Plant Archives Vol. 20, Supplement 1, 2020 pp. 503-505 **e-ISSN:2581-6063 (online), ISSN:0972-5210**

KNOWLEDGE LEVEL OF HYBRID COTTON GROWERS ON COTTON CULTIVATION PRACTICES

R. Jeya
Department of Agricultural Extension, Faculty of Agriculture,
Annamalai University, Annamalainagar – 608002, Tamil Nadu, India.
E-mail : rjeya1974@gmail.com

Abstract

The study was conducted in Veppanthattai, Alathur and Veppur blocks of Perambalur district of Tamil Nadu to study the knowledge level of hybrid cotton growers on recommended cotton cultivation practices. A sample size of 300 respondents were selected based on proportionate random sampling procedure. The study revealed that majority of the respondents (45.00%) had medium level of knowledge on recommended cotton cultivation practices where as, low level of knowledge was observed on weedicide application (20.00%).The correlation analysis showed that the knowledge level of cotton growers was significant and positive relationship with the characteristics namely occupation, area under cotton cultivation, information source utilization, innovativeness, risk orientation and economic motivation.
***Keywords*:** Knowledge level, Cotton growers, Cotton cultivation, Practices.

Introduction

Cotton is India's principal commercial crop providing the means of livelihood to several million farmers and several million people engaged in trade, processing and textile industries. It is also called as "White gold". By way of exports, foreign exchange earnings of cotton amount to about Rs. 50,000 crores, which is nearly one – third of the total foreign exchange earnings of our country. World over, cotton is assuming the status of preferred fibre even for fashion fabrics. India produces widest range of cotton from non – spinnable coarse to medium, long, extra long and super fine cotton. The development of hybrid cotton in the 1970's which now occupies about 80 to 90 per cent of total cotton area is a significant milestone achievement in Indian cotton scenario. Hybrids gave almost twice the yield of varieties and better quality, especially long/ extra long staples. Even though the production and productivity of cotton enhanced due to this hybrid revolution, India's productivity (440 kg lint/ha) is still below the world average of 682 kg lint/ha (Khadi, 2006). There is a scope to expand cotton production by increasing the adoption level of all the recommended technologies. Knowledge is the pre – requisite for adoption of any technologies. Hence an attempt was made to study the knowledge level of cotton growers with the following objectives.

1. To find out the knowledge level of cotton growers on recommended cotton cultivation practices.
2. To study the relationship of socio – personal and psychological characteristics of respondents with their knowledge level.

Materials and Methods

This study was conducted in Perambalur district of TamilNadu. Ex-post facto research design was followed. A sample of 300 respondents was selected by proportionate random sampling procedure. The selected villages were V.R.S.S. Puram and Pandagapadi from Veppanthattai block, Sathanur and Siruganpur from Alathur block and Olappadi and Paravai from Veppur block; Data were collected by a well structured and pre – tested interview schedule. Knowledge test was administrated to test the knowledge level of cotton growers. The collected data were analyzed by using cumulative frequency method, percentage analysis and simple correlation and multiple regression analysis.

Results and Discussion

Overall knowledge level of the cotton growers

In order to study the knowledge level of cotton growers knowledge test was administrated. The respondents were classified as low, medium and high using cumulative frequent method. The result on overall knowledge level of cotton growers are presented in Table 1.

Table 1 : Distribution of respondents based on their overall knowledge level. **(n = 300)**

S.No	Category	Number of respondents	Per cent
1.	Low	69	23.00
2.	Medium	135	45.00
3.	High	96	32.00
	Total	300	100.00

It could be observed from the Table 1 that nearly half of the respondents (45.00 per cent) had medium level of knowledge followed by high (32.00 per cent) and low (23.00 per cent) levels of knowledge on recommended cotton cultivation practices. This finding is in accordance with the finding of Madiajagan and Somasundaram (2002) and Jeyalakshmi and Govind (2006).

Item-Wise Knowledge level of cotton growers.

The results on item – wise knowledge level of the respondents are presented in Table 2.

Table 2 Practice–wise knowledge level of cotton growers

(n = 300)

S. No	Items	Number of respondents	Per cent
1.	Selection of Variety	295	98.33
2.	Quantity of recommended seed rate	284	94.66
3.	Recommended spacing	294	98.00
4.	Time of gap filling	277	92.33
5.	Quantity of bio - fertilizer	223	74.33
6.	Quantity of farm yard manure	249	83.00
7.	Quantity of NPK fertilizers	247	82.33
8.	Quantity of micro nutrient mixture.	198	66.00
9.	Recommended weedicide.	60	20.00
10.	Name of plant growth regulator	168	56.00
11.	Quantity of plant growth regulator.	168	56.00
12.	Quantity of DAP for foliar spray	253	84.33
13.	Quantity of insecticide for bollworm.	264	88.00
14.	Quantity of insecticide for white fly.	245	81.66
15.	Fungicide for leaf spot.	212	70.66

It could be observed from the Table 2 that an overwhelming majority of the respondents were found to have knowledge on the practices namely selection of variety (98.33 per cent), spacing (98.00 per cent), seed rate (94.66 per cent) and time of gap filling (92.33 per cent). The high level of knowledge about these practices was due to the advertisements and business promotional activities made by the seed producers and input dealers.

Further, it was observed that about two – fifth of the respondents had correct knowledge about quantity of insecticide for boll worm (88.00 per cent), quantity of DAP for foliar spray (84.33) quantity of farm yard manure (83.00 per cent), quantity of NPK fertilizers (82.33 per cent) and quantity of insecticide for whitefly (81.66 per cent).

In addition, more than half the proportion of the respondents had knowledge on quantity of bio – fertilizer (74.33 per cent), recommended fungicide for leaf spot (70.66 per cent), quantity of micro nutrient mixture (66.00 per cent), recommended plant growth regulator (65.33 per cent) and quantity of plant growth regulator (56.00 per cent).

The low level of knowledge on weedicide application was possessed by 20.00 per cent of the respondent. This might be due to their lack of interest in acquiring knowledge on weedicide application. This finding is in accordance with the findings of Meenakshi (2006). In line with the present results Pavan Kumar and Dhorey (2017) observed in Bt cotton growers of Telangana that majority of the respondents had medium level of extent of adoption of Cotton technologies

Association and Contribution of characteristics of respondent with their knowledge level

Table 3 : Zero–order correlation analysis of socio–personal and psychological characteristics of respondents with their knowledge level.

S. No	variables	'r' Values	Regression Co - efficient	Standard error	'r' Value
1.	Age	0.104 NS	1.053	0.701	1.502 NS
2.	Educational status	0.058 NS	0.741	0.225	3.285 **
3.	Occupation	0.150**	-0.149	0.615	0.242 NS
4.	Farm Size	-0.005 NS	-0.305	0.433	-0.704 NS
5.	Area under cotton cultivation	0.192 **	-0.001	0.166	0.006 NS
6.	Farming experience	0.003 NS	0.383	0.226	1.698 *
7.	Annual income	0.051 NS	-0.142	0.147	0.962 NS
8.	Socio – economic status	0.076 NS	-0.010	0.055	0.181 NS
9.	Social participation	-0.021 NS	-0.215	0.267	-0.803 NS
10.	Contact with extension agency	0.038 NS	0.135	0.152	0.888 NS
11.	Information source utilization	0.354 **	0.351	0.152	2.367 **
12.	Innovativeness	0.354*	0.013	0.448	0.029 NS
13.	Risk orientation	0.363 **	0.874	0.443	1.973 **
14.	Scientific orientation	0.047 NS	0.406	0.475	0.853 NS
15.	Economic motivation	0.235 **	0.153	0.232	0.659 NS
16.	Decision making	0.095 NS	0.036	0.037	-0.978 NS

** - Significant at 1% level
*- Significant at 5% level
NS – Non – Significant
R^2 – 0.484

It could be seen from Table 3 that out of sixteen characteristics, occupation, area under cotton cultivation, information source utilization, risk orientation and economic motivation showed a positive and significant relationship at 0.01% level of probability and innovativeness showed positive and significant relationship at 0.05% level probability with the knowledge level of cotton growers. All the other variables were found to be non – significant relationship with knowledge level.

In order to find out which of the independent variables explained the variation in the knowledge level and also to know the extent of contribution made by these variables, multiple regression analysis was carried out and the results are presented in Table 3. The results revealed that the knowledge level of growers could be positively influenced by their educational status, farming experience, information source utilization and risk orientation. All other variables were found to be non – significant.

Conclusion

Majority of the respondents were found to have medium level of knowledge about recommended cotton cultivation practices. Since knowledge is the pre – requisite for adoption, the extension personnel may organize intensive training programmes and adopt innovative teaching methods to enhance the knowledge level of cotton growers on recommended cotton cultivation practices. Regarding the characteristics, educational status, occupation, farming experience, annual income, area under cotton cultivation, information source utilization, innovativeness, risk orientation and economic motivation were found to be positively associated with the knowledge level of cotton growers. Hence these characteristics may be taken into account while formulating extension strategies for dissemination of cotton technologies at farm level.

References

Jeyalakshmi, M. and Govind, S. (2006). Knowledge level of farm women on plant protection technologies in paddy cultivation. Mysore Journal of Agricultural Sciences, 42(1): 116–120.

Khadi, B.M. (2006). Qualitative, quantitative changes. The hindu survey of Indian Agriculture: 115–118.

Madiajagan, M. and Somasundaram, S. (2002). Cotton farmers field school–An empirical analysis. Journal of extension education. 13(2): 3314 3317.

Meenakshi, R. (2006). A Study on awareness, knowledge and extent of adoption of recommended cotton technologies by farmers, unpub. M.Sc. (Ag.) Thesis, Annamalai University.

Pavan, K.P. and Dhorey, R.K. (2017) Extent of Adoption of Farmers about Bt Cotton Practices in Warangal District of Telangana State, India. Int. J. Curr. Microbiol. App. Sci. 6(11): 824-829.