Return On Investent By Rubber Plantation By Small Rubber Holders In Kanyakumari District

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Abstract
Rubber is one of the essential roles of horticultural crops in India. The required information for the present study has been collected both from Primary and Secondary data. The information has been collected from the respondents through the separate interview schedule from the small rubber holders. The Secondary data required for the study were collected from the various books, Rubber the various articles published in Newspapers, and Magazine. 100 sample respondents were chosen using a simple random sampling procedure and the responses are fed into SPSS version 22 for analysis and validation of the statements. From the findings it concludes that Government should provide credit plan and skill development training programme, can transform the smallholder rubber plantation programme as a suitable alternative land use for shifting cultivation; it would sustain income, employment and prevent environmental degradation. The government should offer subsidies for the tiny rubber holders because they were unable to make any money during the early stages of rubber plantations. so that they won't endure pain.

Keywords: Rubber Plantation, Horizontal Crops, Income, Environmental Degradation.

I INTRODUCTION

Rubber plantations in India were started by the British. The economic importance of rubber plantation in India hardly needs any emphasis. Rubber plantations supply raw materials for the production of many industrialised goods required for automobiles, aircrafts, railways, textile industries, sports goods, engineering goods and even for building roads. On account of the multifarious uses to which rubber can be put to, the consumption of rubber in the world as well as in India has been increasing steadily. The total rubber plantation area in India is 5.70 lakh ha. India is the third largest producer of natural rubber next only to Thailand and Indonesia contributing about 9 per cent of the global output. India is the fourth largest consumer next to China, USA and Japan. More importantly India's average rubber productivity is 1631 kg. per hectare is the highest among the major natural rubber producing countries. The country has experienced substantial transformation in the production structure with the entry of the native peasantry, eventually leading to proliferation of smallholder systems under various socio-economic, political and institutional contexts. Resultantly, the Indian rubber plantation industry is dominated by small holdings having an average size of less than 0.5 ha. Smallholdings account for nearly 88 per cent of the total area under rubber and the total production of natural rubber in the country. In the early year's rubber was grown only in Kerala and Kanyakumari District in Tamil Nadu, which are the traditional rubber growing areas of the country. But currently, Rubber is also grown in Tripura, Assam, Meghalaya, Mizoram, Manipur, Goa, Coastal Karnataka, Orissa, Andhra Pradesh, Madhya Pradesh and West Bengal. India is the sixth largest producer and consumer of natural rubber (Binitha, 2018). This district accounts for 98 percentage of rubber production. It has suitable soil and climate for the cultivation of rubber trees. Out of 91807 hectares of total crop area, rubber is cultivated in 19500 hectares. There are 126 small scale rubber-based industries registered under the (Selvia, 2012) District Industries Centre (DIC). They provide employment to 1874 people. Rubber is being cultivated in three taluks of the District: Kalkulam Taluk - 180 rubber estates, Thovalai Taluk - 13 rubber estates, Vilavancode Taluk - 230 rubber estates according to Rubber Board, Marthandam. (Binitha, 2018) According to department of Economics and Statistics of Kanyakumari District there are 41 registered rubber estates with 7373.126 hectares of land in which there are 1998 male labourers and 988 female labourers. Land coverage under rubber plantation in Kanyakumari District is 27407 hectares. (District Statistical Handbook, 2015). This paper seeks to study the return on investment by rubber plantation by small rubber holders in Kanyakumari district

II STATEMENT OF THE PROBLEM

In Kanyakumari, shifting farming, also referred to as jhuming, is the main method of land use. This land use scheme is more significant today because of the problems it causes. Some disadvantages of this system include resource degradation, low output, and little to practically no room for the adoption of better agricultural production technology. 'Jhuming cycle' in the same land which extended to 20-30 years in olden days has now been shortened to 3-6 years because of increase in population pressure on land and decrease in productivity leading to utilisation of more area under

'jhuming. Continuance of shifting cultivation lead to soil erosion resulting in declining fertility and low yield. This occurs mainly due to the loss of soil organic matter and nutrients contained in the eroded sediments. To prevent the colossal loss of natural resources due to the practice of jhuming, rubber plantation was introduced by the Government on a large scale as an alternative land use in degraded jhum land of hill slopes with the twin objectives of generating additional income and employment to jhum practicing farm families and to prevent the loss of natural resource. Rubber plantations in degraded hill slopes control erosion in two ways.At the village level, there are also a great number of unregistered private rubber dealers who serve as a bridge between the dealers and the rubber growers. The Rubber Board, which is the only organisation that promotes structured rubber cultivation, has been very active in the market through a variety of rubber producers'/growers' organisations and rubber marketing societies. According to these institutional arrangements, rubber small-holders can sell their produce to any of the three sources mentioned above, depending on the market price or nearby locations. Field officers stationed at various areas offer extension services to rubber growers. Many jhum farmers in the Kanyakumari district have turned to rubber planting as an alternative income source thanks to Rubber Board's guaranteed market and extension services. Till now there is no comprehensive. study on the economics of smallholder rubber plantation in Kanyakumari district. Therefore, there is an urgent need to study the economics of smallholder rubber plantation in Kanyakumari district. The information generated in this study will throw light to the planners and policy makers and financial institutions to formulate suitable policy package for smallholder rubber plantation programmes for generation of additional income, employment and restoration of environmental sustainability in the district

III REVIEW OF LITERATURE

- **Mathanraj and Saranya (2021**) In their article entitled "Rubber Plantation Labours in Kanniyakumari District - An Economic Study" The specific objectives of the study are as follows (i) To study the living and working condition of the rubber plantation in Kanniyakumari district. (ii) To analyze their level of income and expenditure. (iii) To give suggestion for improving the status and working condition of rubber plantation. The required information for the present study has been collected both from Primary and Secondary data. The information has been collected from the respondents through the separate interview schedule for the rubber plantation labour. The Samples were selected by Convenience Sampling Technique. The Total number were samples were collected 90 Respondents. The study was conducted among the select rubber plantation labours in Kanniyakumari district. The interview schedule has been used for collection of primary data from the rubber plantation labours employed in the factory. Hence they conclude that The government and Rubber Board take care and make more steps to boost and protect rubber producers by considering their contributions to the country and society.
- **Ashokkumar (2023)** in his article entitled "Investment and Return Analysis of Natural Rubber Plantations In Kerala" The study has used both primary and secondary data. The primary data have been collected from small holdings and estate owners. The researcher has used two separate interview schedules, one for the cultivators and another one for the market intermediaries. The secondary data have been collected from the official publications of the central and state governments. In order to achieve the objectives of the study, the total sample plantation of 367 is stratified into two categories namely small holdings and estate sector. The farmers who have less than 20 hectare are grouped as small holdings and the farmers who have 20 or more than 20 hectare are grouped as estate sector. Out of 367 sample farms, 338 (92.10 per cent) came under the category of small holdings and the remaining 29 (7.90 per cent) came under the group of estate sector.

IV OBJECTIVES OF THE STUDY

- To study the profile of rubber smallholder in Kanyakumari District
- To analysis the cost of establishment of rubber plantation.
- To evaluate the cost of production of rubber

V RESEARCH METHODOLOGY

The required information for the present study has been collected both from Primary and Secondary data. The information has been collected from the respondents through the separate interview schedule for the rubber plantation labour. The Secondary data required for the study were collected from the various books, Rubber the various articles published in Newspapers, and Magazine.

SAMPLE DESIGN

The Samples were selected by Simple Random Sampling Method. The Total number were samples were collected 100 Respondents. The study was conducted with a small group of rubber plantation owners in the Kanyakumari district

COLLECTION OF DATA

The interview schedule has been used for collection of primary data from the rubber plantation owners in the Kanyakumari District.

TOOLS OF ANALYSIS

The analysis was done by the use of SPSS. The various statistically tools applied to analysis the primary data were Percentage analysis and Rank for effective analysis and easy understanding, the data were tabulated.

VI RESULTS AND DISCUSSION

PROFILE OF RUBBER SMALLHOLDER IN KANYAKUMARI DISTRICT

TABLE 1

S.No	Particulars	Values
1	Average age of the smallholders (years)	45
2	Experience in rubber farming (years)	25
3	Children studying (per cent)	75
4	Average family size (No.)	5
5	Farmers practicing jhum (per cent)	42
6	Farmers growing other crops (per cent)	52
7	Average holding size (ha)	1.75
8	Average rubber area (ha)	1.00

Source: Primary Data

All the rubber growers in the study area were tribals. The profile of sample rubber growing households is presented in Table 1. The table brings out the average age profile of growers being 45 years. The rubber plantation experience of the growers in the study area is only 25 years. The importance attached to educating the children is moderately higher with 75 per cent of the children being sent to school. In the study region, the pursuit of farm related activities other than rubber cultivation mainly include rice cultivation either in plains or hills, growing of food and cash crops and vegetables and practice of jhum with different degrees of intensity. While practice of jhum with the intensity of 42 per cent is reported. The average size of rubber holding is 1.75 ha, this also denotes the durability of rubber-producing households in terms of their access to natural capital, the foundation of their asset base for sustaining their way of life.

COST OF ESTABLISHMENT OF RUBBER PLANTATIONS

TABLE 2

Sr. No.	Particulars	Mean score	Rank
1.	Preparatory operations	3.07	XI
2.	Terracing, lining, pitting	3.91	IV
3.	Filling and planting	3.80	V
4.	Cost of planting materials	4.07	III
5.	Pruning/branch induction	3.21	X
6.	Fertilizer and manures	4.18	II
7.	Cultural operations	4.36	I
8.	Plant protection	3.76	VI
9.	Current crop establishment	3.50	VIII
10.	Drainage and other Miscellaneous work	3.43	IX
11.	Boundary protection and foot path	3.66	VII

Source: Primary Data

From the above table, the study clarifies that the cost establishment of rubber plantation by small rubber holders is "Cultural Operations" since it has the highest mean score of 4.36, followed by "Fertilizer and Manures" with a mean score of 4.18. The third cost establishment of rubber plantation by small rubber holders was "Cost of Planting

materials" with mean score of 4.07. "Filling and planting" was ranked fourth, since its mean score is 3.80, followed by "Plant Protection" with a mean score of 3.76. The sixth cost establishment of rubber plantation by small rubber holders was "Plant protection" with a mean score of 3.76, followed by "Boundary protection and foot path" with a mean score of 3.66. "Current crop establishment" was ranked eighth with a mean score of 3.50. The ninth and tenth rank is for "Drainage and other miscellaneous work" and "Pruning/branch induction" with a mean score of 3.43 and 3.21. The last rank is for "Preparatory operations" with a mean score of 3.07 respectively.

COST OF PRODUCTION OF RUBBER

TABLE 3

S. No.	Cost item	Mean Score	Rank
A.	**Variable cost**		
1	Manures and manuring	3.88	VI
2	Weeding	3.74	VII
3	Pruning	3.29	XIII
4	Plant protection charges	3.31	XII
5	Tapping charges	4.08	II
6	Processing and marketing cost	3.98	IV
7	Watch and ward and miscellaneous expenditure	3.55	IX
8	Interest on working capital	3.91	V
B.	**Fixed cost**		
9	Rental value of land	4.28	I
10	Interest on fixed capital	3.67	VIII
11	Depreciation on fixed assets	3.42	X
12	Annual share of establishment cost	4.01	III
13	Land revenue and plantation tax	3.35	XI

Source: Primary Data

From the above table it clearly shows the cost of production of rubber by small rubber holders is "Rental value of land" since it has the highest mean score of 4.28, followed by "Tapping charges" with a mean score of 4.08. The third rank is for "Annual share of establishment cost" with a mean score of 4.01. Fourth rank is for "Processing and marketing cost" with a mean score of 3.98. Fifth rank is for "Interest on working capital" with a mean score of 3.91. Sixth rank is for "manures and manuring" with mean score of 3.88. Seventh rank is for "Weeding" with a mean score of 3.74. Eighth, ninth, tenth rank is for "Interest on fixed capital", "Watch and ward and miscellaneous expenditure" and "Depreciation on fixed assets" with a mean scores of 3.67,3.55 and 3.42, followed by eleventh rank is for "Land revenue and plantation tax" with a mean score of 3.35. Twelfth rank is for "Plant protection charges" with a mean score of 3.31 and last rank is for "Pruning" with a means score of 3.29 respectively.

VII FINDINGS

- Most of the respondents age profile of growers being 45 years.
- The rubber plantation experience of the growers in the study area is only 25 years.
- It could be observed that,75 per cent of the children being sent to school by the small rubber holders.
- 42 percent of the respondents practice jhum method.
- The average size of rubber holding is 1.75 ha.
- The study clarifies that the cost establishment of rubber plantation by small rubber holders is "Cultural Operations" since it has the highest mean score of 4.36 and last rank is for "Preparatory operations" with a mean score of 3.07.
- It clearly shows the cost of production of rubber by small rubber holders is "Rental value of land" since it has the highest mean score of 4.28 and last rank is for "Pruning" with a means score of 3.29.

VIII SUGGESTIONS

- Government should provide credit plan and skill development training programme, can transform the smallholder rubber plantation programme as a suitable alternative land use for shifting cultivation; it would sustain income, employment and prevent environmental degradation.
- The government should offer subsidies for the tiny rubber holders because they were unable to make any money during the early stages of rubber plantations. so that they won't endure pain.
- Though the Rubber Board and the Government of India launched special programmes for smallholding sectors with long term loan, input subsidies and interest subsidies, still the content of the programme is not known to many and there were cases where the rubber growers could not avail the subsidies on account of the rigid terms and conditions imposed on the beneficiaries.

IX CONCLUSION

Rubber farmers are agricultural workers who play an essential role in the Indian economy and labor market. The main objective of return on investment by rubber plantation by small rubber holders was to analysis the cost of establishment of rubber plantation and to evaluate the cost of production of rubber. In that Most of the respondents age profile of growers being 45 years. 42 percent of the respondents practice jhum method and the average size of rubber holding is 1.75 ha. The study clarifies that the cost establishment of rubber plantation by small rubber holders is "Cultural Operations" has the first rank and last rank is for "Preparatory operations". The cost of production of rubber by small rubber holders is "Rental value of land" has the first rank and last rank is for "Pruning". From the findings it concludes that the Rubber Board and the Government of India launched special programmes for smallholding sectors with long term loan, input subsidies and interest subsidies, still the content of the programme is not known to many and there were cases where the rubber growers could not avail the subsidies on account of the rigid terms and conditions imposed on the beneficiaries.

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