A STUDY ON CULTIVATION AND MARKETING OF COCONUT FARMING IN COIMBATORE DISTRICT WITH SPECIAL REFERENCE TO SULUR TALUK

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ABSTRACT
India is primarily known as agriculture country. Agriculture is the backbone of India. It contributes about 40% to 60% of GDP's National income of India. Nearly 69% of the people directly depend upon the agriculture. It is one of the major livelihoods for many people in the world. Coconut plays a major role in both export and import. In India, Tamil Nadu holds the most of the share in coconut area and production then the other states by following Kerala. Nearly, 60% of the farmer’s livelihood and income depends upon on the coconut cultivation only. This coconut farming gives more employment opportunities to the people in particularly rural areas. The increase in trend of coconut production has brought some of the challenges to the coconut growers. In Tamil Nadu, Coimbatore district rank first in productivity of coconut followed by Thanjavur, Dindugal and so on. Our India ranks third in largest coconut producing countries since 1960 to 2019. Coconut tree is the most beneficial tree in the world. Different varieties of trees are useful for many purpose to human but coconut tree is the tree of heaven were it produces many ayurvedic medicines for the diseases. In recent years, improvement in coconut cultivation was seen in large. The present study has made an attempt to bring out the risk involved in coconut farming and problems faced by the coconut growers. This study may be useful to make any appropriate decisions for implementing various policies regarding the coconut grower welfare.

KEYWORDS: Agriculture, coconut cultivation, marketing, production and all over the world level

INTRODUCTION
As we know that, India is primarily an agricultural country and nearly 69% of the people are directly engaged in agricultural work or in its allied occupations like agro-industries. Coconut tree is highly grown in more than 80 countries. Coconut is also interlinked with socio-economic life of a large number of small and medium scale farmers in this peninsular India. India ranks third in the world map of coconut producing. Coconut trees are grown in many countries and including seven territories of the world. The largest coconut producing countries in the world are Indonesia (19M tonnes), the Philippines (14M tonnes) and India (12M tonnes). In the last 5 years there were an sudden raise in the coconut production in India. In that Tamil Nadu states third largest coconut producing state in India. It has been observed that Coimbatore has largest area under coconut farming among all districts of Tamil Nadu, followed by Tirpur, Thanjavur and Dindugal.

STATEMENT OF THE PROBLEM
Coconut is one of the major product which gives coconut juice, coconut milk, fresh tasty water, nuts etc. But now a day the demand for coconut has been drastically reduced. Major problems stated by the farmers (85%) are plantations of seedlings are destroyed due to Pests and diseases. This damage has been appearing for more than a half century. Unskilled labours and escalating of labour cost is another problem for the coconut growers which uprooted the confidence of them. Many growers has been transformed from their farming business to other industrialization activities. Changes in price fluctuation is the another important problem faced by the growers. Due to the invention of industrialization there were no lands available for doing the farm
business. Scarcity of water is the major problem. In the view of changing scenario in the coconut sector it is an one attempt to study about coconut cultivation and marketing. Hence the study is taken for the research purpose.

OBJECTIVES OF THE STUDY
- To examine the awareness of respondents about the coconut farming business and its marketing.
- To analyze the significant relationship between dependent and independent variables in coconut marketing business.
- To identify the satisfaction level regarding risk involved in coconut cultivation and marketing by the coconut growers and to suggest suitable solutions to solve them.

RESEARCH METHODOLOGY
Research Design: Research methodology is a way to evaluate the research problem scientifically. Descriptive research design is used for the study.

Sample size: The sample size taken for the study is 125 respondents.

Sampling Method: Convenient sampling method is adopted for the study.

Sources of data:
- Primary data- It is collected through questionnaire
- Secondary data- collected from journals, magazines and websites

TOOLS USED IN THE STUDY
The collected data by the respondents are first classified into two things like in tabular and inference. Further, the following specific tools were used,
- Simple percentage analysis
- Chi-square analysis
- Weighted Average analysis

LIMITATIONS OF THE STUDY
1. The data was collected from the respondents of Coimbatore district with special reference to Sulur Taluk. So the findings of the study does not considered for other districts.
2. The information can be biased due to questionnaire. Time and Cost are the factors which have limited the size of sample as 125.

REVIEW OF LITERATURE
Kishore & Murthy (2016) were estimated the growth in area, production and productivity of coconut in Karnataka and its districts using compounded annual growth rate analysis. The necessary secondary data was collected for a period of fifteen years from 2000-2001 to 2014-15. Growth rates in area, production and productivity of coconut in Karnataka state was positive and significant.

OPERATIONAL MEANING
In olden days, the coconut was known as Nux indica”, the Indian nut. During the same period, it was also referred as Nargil tree, which means “the tree of life”. Coconut tree is one of the member of the palm tree family (Areccaceae). Western literature has mentioned the Kerala name “Tenga” for the coconut palm which is related to Tamil word ‘Tennai’. Scientifically, the coconut palm is a monocotyleden and which belongs to the order of palm tree family, family Palmae and the specie is known as Coccusnucifera.

HEALTHY BENEFITS OF COCONUT
1. Coconut will improves the immunity
2. Coconut is one of the perfect gift given to mankind by god or by nature
3. They kill harmful diseases like bacteria, viruses, fungi etc
4. Tender coconut keeps the body cool
5. We can consume coconut in any of its various forms whether it is raw
   - Coconut, coconut oil, coconut milk, coconut butter etc...

TECHNICAL REQUIREMENTS OF COCONUT CULTIVATION
1. Production of seedlings
2. Agro-climatic requirements
3. Soil
4. Preparation of land
5. Spacing
6. Varieties
7. Irrigation
8. Harvesting

DATA ANALYSIS AND INTERPRETATION
The analysis and interpretation of the study is based on the information supplied by a sample of 125 respondents.
SIMPLE PERCENTAGE ANALYSIS

**TABLE 1**

<table>
<thead>
<tr>
<th>S.NO</th>
<th>AGE IN YEARS</th>
<th>NO. OF RESPONDENTS</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Below 30 years</td>
<td>43</td>
<td>34.4%</td>
</tr>
<tr>
<td>2</td>
<td>31-45 years</td>
<td>30</td>
<td>24%</td>
</tr>
<tr>
<td>3</td>
<td>46 to 60 years</td>
<td>34</td>
<td>27.2%</td>
</tr>
<tr>
<td>4</td>
<td>Above 60 years</td>
<td>18</td>
<td>14.4%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>125</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Questionnaire

**INTERPRETATION**

The above table shows the age of the respondents. It is clear that 34.4% of them are below 30 years, 27.2% of them are between 46 to 60 years, 24% of them are between 31 to 45 years, 14.4% of them are above 60 years.

**TABLE 2**

<table>
<thead>
<tr>
<th>S.NO</th>
<th>PROFITS FROM SALE</th>
<th>NO.OF RESPONDENTS</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Below 50000</td>
<td>66</td>
<td>52.8%</td>
</tr>
<tr>
<td>2</td>
<td>Between 50000 to 100000</td>
<td>41</td>
<td>32.8%</td>
</tr>
<tr>
<td>3</td>
<td>Above 100000</td>
<td>18</td>
<td>14.4%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>125</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Questionnaire

**INTERPRETATION**

The above table shows the profit from the sale of coconuts per acre by the respondents. 52.8% of the respondents profit from the sale of coconuts per acre is below Rs.50000, 32.8% of the respondents profit from the sale of coconuts per acre is between Rs.50000 to Rs.100000, 14.4% of the respondents profit from the sale of coconuts per acre is above Rs. 100000.

**CHI-SQUARE ANALYSIS**

Farmer’s attitude is an important element of marketing function which decides the profitability of any agriculture farms. In this chapter an attempt is made to analyse the main factors influencing the satisfaction level of the farmers while marketing the coconut’s in the study area. For the purpose of this analysis, variables are classified into two important strata viz., dependent and independent variable.

**CHI-SQUARE TEST**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Calculation value</th>
<th>Df</th>
<th>Table value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>17.712*</td>
<td>12</td>
<td>21.03</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

**INTERPRETATION**

It is clear from the above table show that, the calculated value of chi-square at 0.05% level is more than the table value. Hence the hypothesis is accepted. So there is no significant relationship between age and satisfaction level of respondents on price stability.
TABLE 2- RELATIONSHIP BETWEEN NUMBER OF ACRES OF FARMING LAND AND AREA OF COCONUT SEEDLINGS

<table>
<thead>
<tr>
<th>S.NO</th>
<th>NO OF ACRES AVAILABLE</th>
<th>AREA OF COCONUT SEEDLINGS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Below 5 acres</td>
<td>6 to 20 acres</td>
</tr>
<tr>
<td>1</td>
<td>Below 5 acres</td>
<td>81</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>6 to 20 acres</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>Above 20 acres</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>96</td>
<td>22</td>
</tr>
</tbody>
</table>

To find out the association between the areas of farming land possessed and areas of coconut seedlings planted by the respondents, chi square test is used and result is given below.

**HYPOTHESIS**

There is no significant between areas of farming land possess and areas of coconut seedlings that are planted by the respondents.

**CHI-SQUARE TEST**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Calculation value</th>
<th>Df</th>
<th>Table value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of acres available</td>
<td>60.526</td>
<td>4</td>
<td>9.488</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

**INTERPRETATION**

It is clear from the above table show that, the calculated value of chi-square at 0.05% level is less than the table value. Hence the hypothesis is rejected. So there is a significant relationship between areas of farming land possessed and areas of coconut seedlings planted by the respondents.

**WEIGHTED AVERAGE ANALYSIS**

Under this method, the respondents are asked to give their opinion as by choosing ranks from 1 to 5. This method involves ranking of the items given. To secure a ranking of all the items involved, the researchers total the weights which are given to each item. The heighted weighted score is ranked first and correspondingly the other ranks are assigned.

\[
\text{Weighted Average} = \frac{\sum f(x)}{N}
\]

\(f(x)\) = weight allotted for each factor,
\(N\) = Number of respondent.

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>1(5)</th>
<th>2(4)</th>
<th>3(3)</th>
<th>4(2)</th>
<th>5(1)</th>
<th>TOTAL</th>
<th>MEAN SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price stability</td>
<td>6</td>
<td>8</td>
<td>45</td>
<td>19</td>
<td>47</td>
<td>125</td>
<td>2.256</td>
</tr>
<tr>
<td>Income from coconut Farming</td>
<td>7</td>
<td>11</td>
<td>49</td>
<td>37</td>
<td>21</td>
<td>125</td>
<td>2.568</td>
</tr>
<tr>
<td>Production</td>
<td>9</td>
<td>14</td>
<td>47</td>
<td>20</td>
<td>35</td>
<td>125</td>
<td>2.536</td>
</tr>
<tr>
<td>Government schemes</td>
<td>8</td>
<td>20</td>
<td>42</td>
<td>37</td>
<td>18</td>
<td>125</td>
<td>2.704</td>
</tr>
<tr>
<td>Channels of distribution</td>
<td>12</td>
<td>19</td>
<td>43</td>
<td>22</td>
<td>29</td>
<td>125</td>
<td>2.704</td>
</tr>
</tbody>
</table>

**INTERPRETATION**

The above table justifies the satisfactory level of current physical position of the coconut farming business. The highest mean score or average is rises to 2.704 for the government schemes and channel of distribution.

**FINDINGS**

**SIMPLE PERCENTAGE ANALYSIS**

- Majority (34.4%) of the respondents are below 30 years.
Majority (52.8%) of the respondents profit from the sale of coconuts is below Rs.50000
Majority (57.6%) of the respondents are male.
Majority (68%) of the respondents are married.
Majority (35.2%) of the respondents are School level.
Majority (39.2%) of the respondents are earning Rs.10000
Majority (68.8%) of the respondents are having a land below 5 acres.
Majority (76.8%) of the respondents have planted coconut seedlings below 5 acres.
Majority (41.6%) of the respondents have planted the Tall coconut trees.
Majority (32.8%) of the respondents yielding time duration of coconut tree is 3 years.
Majority (34.4%) of the respondents have planted below 50 trees in per acre.
Majority (57.6%) of the respondent’s irrigation system is Trip Irrigation.
Majority (58.4%) of the respondents fertilize their coconuts 6 month once.
Majority (56.8%) of the respondent’s rotation period of harvesting coconut is between 36 to 60 days.
Majority (48%) of the respondents are selling coconuts through wholesaler.

CHI-SQUARE ANALYSIS
There is no significant relationship between age of the respondents and satisfaction level given by them on price stability.
There is a significant between areas of farming land possess and areas of coconut seedlings that are planted by the respondents.

WEIGHTED AVERAGE ANALYSIS
It is concluded from the analysis that majority of the respondents are highly satisfied with the government schemes facilities which are offered by the government and it is beneficial to the farmers. It is concluded from the analysis that majority of the respondents are dissatisfied with the price stability which occurs loss to the farmers while cultivating the coconuts and there were limited market information’s available to the farmers.

SUGGESTIONS
Based on the findings of the study, it is suggested that the following measures may be taken by the government of Tamil Nadu to safeguard the interest of the coconut growers in the sample area Sulur Taluk.
Heavy price fluctuation causes unexpected loss to the coconut growers and their income was not as much as they expect. To stabilize the price of the coconut and its products the Government should come forward to implement price guarantee scheme.
Reduction in the cost of production of coconut nut is the most important problem for raising competitiveness. Need to give facilities to improve the irrigation system.

CONCLUSION
Sulur Taluk plays a vital role in coconut production, at Coimbatore district. But in mean time the coconut growers had meet unexpected losses in farming their business. So its productivity is reduced. In this situation, the land owners and other stakeholders are urging to take necessary steps to boost up coconut cultivation in the Sulur Taluk. As there were decline in price of coconut products and there were no markets available in favour of growers in Sulur Taluk. If the government takes steps to regulate coconut marketing and gives, financial help it may encourage the coconut production. Coconut play a crucial role in offering more number of employment opportunities to the rural people and it is a profitable venture for all categories of farmers in spite of their high initial investment. The present study has brought out the problems involved in the cultivation and economic conditions of coconut.

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