



An Analysis of Constraints Encountered by Coconut Growers in Coconut Cultivation of Kanyakumari District

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ABSTRACT

Coconut (*Cocos nucifera*), also known as 'Thennai' in Tamil, is India's first plantation crop. All parts of this palm are useful, so coconut is aptly called 'Kalpavriksha'. India is the third-largest producer of coconut after Indonesia and the Philippines. The states Kerala, Karnataka, Tamil Nadu, and Andhra Pradesh are leading in coconut production. The coconut palm occupies approximately 4,37,570 ha in Tamil Nadu. Kanyakumari district stands fifth in the cultivation of coconut in Tamil Nadu. Though productivity had increased, it also brought numerous challenges to the coconut cultivators. This finding can help to identify those problems faced by farmers towards cultivation. A total number of 300 respondents by using proportionate random sampling method were identified for data collection through interview schedule. The results are analysed using mean score. The constraints identified include 'marketing constraints', 'extension constraints', 'technological constraints', 'physical constraints', 'economic constraints' and 'personal constraints'. The major marketing constraint faced by farmers was high fluctuation in market price.

Keywords: Coconut, production, marketing, constraints.

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INTRODUCTION

Coconut (*Cocos nucifera*) is one of the world's most essential and beneficial palms. India occupies the predominant position and occupies the third place among the coconut-growing countries. In 2020 India cultivated 2173 thousand ha, and production was 20309 million nuts. Coconut cultivation is highly concentrated in the southern parts of the nation. The major coconut-growing states are Kerala (7,60,780 ha), Karnataka (6,24,030 ha), Tamil Nadu (4,37,570 ha) and Andhra Pradesh (1,11,380 ha) [4]. Nearly 6000 lakhs nuts are produced in Tamil Nadu because of the favourable climate condition that renders for the coconut cultivation [13].

In Tamil Nadu, Coimbatore, Tirupur, Thanjavur, Dindigul and Kanyakumari districts are contributing majority area of coconut cultivation. In Kanyakumari district coconut is grown in an area of 24,428 ha. Even though productivity and production of coconut products are high in India, the economic condition of the growers are not favourable. Because of growers' weak bargaining power and poor economic condition, marketing intermediaries are harassing and cheating them in different ways [8]. During the last two decades, coconut growers have faced many problems, ultimately resulting in a decline in production and profitability from their estates. The problems the growers confronted with are often complex, requiring detailed and valid information about many factors [3]. Though it is a commercial-oriented crop, coconut farmers do not get the potential yield since they are not fully aware of scientist-generated technologies, do not possess the expected knowledge and are not convinced to adopt the latest technologies in their fields. Hence it is worth studying the constraints of coconut farmers in cultivation.

MATERIAL AND METHODS

The study was conducted in the Kanyakumari district of Tamil Nadu state as this district has the maximum area under coconut. Three-blocks, namely Rajakkamangalam, Kuruthencode and Agastheeswaram, having the highest area under coconut among all blocks, were purposively selected. A total of 300 respondents were identified from the selected twelve villages using proportionate random sampling method. The

constraints were categorized under the principal heads: physical, extension, personal, economic, technological, and marketing constraints. A well-structured interview schedule for assessing the identified constraints was administrated through a three-point continuum as 'major constraint', 'somewhat constraint' and 'not a constraint' with a scores of 3, 2 and 1 respectively. The score for each constraint was obtained. The data collected through the interview was tabulated and analyzed using the mean score. Based on the mean score and rank order, the constraints were assessed.

RESULTS AND DISCUSSION

Constraints encountered by the coconut growers in coconut cultivation

The mean score and rank order of the constraints are presented in Table 1.

**Table 1. Constraints encountered by coconut growers in coconut cultivation
(n = 300)**

| S. No. | Constraints | Mean score | Rank |
|------------|--|-------------|------|
| I | Marketing constraints | | |
| | High fluctuation in market price | 2.84 | I |
| | Exploitation by middlemen | 2.27 | II |
| | Delayed cash payment | 2.12 | III |
| | Lack of regulated markets | 1.95 | IV |
| | High commission charges | 1.89 | V |
| | Grand mean | 2.21 | |
| II | Extension constraints | | |
| | Lack of training in cultivation | 2.33 | I |
| | Lack of technical guidance | 2.05 | II |
| | Grand mean | 2.19 | |
| III | Technological constraints | | |
| | Incidence of pests and diseases | 2.42 | I |
| | Non-availability of quality HYV | 2.35 | II |
| | Difficulty in coconut harvesting | 2.17 | III |
| | Application of fertilizers is delayed due to irregular and heavy rainfall. | 1.42 | IV |
| | Grand mean | 2.09 | |
| IV | Physical constraints | | |
| | Labour scarcity | 2.32 | I |
| | Non-availability of disease-free seedlings | 2.16 | II |
| | Lack of coconut growers' cooperative societies | 1.87 | III |
| | Inadequate irrigation facilities. | 1.54 | IV |
| | Grand mean | 1.97 | |
| V | Economic constraints | | |
| 1. | High cost of labour | 2.74 | I |
| 2. | Non-availability of credit | 1.72 | II |
| 3. | High cost of inputs | 1.53 | III |
| 4. | High rate of interest | 1.25 | IV |
| | Grand mean | 1.81 | |
| VI | Personal constraints | | |
| 1. | Lack of knowledge about the application of plant protection chemicals. | 1.81 | I |
| 2. | Lack of knowledge to identify pests and diseases | 1.78 | II |
| 3. | Lack of awareness of the latest technologies | 1.62 | III |
| 4. | Not being convinced with recommended practices | 1.54 | IV |
| 5. | Unaware of recommended practices | 1.32 | V |
| | Grand mean | 1.61 | |

As could be seen from Table 1 that among the six major categories of constraints studied, marketing constraints (2.21) were expressed by most of the respondents, followed by extension constraints (2.19), technological constraints (2.09), physical constraints (1.97), economic constraints (1.81) and personal constraints (1.61).

Marketing constraints

High fluctuation in market price (2.84) was the predominant marketing constraint as expressed by a vast majority of the respondents. There is a high price fluctuation for coconut before and after harvest seasons. During the post-harvest period, farmers get a lower price for their produce due to the heavy arrival of the produce in the market. This might have prompted the respondents to feel the high fluctuations in the price

of coconut as a significant constraint. This finding is in line with the findings of Jenila Stephency [6] and Santhoshkumar *et al.*, [9].

Exploitation by middlemen (2.27) was the second reported major marketing constraint reported by coconut growers, followed by a delayed cash payment (2.12), lack of regulated markets (1.95) and high commission charges (1.89). Coconut growers reported exploitation by middlemen by charging a heavy rate of commissions, brokerage, etc., as a constraint. The producers have to pay various incidental charges like immature coconut, commissions etc., which reduce the profit. These are the possible reasons to feel the intermediaries' exploitation. This finding is in line with the findings of Sivanesan and Prabin [11].

Extension constraints

Lack of training in cultivation (2.33) was the major extension constraint expressed by most respondents. Lack of training facilities in the nearby area might be the possible reason that could be attributed.

Lack of technical guidance (2.05) was reported as the second major extension constraint. Majority of the respondents expressed that they did not come across extension workers from the government development departments. Some of the coconut growers expressed that they had only a few occasions to meet the extension personnel of the state department in their office.

Technological constraints

The incidence of pests and diseases (2.42) was the significant technological constraint expressed by most respondents. The majority of the farmers' field was affected by whitefly and wilt. So the farmers are experiencing yield loss. This finding aligns with that of Aayshakumar [1].

Non-availability of quality HYV (2.35) followed by difficulty in coconut harvesting (2.17) are the next constraints. Coconut growers in the study area always depend on labourers for harvesting the coconut. Application of fertilizers is delayed due to irregular and heavy rainfall (1.42).

Physical constraints

Labour scarcity (2.32) was considered as a significant physical constraint. This might be due to the guaranteed and high wages for employment in industry and other sectors. Farm labourers are slowly moving to other occupations, and farmers face labour scarcity. This finding is in line with the findings of Jaganathan *et al.*, [7].

Non-availability of disease-free seedlings (2.16) was the second physical constraint. The majority of the farmers' field was affected by wilt disease. This disease affected the young seedlings also. This finding is in line with the findings of Koli and Patel [7].

The lack of coconut growers' cooperative societies (1.87) was the felt physical constraint for most of the respondents. Coconut growers in the study area always depend on private input dealers and private organizations for input purchase and marketing of the harvested produce. Further, so far, no effort has been made by the state Department of Horticulture to establish coconut growers' cooperative societies at the village level.

Inadequate irrigation facilities (1.54) was the fourth physical constraint reported by coconut growers. This might be due to the failure of monsoon, the water table going down in the summer season and the absence of any alternate source of irrigation such as a canal or tank irrigation.

Economic constraints

High cost of labour (2.74) was the primary economic constraint expressed by majority of the respondents, followed by non-availability of credit (1.72), high cost of inputs (1.53) and high rate of interest (1.25). Farm labourers are presently shifting to industries due to the increased wages they get from industries. This labour movement to industries has created a scarcity of labour for agriculture. This situation has made the farmers pay high wages for agricultural labourers. This could be the possible reason. Non-availability of credit and the high cost of inputs were also expressed as significant economic constraints. This finding is in line with the findings of Anu [2] and Sawant and Mahadik [10].

Personal constraints

Lack of knowledge about the application of plant protection chemicals (1.81) was the main personal constraint, followed by a lack of knowledge to identify pests and diseases (1.78), lack of awareness of the latest technologies (1.62), not being convinced with recommended practices (1.54) and unaware of recommended practices (1.32). The poor extension agency contact, poor media contact, and lack of training facilities could be the possible reasons. This finding is in line with the findings of Vinodhini [12].

CONCLUSION

The result shows that the significant constraints expressed by coconut growers in coconut cultivation were high fluctuation in market price, exploitation by the middlemen, lack of training in cultivation, significant incidence of pests and diseases, non-availability of quality HYV, labour scarcity, and high cost of labour. Development agencies may take suitable strategies to overcome such constraints, which means

information about the Coconut Development Board schemes should be given to extension personnel working at the grass root level. The coconut growers association should take intensive efforts to reduce the role of middlemen in marketing.

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