

Constraints Encountered by the Cotton Growers in Perambalur District

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Abstract

The first and foremost constraint expressed by nearly three-fourth (75.50 per cent) respondents was high cost of inputs. High cost of labour was the second constraint expressed by more than two-third (68.33 per cent) of the respondents. Lack of subsidy was reported as the constraint by nearly fifty per cent of the (48.33 per cent) respondents. Inadequate credit facilities was the constraint expressed by one-third (39.16 per cent) of the respondents. The first and foremost technological constraint expressed by the respondents (71.16 per cent) was lack of awareness on use of pesticides, fungicides and herbicides. The second important technological constraint expressed by nearly three-fourth (61.66 per cent) of the respondents was lack of confidence about certain technologies. Lack of information support was encountered as the serious communication constraint by two-third (70.83 per cent) of the respondents. The next constraint expressed by more than half of the respondents (61.16 per cent) was that they were not able to contact the extension agents at the time of emergency. Half of the respondents (50.83 per cent) expressed inadequate market intelligence as a constraint in the adoption of recommended technologies.

Key Words: Yield Gap, Technological Gap and Cotton Technologies.

Introduction

Tamil Nadu is having cotton area just under 1.42 lakh hectares with a production of 5.00 lakh bales, and the productivity was 599 kg/ha during the year 2015-2016. The requirement of cotton has been projected at 40.00 million bales by

2030. Cotton has been a prominent part of the cropping pattern in the region since the early 20th century, fitting into the larger ecological of downstream users of cotton in the textile and hosiery industries. There is a huge demand for cotton in Tamil Nadu. In 2004, more than half of the mills in operation in India were in Tamil Nadu accounting for around 44.00 per cent of the total consumption by all mills in the country. Yet according to industry sources less than 15.00 per cent of the varietal requirements of the mills are sourced from within the states. This provides a strong market for cotton growers. In Tamil Nadu, some of the cotton revivalism was possibly due to the technology mission on cotton, an initiative of the central government aimed at improving its productivity and the Cotton Corporate of India (CCI), Integrated cotton cultivation programme an euphemism for the promotion of contract farming by mills.

The production and productivity of cotton enhanced due to hybrid revolution however, India's productivity (490 kg/ha) is still well below against the world average of 120.64 million bales. The reason for such a low of productivity is due to the fact that more than 70.00 per cent of cotton cultivation is under rainfed condition. The statewise area, production, productivity of cotton in India during 2015. The major cotton growing states are Gujarat, Maharashtra, Telangana, Karnataka, Andhra Pradesh, Haryana, Madhya Pradesh, Rajasthan, Punjab and Tamil Nadu.

Perambalur district

The highest productivity in cotton was realized in Coimbatore, Vellore and Villupurum districts. The lowest productivity was realised in Ramanathapuram, Thoothukudi, Madurai and Perambalur districts. In Perambalur district, cotton is cultivated predominantly as a rainfed crop during kharif season (July- August). The area under cotton was 26, 542 hectares during the year 1999-2000. Even though the area was high, it did not reflect higher productivity (368.00. kg/lint/ha). After that, the area declined to as low as 2024 hectares in the year 2003-2004 and the productivity had decreased to 260 kg/ha. In 2015-2016 the area under cotton was around 20,383

ha. Cotton cultivation under rainfed condition is really a risky venture. The farmers are afraid of adopting new technologies because of their poor economic base, unassured rainfall, erratic changes in climate, unexpected natural calamities, severe pests and diseases etc., In addition, the farmers experienced numerous bio-physical, technological, economical and institutional constraints in the production and marketing of cotton. Agriculture technology is never completely accepted by the farmer in all respects, as such there always appears to be a gap between the recommended technology by the scientist and its modified use at the farmer's level. The technological gap is thus the major problem in the efforts of increasing agricultural production in the country. A need of the day is to reduce the technological gap between the agriculture technology recommended by the scientists and its acceptance by the farmers on their field.

It is noticed by reviewing the research report and findings reported in the research journals that the package of practices as adopted by the farmers are somewhat different from what is recommended by the scientists for optimum production. In India, enough research on cotton production technology has been generated in agricultural universities and research institutes but the target adopters of the technology have not been able to adopt it to desired level. There always exists a gap between recommended technologies and their adoption by the ultimate users of the technology.

Research Methodology

There are 33 revenue villages in Veppur block. The list of villages under cultivation cotton was collected from office of the Assistant Director of Agriculture, Veppur. Based on the maximum area under cotton RCH-20, six villages namely Olaippadi, Paravai, Puduvettakudi, Varagur, Kilaperambalur and Thungapuram were selected for the study. A sample size of 120 respondents was selected from the six villages by using proportionate random sampling technique.

Based on the experience of the researcher while conducting pilot survey with the cotton growers and the outcome of consultation with scientists and extension personnel, a list of production problems encountered by the cotton growers were identified for this study. During the main data collection, the respondents were asked to reveal the constraints experienced by them from the listed items and they were also asked to mention any other additional constraints to the listed items.

The constraints were classified into bio-physical, economic, technological, communication and marketing constraints. The respondents were asked to enumerate the constraints based on the seriousness of the constraints they experienced. The mean scores obtained under each major constraint was added together and divided by the total number of respondents who had ranked these constraints to arrive at the mean score. These mean score were arranged in descending order and ranks were given.

Finding and Discussion

This section deals with various constraints faced by the respondents in the adoption of recommended technologies in cotton. In accordance with objectives, the constraints experienced by the cotton growers are presented under five heads namely bio-physical constraints, economic constraints, technological constraints, communication constraints and marketing constraints.

Bio-physical constraints

The bio-physical constraints experienced by the respondents in cotton cultivation are presented in Table-1.

Table-1. Bio-physical constraints faced by the respondents

S.No.	Constraints	Number	Per cent
1.	Failure of monsoon	120	100.00

2.	Heavy incidence of pest and diseases	106	88.33
3.	Non-availability of labour	61	50.83

The failure of monsoon was the first and foremost constraints expressed by cent per cent of the respondents. The respondents cultivating cotton under rainfed condition entirely depended upon the south-west monsoon during sowing and north-east monsoon during critical stages of crop growth like square formation stage to obtain economic yield. In some of the areas, the open wells were presents but available water was sufficient only to meet the domestic demand and it was not sufficient to irrigate the crop. Hence, most of them depended on the monsoon rains to raise their cotton crop in this region. Due to the above facts, the respondents would have considered this as an important constraints. This finding is in line with the findings of Kanagasabai (2013)

Heavy incidence of pest and disease attack was ranked as the second constraints expressed most of the respondents. Majority of the respondents (88.33 per cent) faced heavy incidence of pest and diseases namely mealy bug, white fly, boll worm, wilt disease and leaf spot which resulted with reduction in yield. Pesticide resurgence was mentioned as the major problem in the entire cotton region as most them used synthetic pyrethroids to control the various important pests. All these factors ultimately led to yield reduction in cotton. Hence, the respondents might have expressed this as one of the most important constraint in cotton. This finding is in line with the findings of Loganathan (2015)

The third major constraint expressed by respondents was non-availability of labour. It was observed by researcher during the survey that all the respondents in the study area performed the operations like sowing, weeding, application of fertilizers, spraying and other cultural practices at the same time. Besides migration of labour from villages to town in the study area might have resulted with this problem. Even though they are available, they are not properly trained and they demanded high

wages. This may be the reason for the above reported findings. This finding is in line with the findings of Devenderkumar (2014)

Economic constraints

The economic constraints faced by the respondents are given in Table-2.

Table-2. Economic constraints faced by the respondents

S.No.	Constraints	Number	Per cent
1.	High cost of inputs	93	75.50
2.	High cost of labour	82	68.33
3.	Lack of subsidy	58	48.33
4.	Inadequate credit facilities	47	39.16

The data in Table-2, revealed that the first and foremost constraint expressed by three-fourth respondents (75.50 per cent) was high cost of inputs with respect to cotton seeds, pesticides, fungicides, chemical fertilizers and growth regulators. The respondents stated that the cost of hybrid seeds was higher than other varieties. The price of certain new generation pesticides and fungicides was felt higher by the farmers as these chemicals are meant for low dose application technology. Hence, the respondents would have considered this as a major constraint in cotton cultivation.

High cost of labour was ranked as the second constraint expressed by majority of the respondents (68.33 per cent). Most of them expressed that cotton cultivation

required more number of laboures from sowing to harvest operations. The labour requirement for harvest was more as it involved frequent number of harvests. Now-a-days the agricultural labourers were demanding high wages due to scarcity of labour. Hence, it leads to high cost of production. This finding is in line with the findings of Sabi (2012).

Lack of subsidy was reported as the constraint by nearly fifty per cent of the respondents (48.33 per cent). The inputs were distributed at subsidized rates mostly for small and marginal farmers. Some of the respondents expressed that the subsidy amount given by the state and central governments was very less compared to the actual sale price of various recommended inputs. In the case of big farmers, there was no subsidy at all and the inputs cost was always in the increasing trend and most of the respondents had not adopted the recommended quantity of inputs in their field. Hence, this would have resulted in the expression of this constraint by most of the respondents.

Inadequate credit facilities was the constraint expressed by one-third of the respondents (39.16 per cent). The farmers could not avail of the credit facilities from banks because of its tedious and time consuming procedure. They could not borrow money from non-institutional sources because of high interest rates. This finding is in agreement with the findings of Arockiya Mary (2011).

Technological constraints

The economic constraints faced by the respondents are given in Table-3.

Table-3. Technological constraints faced by the respondents

S.No.	Constraints	Number	Per cent
1.	Lack of awareness on use of pesticides, fungicides and herbicides.	86	71.16

2.	Lack of confidence about certain technologies	74	61.66
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The Table-3, revealed that the first and foremost technological constraint expressed by the respondents (71.16 per cent) was ‘Lack of awareness on use of pesticides, fungicides and herbicides’. The cotton crop was severely affected by mealy bug, white fly, boll worm, wilt and leaf spot and it drastically reduced the yield. Due to lack of knowledge, most of the respondents frequently sprayed higher dose of pesticides and synthetic pyrethroids to control these pests and diseases. It would lead to entire crop damage and create a serious problem of pest resurgence and reduce crop yield. Further, the extension personnel would not have concentrated farming community. This may be the reason for the above expressed constraint reported by most of the respondents in cotton cultivation. This finding is in line with the findings of Balaganoormathet *al.*(2013).

The second important technological constraint expressed by the respondents was ‘Lack of confidence about certain technologies’. More than sixty per cent of the respondents (61.66 per cent) expressed lack of confidence about certain technologies like foliar spray, micronutrient application. Bio-fertilizer, topping practice and plant growth regulators which did not visibly influence the crop growth. Control of severe pests also did not visibly influence the yield at individual farm level. They believed that adoption of these practices tend to increase the cost of cultivation thereby reducing the income of the farmers. Hence, most of the respondents were not convinced about the merits of some of these recommended practices and did not adopt them. This finding is in line with the findings of Kanagasabai (2013).

Communication constraints

The communication constraints faced by the respondents are given in Table-4.

Table-4. Communication constraints faced by the respondents

S.No.	Constraints	Number	Per cent
1.	Lack of information support	85	70.83
2.	Inability to contact the extension agents	74	61.16
3.	Lack of market intelligence	61	50.83

The data in Table-4, revealed that lack of information support was encountered as the serious communication constraint by 70.83 per cent of the respondents. During the data collection, the researcher ascertained from the respondents that no synthetic efforts were made by the officials to disseminate timely information about the required inputs at the village level. Hence, most of them depended upon input dealers to get vital information on inputs like seeds, fertilizers etc., and some of them got false information. This may be the reason for the expressed constraint in cotton cultivation.

More than half of the respondents (61.16 per cent) expressed that they were not able to contact the extension agents at the time of emergency. Few extension workers had to serve a large number of clients and they could not contact all of them personally in time. This may be the reason for the reported constraint. This finding is in line with the findings of Loganathan (2015).

Half of the respondents (50.83 per cent) expressed inadequate market intelligence as a constraint. The respondents reported that they do not have adequate knowledge on consumer segmentation, price fixing criteria, market news etc. Hence, they might have expressed this as a constraint in the cultivation of cotton.

Marketing constraints

The marketing constraints experienced by the respondents are given in Table-5.

Table-5. Marketing constraints faced by the respondents

S.No.	Constraints	Number	Per cent
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1.	Absence of quality based price fixing for kapas	78	65.00
2.	Exploitation by middlemen	69	57.50
3.	Delayed payment from buyers	52	43.33
4.	Under weighment of kapas	48	40.00

The data in Table-5 revealed that the first and foremost constraint expressed by the respondents (65.00 per cent) was absence of quality based fixing of price for kapas. In local markets the price is fixing on the basis of quality of kapas. Though the quality was good at peak harvest season the local merchants fixed very low price due to maximum quantity of arrival at that time. In most of the market committee, the price fixation was done by unauthorized commission agents who fix lower price for good quality kapas. Hence, the respondents would have considered this as constraint in cotton cultivation. This finding is in line with the findings of Finger *et al.* (2011).

Exploitation by middlemen was the second constraint expressed by 57.50 per cent of the respondents. The middlemen have by and large rendered the system of agriculture into a non-profitable and stagnant venture. In the entire study, the input dealers are playing middlemen in kapas purchase centre in order to recover credit given to respondents as inputs etc. In this situation, the respondents have to depend upon the middlemen to sell their produce as they have to get inputs on credit basis for the next season thereby reducing considerable profit for their produce.

Delayed payment from buyers was the third constraint expressed by 43.33 per cent of the respondents. Most of the respondents sold their produce through middlemen to the private commission agent in their respective villages. The private commission agent (or) the middlemen failed to pay money immediately to producers of the purchasing the produce. They paid only after period of 15 days to 2 months. Hence, most of the respondents might have reported this as the most important constraint.

Under weighmant of kapas was the fourth expressed constraint by 40.00 per cent of the respondents. Even though marketing facilities were available at village, they were not functioning effectively due to various factors. The entire farming community in the study area depended on middlemen to market their produce. In some other cases the farmers felt that their problems were aggravated due to false weighing machine and weighing measures used by the middlemen that reduced the profit of the produce while marketing. This finding is in line with the findings of Kanagasabai (2013).

Summary and Conclusion

Bio-physical constraints

The failure of monsoon was the first and foremost constraints expressed by cent per cent of the farmers. Heavy incidence of pest and disease attack was ranked as the second constraints expressed most of the respondents (88.33 per cent) and the third major constraint expressed by respondents was non-availability of labour (50.83 per cent).

Economic constraints

The first and foremost constraint expressed by nearly three-fourth (75.50 per cent) respondents was high cost of inputs. High cost of labour was the second constraint expressed by more than two-third (68.33 per cent) of the respondents. Lack of subsidy was reported as the constraint by nearly fifty per cent of the (48.33 per cent) respondents. Inadequate credit facilities was the constraint expressed by one-third (39.16 per cent) of the respondents.

Technological constraints

The first and foremost technological constraint expressed by the respondents (71.16 per cent) was lack of awareness on use of pesticides, fungicides and herbicides. The second important technological constraint expressed by nearly three-fourth (61.66 per cent) of the respondents was lack of confidence about certain technologies.

Communication constraints

Lack of information support was encountered as the serious communication constraint by two-third (70.83 per cent) of the respondents. The next constraint expressed by more than half of the respondents (61.16 per cent) was that they were not able to contact the extension agents at the time of emergency. Half of the respondents (50.83 per cent) expressed inadequate market intelligence as a constraint in the adoption of recommended technologies.

Marketing constraints

The first and foremost constraint expressed by the respondents (65.00 per cent) was absence of quality based fixing of price for kapas. Exploitation by middlemen was the second constraint expressed by 57.50 per cent of the respondents. Delayed payment from buyers was the third constraint expressed by 43.33 per cent of the respondents. Under weighmant of kapas was the fourth expressed constraint reported by 40.00 per cent of the respondents.

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