



Knowledge level of ELS cotton growers in Vellore district – An analysis

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ABSTRACT : The term ‘Extra Long Staple’ (ELS) cotton typically denotes fibre of extra ordinary fibre length. Environmental conditions for ELS cottons are specific; they can be grown only in the limited areas. With this background, the present study was designed and conducted to study the knowledge level and its relationship. The present study was conducted in two blocks of Vellore districts namely, Tirupattur and Kandhili blocks. Four villages from the two blocks were selected namely, Madapalli, Poongulam, Udayamputhur and Sevathur. Thus the total sample size 132 were selected for the present investigation. The data were collected using a well structured interview schedule and data were analysed with appropriate statistical analysis. The study revealed that majority (83.30%) of the respondents possessed medium levels of knowledge on cotton cultivation followed by high (15.20%) and low (1.50%) levels, respectively. The R^2 value indicated that all the variables contributed 61.50% variations in the knowledge level among the respondents.

Key words : ELS cotton, knowledge

Agriculture continues to be the most predominant sector of our economy, as about 58.00 per cent of the population is engaged in agriculture and allied activities for their livelihood. Agriculture is not only an important occupation of the people, but also way of life, culture and custom. Most of the Indian customs and festivals are observed in consonance with agriculture seasons, activities and products.

Cotton is considered as “**White Gold**” among the cultivated crops on accounting its importance in agricultural and industrial sectors. Cotton occupies a prominent position in Indian economy. It is the primary raw material for the huge domestic textile industry and makes

substantial contribution to the country’s foreign exchange earnings.

The term ‘Extra Long Staple’ (ELS) cotton typically denotes a cotton fibre of extraordinary fibre length. The recognized industry standard for the minimum fibre length of an ELS fibre is 34.925 mm. But as per the CIRCOT, Mumbai classification, staple length of more than 32.5 mm is considered as ELS category. In addition to fiber length, ELS cottons are also recognized for their superior strength and better uniformity.

However, even all the benefits of the ELS fibre characteristics with its apparent desirability, it is grown only in limited quantities. ELS and LS (Long Staple) cottons represent only

about 3 per cent of the entire world's cotton production. The ELS cotton varieties needs are specific to produce a successful crop. A significant amount of crop management is required for ELS cottons, than that of upland cottons. ELS cottons tend to be as a vigorous plants and if not managed will grow the large plants with minimal fibre production.

MATERIALS AND METHODS

The study was taken up in two blocks of Vellore districts namely, Tirupattur and Kandhili blocks. Four villages from the two blocks namely – Madapalli, Poongulam, Udayamputhur and Sevvathur with a sample size of 132 farmers were selected for the investigation.

The data were collected using a well structured interview schedule and data were analysed with appropriate statistical tools with regard to frequency, percentage and "t" value.

RESULTS AND DISCUSSION

The socio economic status of the respondents were analysed using percentage analysis and are represented as follows.

The largest percentage of respondents 69.70 per cent possessed medium level of experience in cotton cultivation followed by 65.10 per cent respondents belonged to old age category and remaining 59.84 per cent with its occupational status.

a) Knowledge level of respondents on cotton cultivation : Knowledge has been referred as the body of information possessed by an individual who is in accordance with the

established fact. The body of information possessed by the individuals influences them to behave in a particular manner. Knowledge is a pre-requisite for adoption of innovation, as this would enable the farmers to completely understand a technology and its relative advantage. Hence, an attempt was made to assess the knowledge of cotton growers.

To assess the overall knowledge level possessed by the respondents in cotton cultivation technologies, necessary data were collected and the respondents were categorized as low, medium and high levels and results has been furnished in Table 1 and Fig 1.

Table 1. Distribution of the respondents according to their knowledge level of cotton cultivation (n=132)

S. No.	Category	Frequency	Percentage
1	Low	2	1.50
2	Medium	110	83.30
3	High	20	15.20
Total	132	100	

From the above Table 1, it was observed that majority (83.30%) of the respondents possessed medium level of knowledge on cotton cultivation followed by high (15.20%) and low (1.50%) levels respectively.

The appropriate reason behind their knowledge level was that the medium level of economic motivation, social participation and extension agency contact together reasoned to enhance the knowledge on cotton cultivation to increase the production.

The findings are in conformity with the findings of Pedhekar (2015) and Bishnoi (2016). The findings are in contradictory with the

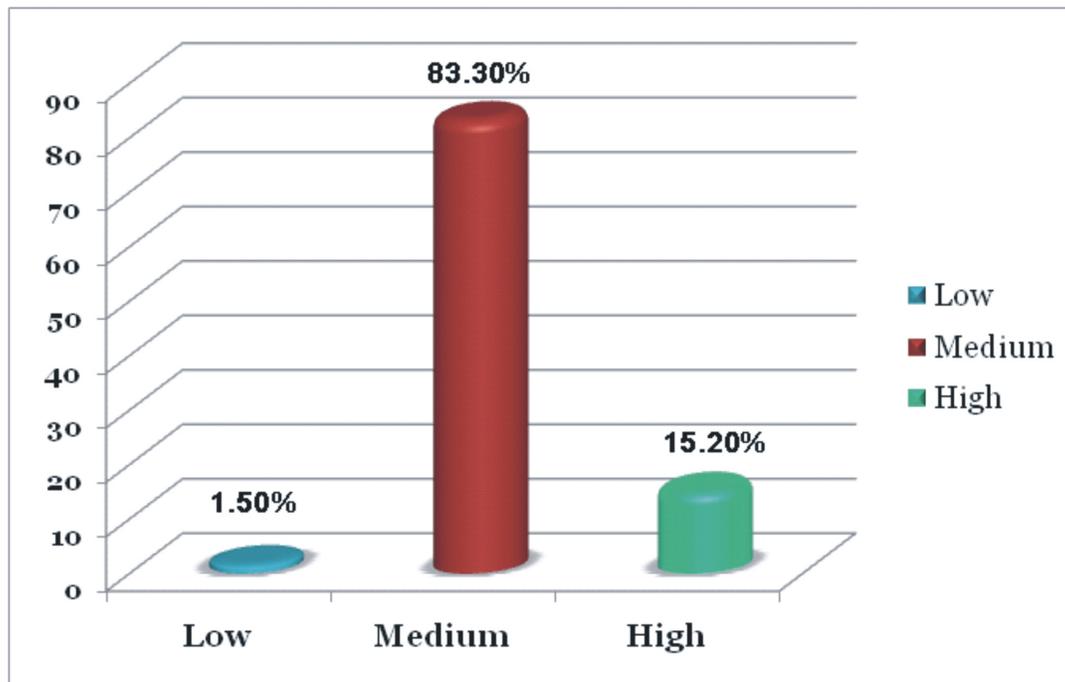


Fig. 1. Distribution of respondents according to their overall knowledge level

findings of Prashanth (2011)

b) Relationship between the profile with knowledge level, adoption and marketing behaviour of the respondents

i) Correlation and multiple regression analysis of independent variable with knowledge level

The contribution of independent variables to the knowledge level of cotton cultivation practices was studied using simple correlation and multiple regression were worked out and the results presented in Table 2.

From Table 2, it is observed that four variables *viz.*, information seeking behaviour (X8), extension agency contact (X10), innovativeness (X12) and trainings undergone (X13) showed positive significant correlation at one per cent level of probability. The table further, shows that remaining nine variables age (X1), educational status (X2), occupational status (X3), annual income (X4), farming experience (X5),

area under cotton cultivation (X6), experience in cotton cultivation (X7), social participation (X9) and economic motivation (X11) did not have any significant association with knowledge level. The findings are in contradictory with the findings of Reddy (2013).

Multiple regression analysis was taken up to find out contribution of independent variable to the knowledge level of respondents. The R^2 value was 0.615. The R^2 value has shown that all the variables contributed 61.50 per cent variation in the knowledge level among the respondents. The F value was found to be 14.359 and it significant at one per cent level of probability. Therefore the equation was worked out and given below.

$$Y_1 = 5.030 - 0.008 (X_1) - 0.098 (X_2) + 0.004(X_3) - 0.168 (X_4) - 0.016(X_5) + 0.040 (X_6) + 0.017 (X_7) + 0.037 (X_8) + 0.072 (X_9) + 0.430 (X_{10}) + 0.003 (X_{11}) + 0.659 (X_{12}) + 0.136 (X_{13})$$

Table 2. Correlation and multiple regression co-efficients of profile of respondents with their knowledge level

Sr. No.	Variables	'r' value	Partial regression coefficient (b)	Standard error	't' value
X ₁	Age	-0.99	-0.008	0.006	-1.221 ^{NS}
X ₂	Educational status	-.098	-0.098	0.070	-1.396 ^{NS}
X ₃	Occupational status	0.053	0.004	0.081	0.053 ^{NS}
X ₄	Annual income	-0.044	-0.168	0.123	-1.367 ^{NS}
X ₅	Farming experience	0.00	-0.016	0.010	-1.606 ^{NS}
X ₆	Area under cotton cultivation	-1.01	0.040	0.020	2.046*
X ₇	Experience in cotton cultivation	-0.093	0.017	0.014	1.200 ^{NS}
X ₈	Information seeking behaviour	0.338**	0.037	0.018	2.024*
X ₉	Social participation	0.130	0.072	0.030	2.374*
X ₁₀	Extension agency contact	0.669**	0.430	0.048	9.032**
X ₁₁	Economic motivation	0.007	0.003	0.018	0.160 ^{NS}
X ₁₂	Innovativeness	0.459**	0.659	0.121	5.440**
X ₁₃	Trainings undergone	0.324**	0.136	0.105	1.293 ^{NS}

* Significant at 5% level

R² = 0.615

** Signification at 1% level

F = 14.359

NS- Non-significant

a = 5.030

The results indicated that the variables *viz.*, extension agency contact (X₁₀) and innovativeness (X₁₂) showed positive significant contribution at one per cent level of probability. The area under cotton cultivation (X₆), information seeking behaviour (X₈) and social participation (X₉) had positive and significant contribution at five per cent level of probability. The results were in conformity with the findings of Gangadhar (2009).

Results revealed that one unit increase in the following independent variables *viz.*, area under cotton cultivation (X₆), information seeking behaviour (X₈), social participation (X₉), extension agency contact (X₁₀) and innovativeness (X₁₂) would increase the knowledge level by 0.040, 0.037, 0.072, 0.430 and 0.659 units, respectively.

As the area under cotton cultivation (X₆) increases, farmers need to possess adequate

knowledge for the scientific cultivation of cotton to get remunerative income. This may be the reason for contribution of area under cotton cultivation to increase in knowledge level on cotton production.

From the study, it could be concluded that information seeking behaviour (X₈) contributed positively with knowledge because of the fact that increased level of information seeking farmers have opportunities of exposure to new technologies of the cultivation practices to their field situation.

Social participation (X₉) had shown positive and significant contribution with knowledge level. The findings were in conformity with the findings of Rajashekar (2015)

Active participation of cotton farmers in social institutions like, cooperative societies, cooperative milk societies, farmers association etc., naturally increased their exposure to

knowledge on scientific technologies on cotton cultivation.

The contribution of extension agency contact (X_{10}) with knowledge level was found to be positive and significant. This revealed that greater the level of contact with extension agency, greater would be the level of knowledge. The reason might be that contact with extension agencies like Agricultural officers and Assistant Agricultural officers in state departments and input dealers had significant influence in increasing the knowledge of farmers on various cotton cultivation aspects.

The variable innovativeness (X_{12}) had a positive significant association with knowledge. Innovative attitude helped the respondents to get exposed to technical knowledge on cotton cultivation. The respondents with innovative mind would have increased knowledge level. Hence innovativeness has contributed significantly to the knowledge of cotton farmers.

CONCLUSION

It was observed the majority (83.30%) of the respondents possessed medium level of knowledge on cotton cultivation.

The appropriate reason behind their knowledge level was the medium level of economic motivation, social participation and extension agency contact together enhance the knowledge on cotton cultivation.

Correlation co-efficients of information seeking behaviour, extension agency contact, innovativeness and trainings undergone showed positive significant correlation at one per cent level of probability.

The study indicated that there is medium level of extension agency contact so efforts can

be made by extension officials in engaging the farmers in field visit and demonstration which can help the farmer in adopting the complex technologies.

The study indicated that cotton growers had medium level of economic motivation, the farmers must believe in profitability of the technology which can be possible only through result demonstration. The observability and confidence towards technologies will be increased through such demonstrations. Hence, farmers will be more oriented towards recommended technologies and so, the risk bearing ability will also be increased.

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Received for publication : August 30, 2019
Accepted for publication : October 16, 2019