



ISSN: 2249-894X
 IMPACT FACTOR : 5.7631 (UIF)
 UGC APPROVED JOURNAL NO. 48514
 VOLUME - 8 | ISSUE - 8 | MAY - 2019



PROBLEMS AND PROSPECTS OF RUBBER PLANTATION INDUSTRIES IN KERALA

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ABSTRACT:

India, being an agricultural nation has made tremendous progress in agricultural production and productivity since independence. The plantation crops cultivated in estates or vast acreages of land therefore seem to be the progenitors of industrial agriculture or rather the precursors in organizing agriculture on an industrial basis. A plantation is, in fact, an agricultural holding large enough to apply industrial and managerial techniques. The activities in the plantation estates such as planting cultivation and on site processing can be treated as industrial activities organized on

the basis of managerial techniques.

Natural rubber production in India is mainly concentrated in Kerala, Tamil Nadu Assam Tripura and Karnataka. Kerala is the leading producer of natural rubber in India. Kerala's share in the national production of rubber is 87.3 per cent. Rubber forms the raw material for a good number of industries. Therefore, the cultivation and production of Natural rubber is important for national point of view. Kerala's share in the national production of rubber is 87.3 per cent. The production natural rubber in Kerala is increasing but the cost of production is also increasing at a high rate. The price is decreasing or even fluctuating and the problem of getting tapping employees is another issue confronted by the growers. Dominance of small holding sector lacks best agricultural and marketing practices. The rubber cultivators left untapped due to unattractive prices, shortage of tappers and high operation cost. In the case of large plantations there are labour problems on account of multiplicity of unions. All these stand as impediment that hinder the growers/planters to improve their benefits and hence the study.

KEYWORDS: agricultural nation, agricultural production and productivity.

INTRODUCTION :

India, being an agricultural nation has made tremendous progress in agricultural production and productivity since independence. The plantation crops cultivated in estates or vast acreages of land therefore seem to be the progenitors of industrial agriculture or rather the

precursors in organizing agriculture on an industrial basis. A plantation is, in fact, an agricultural holding large enough to apply industrial and managerial techniques. The activities in the plantation estates such as planting cultivation and on site processing can be treated as industrial activities organized on the basis of managerial techniques.

Kerala has a substantial share in the four plantation crops of

rubber, tea, coffee and cardamom. These four crops together occupy 7.02 lakh hectares, accounting for 34.4 per cent of the net cropped areas in the state. Kerala's share in the national production of rubber is 87.3 per cent.

REVIEW OF LITERATURE

Rajeevan .B. et. al (2015)¹ in a study on " Farm school -An Extension Tool to Increase Productivity of Rubber Small Holdings by Improving Tapping

Standards" examined the merits of scientific tapping. They adopted experimental methods for arriving at a conclusion that the yield per tree varies according to tapping methods. Kavitha K Mydin, Alice John and C Narayanan (2015)² in a study on "Long term Yield of Rubber and Timber in Some Promising Prang Besar clones in India" examines the stability of yield of different clones of *Hevea Brasiliensis*. The promising yielders from the present study are clones PB280, PB312 and PB314 showed very low incidence of pink disease in the immature stage with only 1.5 to 1.7 per cent trees affected.

The study indicates the scope for further up gradation of clones PB280, PB312 and PB314 in the planting recommendations for the traditional rubber growing regions of India. Baby K .(2015)³ in a study on " Commercialization of Agriculture –Rubber Plantations", an estimated 60000 hectares of land is now under Rubber cultivation and in the next five years, the area under "liquid gold" cultivation would be doubled. 70 per cent of total Rubber production in India is in the form of Ribbed Smoked Sheets (RSS). Viswanathan P.K (2015)⁴ in a report on "More Women Need to Enter Plantation Jobs" assessed that women participation in rubber smallholding sector is very low and says that more women should get in to the rubber plantation jobs after skill development in tapping, latex collection, processing, and sheet making so that the plantations can overcome the present labour shortage problems. Jobby Joseph and Tharian George(2016)⁵ assessed on "Exclusion List under AIFTA: Priorities and Strategies of Asian and India on Rubber and Rubber Products", as per the agreement all tradable goods are classified under three broad groups, viz., products earmarked for tariff elimination, tariff reduction and products excluded from any kind of tariff reduction. Products excluded from any kind of tariff reduction are included under the exclusion list. In order to provide maximum protection to the NR production sector in the country India has included all major forms of NR in the Exclusion List. Conversely, world's biggest producer of NR, Thailand has not provided a similar kind of protection to its domestic producers.

STATEMENT OF THE PROBLEM

The production natural rubber in Kerala is increasing but the cost of production is also increasing at a high rate. The price is decreasing or even fluctuating and the problem of getting tapping employees is another issue confronted by the growers. Dominance of small holding sector lacks best agricultural and marketing practices. The rubber cultivators left untapped due to unattractive prices, shortage of tappers and high operation cost. In the case of large plantations there are labour problems on account of multiplicity of unions. All these stand as impediment that hinders the growers/planters to improve their benefits and hence the present study examines the problems and prospects of rubber plantation industries in Kerala.

OBJECTIVES OF THE STUDY

The following are the objectives of the present study:

1. To ascertain the problems in the cultivation of rubber plantation crops and to study the cost of production.
2. To assess the problems in the marketing of natural rubber in Kerala and to analyse the price trends.
3. To evaluate the cost and benefit of the rubber plantations industry in Kerala.
4. To study the management of the rubber plantation industry in Kerala.

Methodology: Method of Study: The present study is empirical one and it tests the feasibility of solutions by applying various statistical tests.

Data Source: Both secondary and primary data have been used for the study.

Secondary Data: The Secondary data is used in the study for analyzing the area, production and productivity of rubber plantations, consumption of natural and other different forms of rubber and the prices. The secondary data for the study have been collected basically from Annual Reports, Office documents, rubber statistical news and office records of the Rubber Board; Survey Reports on Cost of

the Rubber Board; Published and unpublished research theses; Journals, Books, News papers; Economic Review of the State Planning Board; Papers presented in Rubber Meet, 2016 organized by IRSG and Websites of Rubber Board and other related organizations.

Primary Data: Primary data for the study have been collected from the growers of rubber plantations.

Sampling Technique: **Multistage Stratified Purposive Sampling Technique** is used for the identification of sample population.

Sample Design

A total of 750 respondents are selected by using Multistage Stratified Purposive Sampling technique

1. **Selection of Districts:** Based on the geographical concentration of rubber Kerala state is divided into regions and one each district is selected accordingly. They are Pathanamthitta District from Southern Region, Kottayam District from Central Region and Kannur District from Northern Region.
 - a. **Selection of Taluks:** From each of the Districts two top ranking Taluks based on area under cultivation of natural rubber is identified as sample Taluks. They are **Ranni and Konni Taluks from Pathanamthitta District; Meenachil and Kanjirappally Taluks from Kottayam District and Thaliparamba and Iritty Taluks from Kannur** are selected as sample Taluks.
 - a. **Selection of Villages:** In the Third stage Two Villages each are identified from each of the Taluks selected. They are **Athikayam from Ranni Taluk and Aruvapulam from Konni Taluk** from Pathanamthitta, **Kanjirapally (Mundakayam Taluk and Kadanad (Meenachil Taluk) from Kottayam and Payyavor and Nuchiyad** respectively from **Thaliparamba taluk and Iritty Taluks from Kannur district.**
2. **Selection of Growers of Rubber Plantations :** Each of the Six Villages, 750 respondents are selected by using Multistage Stratified Purposive Sampling Technique. The stratification is made on the basis of the area under cultivation i.e. below 5 acres, 5 to 10 acres, 10 to 15 acres and above 20 acres. Thus, the size of the whole sample population for the present study comes to 750 in which 150 respondents each from each of the Five Strata groups (150 x 5).

Tools for Data Collection: An interview schedule specifically developed for this purpose is made use for collecting primary data from respondents.

Period of Study: A five year period from 2010-11 to 2014-15 is taken for analyzing the cost and price where as a 15 year period is used for analyzing the trend in the Area , Production and Productivity of the natural rubber in the World, India and Kerala.

Tools for Analysis of Data : For analyze and interpretation of data simple Mathematical and statistical tools like Ratios, Percentages, Compound Growth Rate, Mean, Standard Deviation, Co efficient of Variance, Centered Moving Average, Seasonal Indices and ANOVA are used .

Data Analysis and Interpretation

Country wise Area, Production and Productivity: In the case of production of natural rubber Thailand, and India ranks in the first and sixth position respectively

State wise Area, Production and Productivity: The state wise area under cultivation of Natural rubber shows that Kerala ranks first in India.

District wise Area, Production and Productivity: In the case of area and production Kottayam district top in Kerala.

Analysis on Cost and Cost of Production: The cost of production both recurring and non-recurring cost is increasing.

Yield of Natural Rubber: In respect of the yield of natural rubber there is increase in all the strata holdings but the benefit of higher yield is eaten away because of high cost of production.

Production and Consumption: In the case of production the trend shows a fluctuating one where as the consumption shows a trend of increase which is a clear indication of the prospects of natural rubber production.

Export and Import of Natural Rubber: The percentage of export to production shows a declining trend but import shows a trend of increase.

Problems identified : Price fluctuation is a serious one according to respondents and is studied by means of taking the month wise price of natural rubber prices of various categories and analyzed with the help of 12 months Centered Moving Average . This again analyzed by means of seasonal indices and is plotted on a graph for knowing the month in which it affects. It is seen from the analysis that the price is affected by seasonality. The other problems identified are Government policies; Stock piling; Imports; Untimely release of imported rubber; and Seasonal variation in Production and Sales

MANAGEMENT : GENERAL ADMINISTRATIVE MANAGEMENT

- a. **Administration Cost:** The average score of respondents' level of satisfaction indicates that the respondents are of the view that the cost is not high. .
- b. **Method of Sales:** The mean intensity level of this variable is 50 per cent signifies that the respondents are satisfied with the method of sales adopted.
- c. **Research and Development:** It revealed that the respondents that in the case of rubber there is no research and development activities and it is carried out by the Rubber Board.
- d. **Quality Controls:** The average score of respondents' level of satisfaction indicates that the respondents are satisfied with the Quality Controls mechanisms.
- e. **Settlement of Disputes:** The mean score of this variable is only 40 per cent makes clear that the respondents are not satisfied with the measures initiated by the management for settling disputes.
- f. **Seasonality:** The mean score of this variable indicate that there is seasonality in production, sales and price.
- g. **Trade Unions Involvement:** The mean level of satisfaction recorded by the respondents for this variable is 43 per cent shows that the respondents are not satisfied with the involvement of trade unions among the rubber plantations.
- h. **Existence of Multi Unionism:** The overall recorded level of satisfaction is 52 per cent which shows that the respondents are of the opinion that there exists multi unionism in rubber plantations.
- i. **Price Fluctuations:** The mean score of 58 per cent with a standard deviation of 22 and a co variance of 38 shows that there are price wide price fluctuations in rubber price.

Management of Plantations: 1. Management Techniques: The mean score of this variable is 49 per cent which is a clear indication that the respondents are somewhat satisfied with the Management Techniques adopted by them as per the direction of the Rubber Board.

2. Scientific Field Managers: The mean score in this case is only 38 per cent means that the respondents are very much dissatisfied with the services of field managers.

3. Grading/Smoke House: The recorded level of satisfaction of respondents in this respect is very high; the mean score which is 63 per cent clearly indicates that the respondents are highly satisfied with the quality through the use of smoke house facilities in the plantations for high grade rubber.

4. Packaging : The mean score is 55 per cent indicates that the respondents are satisfied with the present system of packaging for transportation.

5. Storage and Warehousing: The low mean score of respondents is an indication that the facilities available for storage and warehousing facilities are not up to their expectations.

5. Transportation: The mean satisfaction level of the respondents is recorded at 51 per cent signifies that there exists a proper system of Transportation for marketing of rubber from the place of making to sales point.

6. Inter Cropping: The average score is 57 per cent makes it clear that the respondents are of the view that through inter cropping they are earning income from rubber plantations during the initial years.

7. Timely Availability of Inputs: The overall mean level of satisfaction recorded is only 44 per cent means that the respondents are of opinion that the inputs required are not available on a timely basis.

Management of Funds:

1. Availability of Funds: The mean score of which is 45 per cent makes it clear that there is the problem of lack of funds for production of natural rubber.

2. Borrowings from Societies or Financial Institutions: It is clear from the mean score (48 per cent) that the respondents are not satisfied with the availability of funds from these institutions

3. Schemes of NABARD: In this case the mean score is at 58 per cent indicates that the respondents are highly satisfied with the various schemes of support extended by NABARD for the rubber production.

4. Need of Funds: In this case the respondents recorded a high satisfaction level as is clear from the mean score of 58 per cent which means the funds are available in time and when the need arise.

5. Working Capital: The mean level of satisfaction on this variable is only 33 per cent indicates that the respondents are of the opinion that the working capital is not enough.

6. Incentives and Subsidies from Rubber Board: The mean level of satisfaction is 49 per cent shows that the respondents are satisfied with the schemes of support provided by Rubber Board.

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