Indian Journal of Extension Education
Vol. 50, No. 1 & 2, 2014 (15-17)

Correlates of Adoption of Package of Practices in *Bt* Cotton by the Farmers of Ranga Reddy District of Andhra Pradesh

Deepthi. V[1], Hema. B[2], Kiranmayi. K[3] and Jyothi. V[4]

ABSTRACT

The study was taken up with the main objective to study the correlates of the adoption of the recommended package of practices in *Bt* cotton by the farmers of Ranga Reddy District of Andhra Pradesh and their profile characteristics. For the purpose of study fifty (50) farmers growing *Bt* cotton were selected at random from Kethireddypalli village of Moinabad mandal of Ranga Reddy district of Andhra Pradesh. The data was collected during 2013 through structured interview schedule. The independent variables studied included age, education, family type, land holding, farming experience, training, extension contact, sources of information, social participation, market orientation, economic orientation, risk orientation, input availability and labour availability for cultivation of *Bt* cotton. While the dependent variable studied included 'adoption of package of practices in *Bt* cotton. The adoption showed positive and significant correlation with training, sources of information and input availability at 5 per cent level of significance. The dependent variable also showed positive and significant correlation with labour availability at 1per cent level of significance.

Key words: *Bt* cotton, adoption, package of practices

INTRODUCTION

It is interesting to note that the area planted under *Bt* cotton has increased from a mere 29,000 hectares in 2002 to 11 million hectare in 2011, a 380 fold increase. *Bt* cotton now covers as much as 93.00 per cent of the total cotton acreage in the country. In India increase in yield in *Bt* cotton was about 50.00 per cent due to effective control of boll worms. A significant reduction in insecticidal applications following the introduction of *Bt* cotton was also noticed and farmers could earn profits ranging from ₹ 7,800 to 30,500 per hectare. *Bt* cotton has delivered significant benefits to all the stakeholders of agricultural value chain in the country and has stakeholders contributed to a cumulative national farm income. The major reason for such good results could be the adoption of recommended technologies in *Bt* cotton. The results could further be improved if we could find the factors effecting the adoption of recommended package of practices by the farmers. The study was conducted with the objective to study profile characteristics and correlation analysis of adoption of recommended package of practices in *Bt* cotton by the farmers.

METHODOLOGY

For the purpose of study, fifty farmers growing *Bt* cotton were selected at random from Kethireddypalli village of Moinabad mandal, Ranga Reddy district of Andhra Pradesh. The data were collected during 2013 through structured interview schedule. The independent variables included age, education, land holding, farming experience, training, extension contact, sources of information, social participation, market orientation, economic orientation, risk orientation, input availability and labour availability for cultivation of *Bt* cotton. While the dependent variable was 'adoption of package of practices in *Bt* cotton.

The adoption in *Bt* cotton was studied with twenty nine items related to package of practices in *Bt* cotton and was measured on a three point continuum namely fully adopted, partially adopted and not adopted. The variables namely., extension contact, social participation, market orientation, economic orientation, risk orientation, input availability, labour availability and adoption of package of practices were categorized into three categories of low, medium and high based on mean and standard deviation. The results were expressed in terms of frequency and percentage. Correlation analysis was done to know the relationship between independent and dependant variables.

RESULTS AND DISCUSSION

Distribution of respondents based on selected independent variables and dependent variable is presented in Table 1 and correlation analysis between the independent variables and the extent of adoption of package of practices in Bt cotton is depicted in Table 2.

[1.& 2.] Ph.D Research Scholars in Extension, ANGRAU (A.P.) & IARI, New Delhi [3].Research Associate, KVK, Amadalavalasa, Srikakulam (Dt.)
[4.] SMS (Extension), KVK, Banavasi, Kurnool (Dt.), Andhra Pradesh

INDEPENDENT VARIABLES

A little less than half of the respondents were old aged (46.00%), followed by middle aged (34.00%) and young aged (20.00%). Greater proportion of the respondents were illiterate (42.00%), followed by primary school (22.00%), upper school (12.00%) and an equal proportion of 8.00 per cent each were found in the categories of high school, intermediate and degree. Majority of the respondents lived in nuclear (70.00%) family type and the remaining 30.00 per cent were found in joint family type. A larger proportion of the respondents had large (44.00%) land holdings, followed by medium (30.00%), small (16.00%) and marginal (10.00%) land holdings. Half of the respondents had medium (50.00%) farming experience, followed by low (44.00%) and high (6.00%). A large majority of the respondents did not receive training (70.00%) and the remaining 30.00 per cent received training. Majority of the respondents were found in low (38.00%) category of extension contact, followed by medium (36.00%) and high (26.00%). Half of the respondents reported friends & neighbours (50.00%) as sources of information, followed by input dealers (28.00%), Dept. of Agriculture (12.00%) and market officials (10.00%). Social participation: Greater proportion of the respondents had low (58.00%) social participation, followed by medium (26.00%) and high (16.00%). A little less than half of the respondents had high (46.00%) market orientation, followed by medium (34.00%) and low (20.00%). Half of the respondents had high (50.00%) economic orientation, followed by medium (36.00%) and low (14.00%). Majority of the respondents had low (62.00%) risk orientation, followed by medium (32.00%) and high (6.00%). A little more than half of the respondents had medium (54.00%) input availability, followed by high (38.00%) and low (8.00%). A large proportion of the respondents had medium (64.00%) labour availability, followed by low (30.00%) and high (6.00%).

Table 1: Distribution of respondents based on selected independent variables and dependent variable

n=50

Variables	Category	F	%	Variables	Category	F	%
Independent variables							
Age	Young	10	20.00	Sources of information	Dept.of Agriculture	6	12.00
	Middle	17	34.00		Market officials	5	10.00
	Old	23	46.00		Input dealers	14	28.00
Education	Illiterate	21	42.00		Friends & neighbours	25	50.00
	Primary school	11	22.00				
	Upper school	6	12.00	Social participation	Low	29	58.00
	High school	4	8.00		Medium	13	26.00
	Intermediate	4	8.00		High	8	16.00
	Degree	4	8.00	Market orientation	Low	10	20.00
Land holding	Marginal	5	10.00	Economic orientation	Low	7	14.00
	Small	8	16.00		Medium	18	36.00
	Medium	15	30.00		High	25	50.00
	Large	22	44.00	Risk orientation	Low	31	62.00
Farming experience	Low (0-10 years)	22	44.00		Medium	16	32.00
	Medium (10-20 years)	25	50.00		High	3	6.00
	High (20-30 years)	3	6.00	Input availability	Low	4	8.00
Training	Received	15	30.00		Medium	27	54.00
	Not received	35	70.00		High	19	38.00
Extension contact	Low	22	38.00	Labour availability	Low	15	30.00
	Medium	18	36.00		Medium	32	64.00
	High	10	26.00		High	3	6.00
Dependent variables							
Variable					**Category**	**F**	**%**
Adoption of package of practices in *Bt* cotton					Low	4	8.00
					Medium	19	38.00
					High	27	54.00

A little more than half of the respondents had high (54.00%) adoption followed by medium (38.00%) and low (8.00%) Table 1. The findings are in conformity with that reported by Sharma and Chandargi (2005); Maraddi and Kumar (2008), and Ambedkar *et. al.* (2013)

The dependent variable showed positive and significant correlation with training, sources of information and input availability at 5 per cent level of significance. The dependent variable also showed positive and significant correlation with labour availability at 1 per cent level of significance. The results

are in conformity with the findings reported by Leelavani *et. al.* (2013), Samantha *et. al.* (2013), and Ambedkar *et. al.* (2013). While the other variables namely, age, education, family type, land holding, farming experience, extension contact, social participation, market orientation, economic orientation and risk orientation did not show any significant relationship with the dependent variable.

Table 2: Correlation between the independent variables and the extent of adoption of package of practices in *Bt* cotton

n=50

Independent Variables	Correlation coefficient (r-value)
Age	0.062NS
Education	-0.012NS
Land holding	-0.095NS
Farming Experience	-0.025NS
Training	0.278*
Extension contact	0.116NS
Sources of information	0.285*
Social participation	0.088NS
Market orientation	-0.017NS
Economic orientation	0.094NS
Risk orientation	0.041NS
Input availability	0.256*
Labour availability	0.377**

CONCLUSION

The study revealed that a majority of the farmers had high level of adoption of recommended package of practices followed by medium and low levels of adoption. The study indicted that the adoption positively and significantly correlated with training, sources of information and input availability at 5 per cent level of significance and with labour availability at 1 per cent of significance.

Paper received on : May 13,2014
Accepted on : June 17, 2014

REFERENCES

Ambedkar D, Babu R P, Naidu R G B M and Rao S V. 2013. Extent of adoption of improved bengalgram production technology. *The Andhra Agricultural Journal.* 60(2): 470-474

Leelavani M, Sivanarayana G and Naidu R G B M. 2013. Information processing behavior of the input dealers and its relationship with profile characteristics. *The Andhra Agricultural Journal.* 60(2): 457-460

Maraddi G N and Kumar S M C. 2008. Extent of adoption of sustainable cultivation practices with respect to ratoon management by sugarcane growers. *Mysore Journal of Agricultural Sciences*. 42(4): 731-734

Samatha J, Vijayabhinandana B and Krishna G T. 2013. An analysis of the profile characteristics of the farmers using ICTs. *The Andhra Agricultural Journal.* 60(2): 466-469

Sharma L and Chandargi D M. 2005. A study on the adoption behavior of rainfed maize growers in Jammu district of Jammu & Kashmir state. *Karnataka Journal of Agricultural Sciences*. 18(4): 1133-1135