology demonstrated.

The data showed that 76.0 per cent of the farmers had low level of adoption which was increased to 84.0 per cent. Thus, it can be said

Table 2. Knowledge level of farmers about package of practices of gram crop.

Sr. No	Particular	Knowledge level		
		Low	Medium	High
1.	High Yielding varieties	08	05	87
2.	Land configuration	06	13	81
3.	Seed rate	14	08	78
4.	Bio fertilizers	19	06	75
5.	Weeding	17	12	71
6.	Integrated Nutrient management	07	10	83

Table 3. Change in adoption level of scientific cultivation of gram .

Category	Before Training (%)	After Training (%)
Low level of adoption	76	04
Medium level of adoption	18	12
High level of adoption	06	84

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 122.173.244.76 on dated 1-Oct-2016

that overall knowledge level and adoption level of the tribal farmers about package of practices of gram had increased up to 82.0 per cent and 84.0 per cent, respectively after acquiring training at KVK, Tapi.

Yield Gap Analysis of Gram Cultivation

The results indicated that the highest yield in FLD plots and farmer's plots was 22.3 q and 13.8 q/ha respectively. The average yield of gram under demonstration ranged between 17.5 q to 20.1 q/ha during different years. The results clearly showed that due to enhanced knowledge and adoption of scientific practices, the yield of gram increased by 36.7 per cent, 45.8 per cent and 46.2 per cent over the yield obtained under farmers practices during the year 2008-09, 2009-10 and 2010-11, respectively. The above findings were in agreement with Dubey *et al.* (2010). Average extension gap was 5.7 q/ha which emphasized the need to educate the farmers through various extension means like FLD whereas the technology gap was 11.7 q/ha. However, it was observed that the average technology gap was narrowing down during last three years. The technology gap observed may be attributed to difference in the soil fertility status, agricultural practices, local climate conditions, rainfed agriculture and timeliness of availability of inputs. Lower the value of technology index, more is the feasibility of the technology demonstrated (Sagar and Chandra, 2004). Therefore, reduction of technology index from 48.9 per cent observed during 2008-09 to 45.0 per cent in 2010- 11 exhibited the feasibility of technology demonstrated. Thus FLD obtained a significant positive result and also provided the researchers an opportunity to demonstrate the productivity potential and profitability of the integrated nutrient management under field conditions.

CONCLUSION

It was noticed that knowledge level and adoption level of the tribal farmers were enhanced after imparting training and conducting FLDs by KVK scientists. KVK is working as a knowledge hub for latest agricultural technology in Tapi district. The frontline demonstration conducted on Integrated Nutrient Management in gram at farmer's fields in Tapi district of Gujarat revealed that the farmers can get increased gram yield by following the recommended package of practices. It improved the productivity by 42.9 per cent. The productivity gain under FLD over farmer's practice created awareness and aggravated the other farmers to adopt integrated nutrient management and high yielding variety of gram in the district. This study suggests for conducting intensive trainings, FLDs and effective use of all means of extension education to educate the gram growers for higher production of gram and to get higher net return on sustainable basis.

REFERENCES

Dubey, S., Tripathy, S., Singh, P. and Sharma, R. K. 2010. Yield gap analysis of black gram production through frontline demonstration. J. Prog. Agri. **1** (1): 42-44

Sagar, R. L. and Chandra, G. 2004. Front line demonstration on sesame in West Bengal. *Agricultural Extension Review.* **16** (2): 7-10

Samui, S. K. Maitra, S., Roy, D. K., Mandal, A. K.and Saha, D. 2000. Evaluation of front line demonstration on groundnut. *J. Indian Soc. Costal Agri. Res..* **18** (2): 180-183.

Table 4. Performance of Front line demonstrations on Gram.

Year	Area	No. of Demo.	Yield (q/h) Highest	Lowest	Average	FP	% increase	EG	TG	TI
2008-09	5	39	18.8	16.1	17.5	12.7	36.7	4.69	12.2	48.9
2009-10	5	39	20.4	18.4	19.7	13.5	45.8	6.18	11.5	46.0
2010-11	5	34	22.3	19.5	20.1	13.8	46.2	6.35	11.2	45.0
Mean	20.5	18.	19.1	13.3	42.9	5.7	11.7	46.6		

(EG) Extension gap= Demonstration yield- Farmers yield

(TG) Technology gap = Potential yield – Demonstration yield

(TI) Technology index= $\frac{\text{(Potential yield – Demonstration yield) X 100}}{\text{Potential yield}}$

www.IndianJournals.com
Members Copy, Not for Commercial Sale
Downloaded From IP - 122.173.244.76 on dated 1-Oct-2016