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Constraints and suggestions by the coconut growers in Tumkur district of Karnataka

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Abstract

The present study on Constraints and Suggestions by the randomly selected 120 coconut growers from Tiptur, Turuvekere, Chikkanayakanahalli and Sira taluks of Tumkur district was conducted during the year 2022-23. The research objective was to enlist the constraints faced by the coconut growers and to seek their suggestions to overcome them. Overall it was disclosed that coconut growers faced constraints majorly in pest & diseases attack in case of production constraints (Rank I) followed by high cost of inputs (Rank II) and then by poor irrigation facility (Rank III). In case of financial constraints inadequate credit was major constraint (Rank I) followed by insufficient repayment time (Rank II) and then followed by inadequate subsidy (Rank III). In the event of labour constraints major constraint was non-availability of climbers for carrying out plant protection & harvesting activities (Rank I) followed by high labour wages (Rank II) and then followed by non-availability of labours timely (Rank III). In the instance of market related constraints lack of remunerative price for coconut ranked first (Rank I) then next by lack of co-operative marketing (Rank II) and then followed by lack of market information (Rank III) were major constraints. In case of extension related constraints lack of timely technical advice on coconut farming (Rank I) followed by lack of farmer training programmes about coconut farming (Rank II) and then followed by insufficient extension activities like demonstrations, farmers group discussions, Kisan melas etc. by extension agency (Rank III) were major constraints experienced by the coconut growers. It was also found that among overall coconut growers significant number of coconut growers suggested providing good market prices which was seen ranked top (Rank I) followed by educating & make available cost effective simple technologies for pest and disease management (Rank II) followed by educating about the labour saving technologies like mulching, coconut climbing machineries (Rank III).

Keywords: Coconut growers, constraints, suggestions, Tumkur

Introduction

Agriculture serves as one of the important parts of India's economy, providing livelihoods for a significant portion of the population while contributing substantially to the nation's Gross Value Added (GVA). Plantation crops, in particular, stand as pillars of growth and development, contributing not only to economic prosperity but also fostering socio-economic advancement across various states. Among these crops, coconut cultivation holds a prominent position, symbolizing resilience, versatility and cultural significance within the agricultural landscape.

In botanical terms, the coconut palm, scientifically known as *Cocos nucifera*, belonging to the monotypic genus *Cocos* within the Arecaceae family, holds a unique position as the only living species of its genus. Despite its colloquial classification as a "nut," the coconut fruit technically resembles a drupe. Its significance exceeds botanical classification, as the coconut holds cultural, economic and nutritional importance in India. India stands as the world's largest producer boasting nearly 31% share of global coconut production (Coconut Development Board 2021) ^[1].

Within the Indian context, coconut cultivation assumes heightened significance, with Karnataka emerging as a prominent hub for coconut production. Tumkur district, often referred to as the 'Kalpatharu Nadu' or the 'Land of Coconuts,' stands at the forefront contributing significantly to the state's coconut output. This district alone contributes around 29% of the total coconut cultivation area and nearly 30% of production in the state (Coconut Development Board 2021-22) ^[2]. The district's coconut growers navigate a myriad of challenges and opportunities inherent in the cultivation of this multipurpose crop, impacting their livelihoods and the broader socio-economic development of coconut growers of the region. Here Agricultural extension services can become instrumental in driving positive change and fostering agricultural development by understanding the constraints, they face and soliciting their recommendations which are also crucial steps towards fostering agricultural sustainability and enhancing the well-being of farming communities by disseminating knowledge, offering technical assistance and advocating for best practices.

With this backdrop, this research paper seeks to study the constraints encountered by coconut growers in Tumkur district and elicit their suggestions to overcome these hurdles. By shedding light on the challenges and suggestions of coconut farmers, this study aims to inform policy formulation, extension services and stakeholder interventions aimed at nurturing sustainable agricultural development in the region.

Materials and Methods

In the present investigation *Ex-post-facto* research design was used. The study was conducted in Tumkur district of Karnataka in the year 2022-23. Tumkur district was selected purposively, because it is one of the top coconut growing districts in Karnataka state and also coconut cultivation is being taken up in most of the taluks of the district. Out of ten taluks in Tumkur district, Tiptur, Turuvekere, Chikkanayakanahalli and Sira taluks were selected purposively considering the highest and lowest productivity. Thus, by using simple random sampling thirty coconut growers from each selected taluk were chosen. From four taluks a total sample constituted was 120 coconut growers. To enlist the constraints expressed by the coconut growers, the constraints were grouped into five sub headings like, production related constraints, finance related constraints, labour related constraints, market related constraints and extension related constraints. Then closed end questions with responses concerning to extent of constraint were asked. The scores of all respondents for individual constraints were summed and ranked using mean score

under each sub heading. To document suggestions of coconut growers to overcome the constraints, closed end questions were asked and responses with respect to importance of suggestion were sought. The scores of all importance of suggestions for individual statements were summed and ranked using mean score.

Results and Discussion

Constraints faced by the coconut growers

The study identified the obstacles experienced by overall coconut growers in coconut farming. The limitations relating to various areas of coconut production were identified using individual respondent replies. The relevant information in this respect is presented in the following Tables.

A. Production related constraints

From Table 1, overall it was found that coconut growers faced constraints majorly in pest & diseases attack in case of production constraints (Rank I) followed by high cost of inputs (Rank II) and then by poor irrigation facility (Rank III). This might be due to lack of information among coconut growers about proper pest and diseases control, the need to purchase inputs from external sources can lead to price fluctuations, dependency on suppliers and increased costs and proximity to reliable water sources might vary among coconut growers, leading to disparities in irrigation capabilities. The important trends are in similarity with Anu (2017) [3] and Deepika (2015) [4].

Table 1: Production constraints faced by the coconut growers (n=120)

| Sl. No. | Constraints | Greater extent | | Lesser extent | | Not at all | | Rank |
|---------|---|----------------|-------|---------------|-------|------------|-------|------|
| | | f | % | f | % | f | % | |
| 1. | Pest and disease attack | 113 | 94.16 | 7 | 5.83 | 0 | 0.00 | I |
| 2. | High cost of inputs | 39 | 32.50 | 36 | 30.00 | 45 | 37.50 | II |
| 3. | Poor irrigation facility | 34 | 28.33 | 40 | 33.33 | 46 | 38.33 | III |
| 4. | Unawareness about coconut nutrient management | 31 | 25.83 | 33 | 27.50 | 56 | 46.66 | IV |
| 5. | High cost of seedlings | 41 | 34.16 | 13 | 10.83 | 66 | 55.00 | IV |
| 6. | Non-availability of plant protection equipments | 15 | 12.50 | 49 | 40.83 | 56 | 46.66 | VI |
| 7. | Unawareness about different Government schemes related to coconut farming | 12 | 10.00 | 39 | 32.50 | 69 | 57.50 | VII |
| 8. | Non-availability of inputs in time | 6 | 5.00 | 1 | 0.83 | 113 | 94.16 | VIII |
| 9. | Non-availability of quality coconut seedlings | 0 | 0.00 | 2 | 01.67 | 118 | 98.33 | IX |

f = Frequency and % = Percentage

B. Financial related constraints

In case of financial constraints shown in Table 2, inadequate credit was major constraint (Rank I) followed by insufficient repayment time (Rank II) and then followed by inadequate subsidy (Rank III). This could be because financial institutions often require collateral to provide credit. Many coconut growers might not possess the

necessary assets to offer as collateral, making it difficult to secure loans. Fluctuations in coconut market prices, weather vagaries and lower crop yields can lead to income instability, making it difficult for growers to commit to strict loan repayment schedule. The subsidy might not be adequate to meet the farm needs. The important trends are in similarity with Anu (2017) [3].

Table 2: Financial constraints faced by the coconut growers (n=120)

| Sl. No. | Constraints | Greater extent | | Lesser extent | | Not at all | | Rank |
|---------|--|----------------|-------|---------------|-------|------------|-------|------|
| | | f | % | f | % | f | % | |
| 1. | Inadequate credit | 27 | 22.50 | 28 | 23.33 | 65 | 54.16 | I |
| 2. | Insufficient repayment time | 16 | 13.33 | 18 | 15.00 | 86 | 71.66 | II |
| 3. | Inadequate subsidy | 12 | 10.00 | 17 | 14.16 | 91 | 75.83 | III |
| 4. | High interest rate | 9 | 7.50 | 13 | 10.83 | 98 | 81.66 | IV |
| 5. | Lack of financial institutions in the locality | 8 | 6.67 | 11 | 09.17 | 101 | 84.16 | V |

f = Frequency and % = Percentage

C. Labour related constraints

In case of labour constraints shown in Table 3, major constraint was non-availability of climbers for carrying out plant protection & harvesting activities (Rank I) followed by high labour wages (Rank II) and then followed by non-availability of labours timely (Rank III). The lack of training programs to develop climbers skills and even migration of these kind of skilled labours to urban locations in search of alternate jobs can lead to a shortage of individuals who are

capable of performing tasks at height. High demand for labour, coupled with limited availability, can drive up wages. If the supply of available labour is insufficient, growers might need to pay higher amount to find farm labours. The migration of labours to cities in search of other jobs limit the timely availability of labours. The important trends are in similarity with Anu (2017) [3], Deepika (2015) [4] and Priyanka (2018) [5].

Table 3: Labour constraints faced by the coconut growers (n=120)

| Sl. No. | Constraints | Greater extent | | Lesser extent | | Not at all | | Rank |
|---------|--|----------------|-------|---------------|-------|------------|-------|------|
| | | f | % | f | % | f | % | |
| 1. | Non-availability of climbers for carrying out plant protection and harvesting activities | 98 | 81.67 | 14 | 11.67 | 8 | 06.66 | I |
| 2. | High labour wages | 83 | 69.16 | 26 | 21.66 | 11 | 09.16 | II |
| 3. | Non-availability of labours timely | 81 | 67.50 | 25 | 20.83 | 14 | 11.67 | III |
| 4. | Unskilled labour | 71 | 59.16 | 27 | 22.50 | 22 | 18.33 | IV |

f = Frequency and % = Percentage

D. Market related constraints

In case of market related constraints shown in Table 4, lack of remunerative price for coconut ranked first (Rank I) followed by lack of co-operative marketing (Rank II) and then followed by lack of market information (Rank III). We could say copra prices have fallen on an average by 31 per cent in the past six months in Karnataka (Deccan Herald, 13th January 2023) [6]. Poor quality of copra due to rainfall, price manipulation by middlemen and increased import of

palm oil have kept the price of coconut and related products low. Many coconut growers might not be fully aware of the benefits of co-operative marketing or might lack knowledge about how to initiate and manage co-operative pool of the farmers. Many coconut growers might not be fully aware about various social platform tools where they could access various market information thus hindering their reach to valuable market information. The important trends are in similarity with Priyanka (2018) [5].

Table 4: Market constraints faced by the coconut growers (n=120)

| Sl. No. | Constraints | Greater extent | | Lesser extent | | Not at all | | Rank |
|---------|---|----------------|-------|---------------|-------|------------|-------|------|
| | | f | % | f | % | f | % | |
| 1. | Lack of remunerative price for coconut | 116 | 96.66 | 2 | 1.66 | 2 | 01.66 | I |
| 2. | Lack of co-operative marketing | 22 | 18.33 | 36 | 30.00 | 62 | 51.66 | II |
| 3. | Lack of market information | 14 | 11.66 | 39 | 32.50 | 67 | 55.83 | III |
| 4. | Lack of proper processing industries and storage facilities | 12 | 10.00 | 21 | 17.50 | 87 | 72.50 | IV |
| 5. | Delayed cash payment | 7 | 05.83 | 26 | 21.67 | 87 | 72.50 | V |
| 6. | Perishability of the produce | 14 | 11.66 | 11 | 09.16 | 95 | 79.16 | VI |
| 7. | Lack of good transportation facilities | 11 | 09.16 | 15 | 12.50 | 94 | 78.33 | VII |
| 8. | Markets are located at faraway places | 7 | 05.83 | 21 | 17.50 | 92 | 76.66 | VIII |

f = Frequency and % = Percentage

E. Extension related constraints

In case of extension related constraints shown in Table 5, lack of timely technical advice on coconut farming (Rank I) followed by lack of farmer training programmes about coconut farming (Rank II) and then followed by insufficient extension activities like demonstrations, farmers group discussions, Kisan melas etc. by extension agency (Rank III) were major constraints experienced by the coconut growers. Agricultural extension services might be inadequately resourced or understaffed, resulting in a lack of

timely and regular visits to all the coconut farms to provide technical advice. Also, the ability of extension organizations to successfully undertake training and outreach may be hampered by a lack of staff or poorly trained people. Agencies that provide extension services may have trouble reaching farmers in distant or difficult-to access locations where they are spread over considerable distances. The important trends are in similarity with Anu (2017) [3] and Priyanka (2018) [5].

Table 5: Extension constraints faced by the coconut growers (n=120)

| Sl. No. | Constraints | Greater extent | | Lesser extent | | Not at all | | Rank |
|---------|--|----------------|-------|---------------|-------|------------|-------|------|
| | | f | % | f | % | f | % | |
| 1. | Lack of timely technical advice on coconut farming | 39 | 32.50 | 11 | 9.16 | 70 | 58.33 | I |
| 2. | Lack of farmer training programmes about coconut farming | 24 | 20.00 | 33 | 27.50 | 63 | 52.50 | II |
| 3. | Insufficient extension activities like demonstrations, farmers group discussions, kisan melas etc. by extension agency | 21 | 17.50 | 13 | 10.83 | 86 | 71.66 | III |

f = Frequency and % = Percentage

Some other miscellaneous constraints expressed openly

Some of the farmers even expressed few other problems related to ODOP loan problem and also the delay in NAFED amount payment. This might be due to the bureaucratic administration delays in the amount sanction.

Suggestions as expressed by coconut growers

Table 6 shows the suggestions expressed by coconut growers. It was found that among overall coconut growers significant number of coconut growers suggested providing good market prices ranked top (Rank I) followed by educating and make available cost effective simple technologies for pest and disease management (Rank II) followed by Educating about the labour saving technologies like mulching, coconut climbing machineries (Rank III). Coconut growers are highly motivated by the need for better income and profitability. Good market prices directly

impact their economic well-being and livelihood. Growers often seek affordable and accessible solutions to manage pests and diseases, as they can lower production costs and reduce income loss. There by developing and making accessible simpler cum cost effective disease and pest management technologies might help the coconut growers enhance their production as well as coconut farm returns. Labour scarcity addressing in coconut farming is also the need of the hour, so this can be done by developing simpler and accessible labour saving technologies like coconut climbing machineries and educating coconut growers about it might help in following good and recommended coconut cultivation practices likes pest and disease management there by enhancing yield and their farm returns. The important trends are in similarity with Rashmi (2018)^[7] and Gulshan (2022)^[8].

Table 6: Suggestions as expressed by coconut growers (n=120)

| Sl. No. | Statements | Very important | | Important | | Not important | | Rank |
|---------|---|----------------|--------|-----------|-------|---------------|-------|------|
| | | f | % | f | % | f | % | |
| 1. | Providing good market price | 120 | 100.00 | 0 | 0.00 | 0 | 0.00 | I |
| 2. | Educating & make available cost effective simple technologies for pest and disease management | 106 | 88.33 | 14 | 11.67 | 0 | 0.00 | II |
| 3. | Educating about the labour saving technologies like mulching, coconut climbing machineries | 93 | 77.50 | 19 | 15.83 | 8 | 6.67 | III |
| 4. | Giving timely technical advice on coconut farming | 91 | 75.83 | 22 | 18.33 | 7 | 5.83 | IV |
| 5. | Make sure availability and supply of quality inputs at right time at subsidized rates | 59 | 49.17 | 7 | 05.83 | 54 | 45.00 | V |
| 6. | Timely and adequate information regarding availability of inputs, prices, arrivals etc. | 40 | 33.33 | 21 | 17.50 | 59 | 49.16 | VI |
| 7. | Conducting demonstration cum training programmes regularly | 22 | 18.33 | 56 | 46.66 | 42 | 35.00 | VII |
| 8. | Provision of irrigation source | 37 | 30.83 | 21 | 17.50 | 62 | 51.66 | VIII |
| 9. | Providing timely and interest free credit | 31 | 25.83 | 19 | 15.83 | 70 | 58.33 | IX |
| 10. | Providing linkages to processing industries and storage facilities | 26 | 21.66 | 23 | 19.16 | 71 | 59.16 | X |
| 11. | Providing market information | 15 | 12.50 | 42 | 35.00 | 63 | 52.50 | XI |
| 12. | Longer repayment period for credit | 6 | 5.00 | 20 | 16.67 | 94 | 78.33 | XII |
| 13. | Provision for timely and adequate cash payment | 1 | 0.83 | 20 | 16.66 | 99 | 82.50 | XIII |
| 14. | Provision for suitable market infrastructure viz. transportation etc. | 4 | 3.33 | 8 | 06.66 | 108 | 90.00 | XIV |

f = Frequency and % = Percentage

Some other miscellaneous suggestions expressed openly

Some of the farmers also suggested to minimize the chemical application to the fields so that land degradation over the years can be reduced. Some of the farmers also suggested to provide them with training in Apiculture.

Conclusion

Thus, an understanding of the constraints and suggestions of the coconut growers underscores the significance of stakeholder engagement and participatory approaches in addressing the multifaceted challenges in coconut cultivation. By prioritizing stakeholders and through collaborative efforts between growers, policymakers, researchers and agricultural extension services, targeted interventions can be developed to provide practical solutions and empower coconut growers with the tools and knowledge needed to navigate obstacles effectively. Ultimately fostering resilience, innovation and sustainability within the coconut farming sector, we can pave the way for a brighter and more prosperous future for all stakeholders making coconut farming evergreen.

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