



## Adoption of Recommended Cotton Cultivation Practices by Cotton Growers of Perambalur District of Tamil Nadu

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Cotton, often referred to as the White Gold, is an important cash crop of India and it plays a key role in the Indian economy. It provides livelihood to more than 60 million people by way of support in agriculture, processing and use of cotton in textile (Barwale *et al.* 2004). Cotton occupies a predominant place among cash crops touching the country's economy at several points by generating direct and indirect employment in the agricultural and industrial sectors. It is being cultivated over an area of about 9.5 million hectares, which represents approximately a quarter of the global cotton area of 35 million hectares. Despite low productivity, India has become the largest producer as well as consumer of cotton, next only to China. The farmers have shown great interest in cotton cultivation because, when compared to other rainfed crops like sorghum, maize and oilseeds, cotton fetches profitable market price to the farmers. In order to meet the demand, our production targets have to go up. It could be possible only by adopting the improved production technologies in cotton cultivation. Keeping the above points in view, an ex-post facto study was taken up to find out the extent of adoption and the relationship of profile of respondents with extent of adoption of cotton cultivation practices.

The present study was taken up in Perambalur District of Tamilnadu. Three blocks namely Veppanthattai, Veppur and Alathur were selected based on the maximum area under cotton cultivation. A list of villages for these three blocks was obtained from District Statistical Officer, Ariyalur. Based on the maximum area under cotton cultivation, six villages namely V.R.S.S Puram, Pandagapadi, Sathanur, Siruganpur, Olappadi and Paravai were selected for the study. From these villages 300 respondents were selected as a sample size by adopting proportionate random sampling technique. Thirteen cultivation practices pertaining to cotton were selected to measure the extent of adoption. Interview schedule was developed to collect the responses through personal contact.

### *Overall adoption behavior of cotton growers*

It could be seen from the (Table 1) that majority of the respondents (41.00%) were found to be medium adopters followed by high (30.00%) and low (29.00%) adopters. The farmers with more economic motivation and risk orientation could adopt more production technologies. This finding is in line with the findings of Ravisankar and Katteppa (1997). The overall adoption of cotton cultivation practices by the respondents is presented in (Table 1).

Category	Number of respondents	Percent
Low	86	29.00
Medium	124	41.00
High	90	30.00
Total	300	100.00

### *Practice wise adoption of cotton growers*

The practice wise adoption of the selected cotton technologies are given in (Table 2). It is revealed from the data that majority of the farmers had fully adopted the practices in which recommended variety (98.33%), spacing (98.00%), seed rate (94.66%), gap filling (86.00%), fertilizer application (82.00%), foliar spray of DAP (72.00%), pest control measures (68.66%), disease control measures (63.00%), micro nutrient mixture application (61.33%) and plant growth regulator application (57.33%). Majority of the farmers reported that all these practices were important for increasing the yield of cotton crop. These results are in conformity with the results of Meenakshi (2006). Further it was very interesting to note that majority of the respondents not adopted the practices like weedicide application (95.34%), farm yard manure application (73.34%), and bio-fertilizer application (63.00%). The reason for non-adoption of this practice might be due to lack of visible impact of farm yard manure and bio-fertilizer application and also lack of conviction about the benefits of weedicide application.

Table 2 Practice wise adoption of cotton growers

Technologies	No. of respondents	Percent
Varieties	295	98.33
Seed rate	284	94.66
Spacing	294	98.00
Gap telling	260	86.00
Biofertilizer application	111	37.00
Farm yard manure application	80	26.66
Fertilizer application	246	82.00
Micro nutrient mixture application	184	61.33
Weedicide application	14	4.66
Plant growth regulator application	172	57.33
Foliar spray of DAP	216	72.00
Pest control measures	206	68.66
Disease control measures	189	63.00

It is evident from (Table 3) that the independent variables namely education, information source utilization, risk orientation and economic motivation were significant and positive relationship with adoption of recommended cotton cultivation practices at 0.01 level of probability where as the variables namely occupation and annual income were significant and positively related at 0.05 level of probability. Similar results were also observed by Ilayaraja (2002).

### SUMMARY

The present investigation was carried out to assess the extent of adoption of cotton cultivation practices. Thirteen practices were taken up for the study to measure the extent of adoption of a sample size of 300 cotton growers. The study revealed that majority of the respondents adopted all the recommended practices whereas, low level of adoption was found with biofertilizer application, farm yard manure

and weedicide application. From the study it is concluded that majority of the farmers adopted the recommended cotton cultivation practices except weedicide application, farm yard manure and biofertilizer application. This can be tackled by educating farmers by conducting meetings, campaigns and regular follow up visit by the extension personnel. The characteristics namely education, occupation, annual income, information source utilization, risk orientation and economic motivation were positively associated with extent of adoption. All these characteristics were taken into account while formulating appropriate strategies to increase cotton production at farm level.

Table 3 Correlation co-efficient of profile of respondents with extent of adoption of recommended cotton cultivation practices by cotton growers (N= 300)

Profile of respondents	r value
Age	-0.011
Education	0.150**
Occupation	0.117*
Farm size	-0.044
Area under cotton cultivation	-0.149
Farming experience	-0.051
Annual income	0.127*
Socio-economic status	-0.049
Social participation	0.012
Contact with extension agency	0.039
Information source utilization	0.316**
Innovativeness	0.079
Risk orientation	0.555**
Scientific orientation	-0.196
Economic motivation	0.446**
Decision making	0.072

\*\*Significant at 1% level of probability

\*Significant at 5% level of probability

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