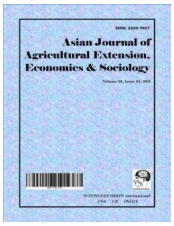

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A Study on Constraints Faced by the Farmers in Adoption and Marketing of Extra Long Staple Cotton Production Technology

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

The present study was conducted to analyse the constraints faced by the farmers in the adoption and marketing of ELS cotton production technology. The study was taken up in two blocks of Vellore district namely, Tirupattur and Kandhili blocks of Tamil Nadu. The sample size of 132 cotton growers was drawn on proportionate random sample method. The data were collected using a well-structured interview schedule and data were analysed using appropriate statistical analysis. The study revealed that less than two-thirds (62.87%) of the respondents faced the problem of labour crisis followed by a transportation problem (57.57%).

Keywords: Constraints; adoption; marketing behaviour; suggestions.

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1. INTRODUCTION

Agriculture continues to be the most effective sector of our economy, as about 70.00 per cent of the population is engaged in agriculture and allied activities for their livelihood [1]. Agriculture is not only an essential occupation of the people but also the way of life, culture and custom. Agriculture provides the principal means of livelihood for over 60 per cent of India's population.

Cotton is considered as "white gold" among the cultivated crops on account its importance in agricultural and industrial sectors. Cotton occupies a prominent position in the Indian economy. It is the primary raw material for the vast domestic textile industry and makes a substantial contribution to the country's foreign exchange earnings [2]. Cotton is the backbone of the textile industry, which consumes 59.00 per cent of the country's total fibre production.

The term 'Extra Long Staple' (ELS) cotton typically denotes a cotton fibre of extraordinary fibre length. The recognised industry standard for the minimum fibre length of an ELS fibre is 34.925 mm. This minimum length is significantly longer than traditional varieties of cotton, known as upland cotton, where the staple length is average of 26-27 mm [3,4]. Along with the fibre length, ELS cotton is also recognised for their superior strength and better uniformity.

However, even with all the benefits of the ELS fibre characteristics and its apparent desirability, it is grown only in limited quantities. ELS and LS (Long Staple) cotton represent only about 3.00 per cent of the entire world's cotton production. The ELS cotton varieties are specific in their needs to produce a successful crop [5]. ELS cotton tends to be very vigorous plants and if not managed will grow to be large plants with minimal fibre production. Environmental conditions for ELS cotton are specific; they can be produced only in the limited areas that suit the plant's needs for hot days and cold nights [6]. All of these factors result in higher production costs, with increased risks compared to upland cotton. This, in turn, is a major limiting factor for the production of ELS cotton.

With this background, the present study was designed and entitled "Constraints Faced by the Farmers in Adoption and Marketing of ELS Cotton Production Technology. The primary objective of this study is to find out the constraints faced by the cotton growers and to suggest suitable strategies.

2. METHODOLOGY

The study was taken up in two blocks of Vellore district namely, Tirupattur and Kandhili blocks. Four villages from the two blocks namely- Madapalli, Ponngulam, Udayamputhur and Sevvathur with a sample size of 132 farmers were selected.

The data were collected using a well-structured interview schedule, and data were analysed using appropriate statistical analysis.

3. FINDINGS AND DISCUSSION

3.1 Constraints Faced by Cotton Growers

A significant task of extension service is to get modern and improved technologies adopted by the client system, the farmers. Farmers however sometimes find difficult to continue the use of enhanced practices recommended. Hence the constraint analysis is becoming one of the essential components of extensive research.

The constraints were asked through open-ended questions. The collected constraints were analysed and tabulated with the help of percentage analysis.

Labour crisis: the labour crisis is a major issue which affects the overall production of cotton. Due to the scarcity of labour and lack of skilled farmers, the global cultivation and harvesting of long staple cotton crop decrease.

Difficulty in picking the bolls: Under rainfed situation picking up cotton bolls are difficult. The best time to collect bolls is during pleasant seasons like summer mornings or in winter.

Pests and diseases in cotton: Despite sufficient awareness, the practice of IPM is not carried out in several cotton fields. Cotton leaf curl virus (CLCuV) is one of the significant biotic constraints which affects the production of crops. Lack of knowledge among farmers, or may be due to availability and standard bioagents degrades the overall output.

Price fluctuations: In the last 200 years or so cotton prices have seen sharp spikes probably four or five times. This is another most significant

constraint affecting the production. Constant lowering and hiking of price affect the output.

Involvement of middlemen: Intermediaries plays a significant role in the marketing. Both the consumers and producers gain immensely from the roles of intermediaries, who ensures that there is a seamless flow of goods in and also the availability of crop. Unavailability of proficient middlemen pauses the marketing of crops which on simultaneously decreases the production.

Partial payment: Static payments always slowdowns the overall output of the production. Proper payments from the management are always needed to balance the harvesting process.

Transportation problem: Transportation and transport cost plays the key role in recognising the link between accessibility and agricultural development. Proficient transport system is necessary to assure a proper balance between agriculture and marketing.

From the Table 1 it was observed that less than two-thirds (62.87%) of the respondents faced labour problem while cultivation and harvesting followed by transportation problem (57.57%), difficulty in picking those bolls (42.42%), pests and disease infestation in cotton (34.09%), price fluctuations (25.00%), partial payment (24.24%), bolls don't burst well (21.21%) and involvement of middlemen (16.66%).

3.2 Suggestions to Overcome the Constraints

Suggestions offered by the farmers should serve as an eye-opener to those persons who adopt the recommended technologies. So, probable implications were encountered to overcome the limitations faced by the cotton growers and presented in Table 2.

The Table 2 shows suitable suggestions to the farmers who are facing the constraints. About half (50.75%) of the respondents gave suggestions that vehicles can be provided by government officials followed by to create awareness on cotton technologies through training programmes (31.81%), price stabilisation (28.78%), full payment can be credited (26.51%), viable pests and disease resistant hybrids may be introduced (16.66%) and involvement of middlemen should be avoided (15.15%).

Table 1. Constraints faced by cotton growers in the adoption of ELS cotton production technologies

(n=132)*

S. no.	Constraints	Number	Per cent	Rank
1	Labour crisis	83	62.87	I
2	Difficulty in picking the bolls	56	42.42	III
3	Pests and diseases in cotton	45	34.09	IV
4	Price fluctuations	33	25.00	V
5	Involvement of middlemen	22	16.66	VIII
6	Partial payment	30	24.24	VI
7	Transportation problem	76	57.57	II
8	Bolls don't burst well	28	21.21	VII

**Multiple responses obtained*

Table 2. Suggestions to overcome the constraints

(n=132)*

S. no.	Suggestions	Number	Per cent
1	Creating awareness on cotton technologies through organising more training programmes	42	31.81
2	Price stabilisation	38	28.78
3	Involvement of middlemen should be avoided	20	15.15
4	Full payment can be credited	35	26.51
5	Vehicles can be provided by the government officials	67	50.75
6	Viable pest and disease resistant hybrids may be introduced	22	16.66

**Multiple responses obtained*

4. CONCLUSION

The study revealed that majority of them faced the problem of labour crisis, transportation problem and pests and disease attack. The study indicated new agricultural machinery may be popularised among farmers and farmers must be trained in handling those implements to overcome the problem of labour scarcity. Further viable pests and disease resistant hybrids can be introduced to reduce the loss caused by pests and disease incidences. The government officials can provide a vehicle for transportation.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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