

**SOCIO-ECONOMIC PROFILE OF RUBBER TAPPERS
IN THE SMALL HOLDING SECTOR**

A STUDY AT KANJIRAPPALLY PANCHAYATH

Final Report

By

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CHAPTER I

INTRODUCTION

Kerala has a long tradition in the cultivation of plantation crops. Rubber, tea, coffee and cardamom are the major plantation crops in Kerala. Now the state represents 45 percent of the total area under plantation crops in the country. Rubber plantation had its beginning in India during the first decade of the present century. Kerala holds a dominant position both in the area of cultivation as well as in the production of natural rubber in India. Kerala at present has more than 85 percent of the total cultivation and nearly 93 percent of the total production of natural rubber in India.

The earliest rubber plantations in India were large-scale agricultural enterprises operating on commercial lines, engaging regular hired labour. Because of the high remuneration from rubber in the early years of the century, small-scale cultivation also started developing. Rubber attracted small-scale cultivators by virtue of its capacity to provide steady returns for long period. Moreover, rubber can be cultivated even on inferior lands. In Kerala the Land Reforms Act and Rubber Development Schemes of Rubber Board have accelerated this process. Now rubber economy is over whelmingly smallholder- oriented.

1.1 Importance of the study

Under the Rubber Act Rules, owners of rubber plantations are classified in to two groups viz; small growers and large growers. A small grower is defined as an owner whose rubber plantation does not exceed 20.23 hectares(50 acres) An owner having more than 50 acres of rubber cultivation is considered to be large grower. About 9 lakhs small holders occupy 93 percent of total rubber area and contributing 85 percent of total rubber production in Kerala. During the period 1960-61 to 1999-2000 the proportion of area of

smallholdings had increased from 65.06 to 93 percent. Concurrently the relative share of area under estates had declined from 34.94 to 7 percent. With the changes in area of production, the per hectare yield of smallholdings and estates has also changed. The productivity gap between estates and smallholdings has been narrowed down. It was more than 50 percent in 1960-61. After 30 years, i.e; in 1990-91 the percentage difference declined to 13.89. Kerala represents 88 percent of small holding rubber cultivation area in the country.

Rubber cultivation and production is not an easy and simple avocation. It needs a large and professional labour force during its whole lifetime existence. Tapping of rubber trees is not only a skilled job but also highly labour intensive. Tapping is normally continued for 10-20 years, depending on how fast accessible the bark is consumed. The rate of bark consumption will depend on the skill of the tapper, clone and age of the tree, fertility of the soil, climatic conditions and the rate of adoption of improved tapping practices

Similarly, response to tapping system varies from clone to clone. Rubber Board has recommended half spiral third daily tapping for reducing the panel disease. Naturally, this system of tapping tends to reduce the number of tapping days by 30 to 35 days.

Self-tapping is not popular in Kerala. Even Small growers of rubber area below half a hectare hire labourers for tapping. Though women tappers seemed to be efficient in tapping, the share of women in the total number of tappers is very low.

Tapping labourers in rubber estates are highly organized due to the activities of trade unions. There are specified rules and regulations like Plantation Labour Act

regarding wage structure, terms and conditions of work, welfare measures etc.

Even though more than 10 folds of tapper in the rubber estate are working in the smallholdings; there is the absence of well-defined wage rate or working conditions. More over, the problems of rubber tapper in the smallholdings have not been seriously taken into consideration even by the institution connected with rubber. Thus, the actual force behind the glittering development of small holding rubber sector has not been given adequate consideration in the rubber related studies. Hence, this micro level study assumes importance.

1.2 Review of Literature

The development of rubber economy of Kerala is an important step towards the advancement of agriculture sector in the state. There have been a number of studies about the spectacular development of small holding rubber sector and its dominant role in the total production of natural rubber. But these studies deal only with productivity, technology adoption, credit facilities and different schemes of governmental agencies to encourage production.

It is unfortunate that there has not been any specialized and comprehensive study on the problems of the unorganized tappers in the smallholdings. However, there are some studies about the agricultural laboureres and plantation workers in the state. These studies are, to some extent, applicable to tappers as well.

The typical features of rural sector in Kerala shown by Dr. M. K. Sukumaran Nair¹ are:

1. The average size of holdings is relatively low. Consequently land distribution is less skewed and even labourers possess some land.
2. The cropping pattern is characterized by the predominance of commercial and tree crops.
3. The labour market is fragmented by villages and village market is further segmented by skill and type of tasks.
4. Wage rates are high and do not significantly vary with seasons and across the villages.
5. Government subsidies, welfare measures and other transfer payments keep the real wages and reserve price of labour high.

Above features except (4) and (5) are applicable to tappers also. Wage rate is not high. He says that rural labourers are highly organized. However, trade union activities and informal groupings are absent among the tappers.

According to Pranab .K. Bardhan,² 'personalized clientelism' fragments the labour markets, fractures the consciousness and emasculates class organization. Clientelism is the tendency for repetitive purchasers of particular goods and services to establish continuous relationship with particular purveyors of them, rather than searching widely through the market at each occasion of need.

¹ .Sukumaran Nair .M.K, "*Labour shortage in a Labour surplus economy*", Kerala Economy, Vol.2

² .Pranab K . Bardhan, *Land, Labour and Rural Poverty*, Oxford university press, Delhi

Bent Hansen, Bhalla, Errikson, Roberts and Pranab Bardhan have studied the features of 'attached labour' in agricultural sector. Attached labourers are defined as those who are more or less in continuous employment. Their findings show that tighter labour markets lead to more tied labour contracts. In slack labour markets with high unemployment, the employer often does not bother to have long term contracts with labour since he is surer of the labour supply.

There are studies regarding the 'Trickle Down Effects'³ of growth on poverty among the agricultural labourers of India. This suggests that in general, growth in agricultural output tends to generate some forces improving the income of wage labourers. Yield increasing or land improvement factors and the demand for hired labour increase their income. The new technology also increases the bargaining power of wage labourer. But the studies of Parthasarathy and Prasad and Mellor observed that in India new technology may have adversely affected the relative share of wage labour in output.

It is fruitful to analyse the socio economic profile of rubber tappers in the light of the concept of 'Livelihood Diversification'⁴. Frank Ellis defined this concept as the process by which rural families construct diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standard of living.

The evolution of technology in the rubber economy of Kerala and, its development in various stages of rubber cultivation and production are widely discussed and analysed in the Hand Book Of Natural Rubber,⁵ published by the Rubber Research Institute in

³ Anne Booth, Sundaram R M, 1984, *Labour Absorption In Agriculture*, Oxford university press, Delhi

⁴ Frank Ellis, 1998, 'Household Strategies And rural Livelihood Diversification' - Survey article, *The Journal Of Development Studies*, Frank Cass, London, October, Vol.35, PP.1-38

⁵ The Rubber Board, 1980, *Hand Book Of Natural Rubber Production In India*, The Rubber Research Institute Of India, Kottayam. Tillekeratne L.M.K and Nagawela A, 1995, "Tap Rubber Boom With The Rainguard", *Rubber Asia*, Dhanam Publication, Cochin, September-October, pp.67-75

Kottayam.

One important problem now faced by rubber economy of Kerala and elsewhere is the non-availability of skilled labourers. According to Tileke Ratne and Nugawela ⁶the use of rain guard enabled not only to maximize natural rubber production but also to reduce seasonal unemployment of rubber tappers .

Lack of skilled tappers is considered as the emerging problem in smallholdings. According to Ng Kok Tee⁷, labour shortage is one of the major problems behind the decline in natural rubber production in Malaysia. There is a move of production factors from agriculture sectors to other sectors and the shortage of labour has been accelerating this process.

Pushpa Rajah in one of his articles points out that Malaysia has given more importance to the innovations in labour saving techniques of rubber cultivation . He states that future of Malaysian rubber industry will brighten up only by making rubber cultivation a less labour-intensive system particularly in tapping . The study predicts that in the near future, the approach to rubber as a monocrop solely for latex will slowly phase out. Then rubber will be planted for the timber as a primary product and latex will be an important by- product.

1.3 Objectives of the study

The study is mainly focusing on the socio- economic profile of rubber tappers in

⁶ .Tilleke ratne L.M.K and Nagawela A , 1995, “Tap Rubber Boom With The Rainguard”,*Rubber Asia*, Dhanam Publication, Cochin, September-October,pp.67-75

⁷ Ngkoktee,2001,*Rubber Asia* , Dhanam Publication,Cochin

the Kanjirappally panchayath. The specific objectives are:

- A) to assess the living conditions of rubber tappers in the study area,
- B) to analyse the labour market, the level of wage and wage structure of rubber tappers,
- C) to examine the role of women tappers and to assess their further scope of employment in this sector and
- D) to evaluate the role of institutions in providing training to tappers.

1.4 Methodology and Sources of the study

The period covered by the study is 1990's. The social and economic status of rubber tappers in the study area along with the changes in tapping technology over the past years and the factors responsible for the non- adoption of these improved technologies are closely examined. The land area, housing condition and the house hold management, per capita income, educational status, house hold debt, savings, consumption pattern etc. are being considered as the indicators of the general living conditions of a rubber tapper .

This is a development oriented micro level study at panchayath level. According to 1991 Census data, the total population of the panchayath is 37017 and the total area of the panchayath is 5316.6 hectares of which the area under rubber consists of 4803 hectares. The panchayath consists of 7403 households. Out of these 2804 households come under the selected four wards. Majority of these households are small growers and the estimated number of tappers in this panchayath is 875 .A major share of the population depend, directly or indirectly, on rubber cultivation for their livelihood. Therefore this research work is a part of the development studies of rubber cultivation areas. As only four wards of the panchayath are brought under the analysis, it is a micro level study also.

The present study is mostly based on primary data collected in a survey. .For the

data collection, sample method is adopted. A total of two hundred sample tappers, 35 small growers and 15 women tappers are selected in the study area. The tappers selected on random basis, i.e; 50 tappers from each ward. There are male and female tappers; self tappers and hired tappers .

The sample tappers were selected by using the method of quota sampling ie; by dividing the tappers into a quota of 50 from each ward. By using the random sampling technique, we have selected the tappers from each quota. A random method is adopted in the selection of small growers and women tappers .

In the case of sample survey, selected tappers were interviewed with a structural questionnaire.

To understand the problem of tappers we have conducted discussions with institutions like Rubber Board officials, trade union workers, labour offices, various experts etc. Observation at the time of survey helped to some extent to generate some aspects relating to tappers living conditions, tapping awareness etc., which are not quantified.

The sample study includes the data regarding various aspects of the living conditions of tappers, technology relating to tapping etc. On the basis of these data socio-economic status of sample tappers is estimated. Average age of tappers, social and economic status, the diffusion and rate of adoption of tapping techniques, growers' response to tappers is also estimated from the sample data.

To analyze the socio-economic status of tappers we have used various statistical tools.

The present study has also made use of the secondary data. Important sources of the secondary data are various publications of Rubber Board, Kottayam.(Rubber Board bulletin,IJNRR,Rubber Reporter etc), RRII Puthupally, various issues of journals, periodicals,etc.were referred to for the study .

1.5 Scheme of the study

The study consists of 5 chapters. The **first chapter** is an introductory chapter where a brief account of the significance of rubber economy of Kerala, the various problems faced by tappers and the importance of present study are given. An analysis of primary investigations conducted in Kanjirappally panchayath is presented in the **second chapter**. The socio- economic profile of rubber tappers, role of institutions and rate of adoption of improved tapping techniques in the study area are closely examined in this chapter. The labour market conditions of tappers, their wage structure etc, are analysed in the **third chapter**. Scope of women tappers and their problems are discussed in the **fourth chapter**. The **fifth chapter** gives the summary and conclusions of the study.

CHAPTER II

Socio- economic Profile Of Rubber Tappers

The study area covers four wards [ward 1,2,3,and 4] in the Kanjirappally panchayath. Majority of the population in the area depends on rubber cultivation for their livelihood

2.1 Socio – economic back ground of sample households

2.1.1 Community Wise Distribution

Prominent communities of rubber tappers in the area are Roman Catholic, Ezhava, and scheduled caste. Close to one-third of the households belong to

Table-2.1

Community wise Distribution of Sample Households

Community	No.of households	Percentage
Ezhava	58	29
Orthodox	1	0.50
Roman catholic	64	32
CSI	2	1
Nair	17	8.50
Sambavar	14	4.70
Velan	6	3
Pandithar	2	1
Viswa karma	5	2.50
Muslim	4	2
Latin catholic	2	1
Vellala	4	2
Edavar	1	0.50
Penta cost	1	0.50
Paravan	2	1

Cheramar	1	7.5
Total	200	100

Roman Catholic community and around 30 percent belong to Ezhava. Total share of scheduled caste coming under different communities is 20 percent.

2.1.2 Family Size, Age Distribution and Educational Status

Total sample population is 949 and average size of the rubber tappers household is found to be 4.77. Majority of the sample tappers in the study area belong to the age group 40-50. The study shows that the new generation is averse to rubber tapping. Out of 200 sample tappers only 6 percent come under the age group, below 30. (Table 2.2)

Table 2.2
Age Distribution of Sample Tappers

Age group	Number of Tappers	Percentage
20-30	12	6.00
30-40	60	30.00
40-50	81	40.50
Above 50	47	23.50
Total	200	100

Educational status of the family members as a whole and that of tappers has been separately analysed. More than 90 percent of the sample population are literate. Out of the

total sample population 7.45percent are illiterate. Nearly 22 percent have dropped their study at the primary level whereas 60.44percent discontinued study at secondary level and only 10.39percent can reach SSLC and above.

More than 95percent of the sample tappers are literate. Out of 200sample tappers, 33percent dropped out of their studies at the primary level itself. Around 55 percent discontinued studies at the secondary level. Percentage of tappers having educational qualifications of SSLC and above is 8.5.(Table2.3)

Table 2.3
Educational Status of Sample Tappers

Level of education	Number of tappers	Percentage
Illiterates	9	4.50
Primary	65	32.50
Secondary	109	54.50
Above class 10	17	8.50
Total	200	100

2.1.3 Employment

The total labour force in the sample families is estimated to be 406. It is 42.8percent of total population. Total labour force consists of persons coming within the age group of 18 to 60 except students, disabled and housewives. Out of this total labour force, only 298 persons are employed causing unemployment of 108persons[26.6percent].

Table2.4
Distribution of Sample Family on the Basis of Employment

Family Size	No. Of House holds	No. Of Workers		Unemployed		Children, old, Housewives		Total
		Number	%	Number	%	Number	%	
2	9	9	50	—	—	9	50	18
3	26	33	42.3	4	5.1	41	52.6	78
4	59	70	29.7	15	6.3	151	64	236
5	60	94	31.3	37	12.3	169	56.4	300
6	29	44	24.6	30	16.7	105	58.7	179
7	9	24	38.1	11	17.5	28	44.4	63
8	4	9	28.1	3	9.4	20	62.5	32
9	2	7	38.9	3	16.7	8	44.4	18
10	1	3	30	3	30	4	40	10
11	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—
13	—	—	—	—	—	—	—	—
14	—	—	—	—	—	—	—	—
15	1	5	33.3	2	13.3	8	53.4	15
Total	200	298	31.4	108	11.4	543	57.2	949

The table shows that the rate of unemployment and family size is more or less directly proportional.

2.14 Occupational Pattern

Out of 298 employed persons, 76.5 percent are tappers; 10 percent represent

agriculture and animal husbandry and 8.4percent are engaged in casual labour. Percentage of workers in secondary and tertiary sectors put together is only 11.7.(Table2.5)

Table 2.5
Occupational Distribution of Sample Tappers

Occupation	Number	Percentage
Tapping	228	76.50
Casual labour	25	8.40
Agriculture	10	3.40
Others	35	11.70
Total	298	100

2.1.5 Land area

All of the sample tappers in the study area except 1.5percent have their own land. The total land possessed by the entire sample tappers comes to 58.02 acres; 10percent of them possess land area of below 5cents while 57percent of them possess land area of 5to 20cents and 19percent of them got a land area ranging from 20to 50cents.Only 12.5percent of them possess around 50cents whereas 1.5percent do not have any land.

2.1.6 Residential Facilities

All the sample households have got their own houses except one family, which resides in a rented house. Out of the 200 sample households, 64.5percent built their houses them selves, 15.5percent have purchased and 19.5percent inherited. Plinth area of house of 82 Percent households is below 400 sq.feet.

Table.2.6
Distribution of Residential Facilities

<u>Types of roof</u>	<u>Number Of Households</u>	<u>Percentage</u>
Tiles	134	67
Asbestos	42	21
Concrete	14	7
Others	10	5
Total	200	100
<u>Types of latrine</u>	<u>Number of households</u>	<u>Percentage</u>
Pit	29	14.5
Septic tank	148	74
Open field	23	11.5
Total	200	100
<u>Type of fuel</u>	<u>Number of households</u>	<u>Percentage</u>
Gas	22	11
Wood	200	100
Kerosene	4	2
<u>Household amenities</u>	<u>Number of households</u>	<u>Percentage</u>
T.V	56	28
Radio	126	63
Fan	45	22.5
Fridge	13	6.5
Tape recorder	50	25
Mixy	20	10

Vehicle	24	12
Phone	5	2.5

Only 6 percent cases come above 800 sq. feet. Roof of 67 percent of houses is tiles, 21percent-asbestose, and 7 percent concrete. All households use firewood as cooking fuel. In addition to firewood, 11percent use LPG and 2 percent kerosene.

Only 39percent of sample houses are electrified. Out of 200sample households, 74percent have septic tank for latrine, 14.5percent depend on pit and the rest 11.5percent resort to open field. The distribution of sample households on the basis of household amenities can be shown as below.

TV-28percent, Radio-63percent, Fan-22.5percent, Fridge-6.5percent Tape recorder-25percent, Mixy-10percent, Vehicles-12percent, Phone-2.5percent.(Table2.6)

A number of tapping families enjoy financial helps for constructing houses and improving residential facilities from People’s Plan and other governmental and non-governmental institutions like churches.

Kuttappan has been working as a tapper for 18 years . Now he is 38 years old. He is married, but does not have children. His hut has been built by wooden waste of saw mills and broken sheets . Block panchayath allotted Rs. 35000/- for building house; he has got Rs. 12000/- so far and completed the foundation. He cannot save money out of his income from tapping, because it is insufficient to meet even the day-to-day expenses of the household.

2.1.7 Earnings of Sample Households

Total annual earnings of sample households consist of income obtained from different sources such as tapping, casual labour, agriculture and animal husbandry. Out of

total sample households, 46.5percent come within the income range of Rs.10, 000 to 20,000. The second largest group belongs to the income range of Rs.20, 000 to 30,000. Only 11percent of the sample households have got an income above Rs. 30,000.(Table2.7)

Table2.7

The Relative Share of Different Sources of Income [percentage]

Income range (Rs)	Tapping	Agriculture	Animal husbandry	Casual labour	Others
Below 10,000	71	-	4.40	19.60	5.00
10,000-20,000	67.50	1.50	6.10	11.30	13.60
20,000-30,000	61	3.50	7.25	14.50	13.75
30,000-40,000	46.10	5.00	7.80	18.80	22.30
40,000 and above	25.20	26.20	1.20	7.00	40.40

Major portion of their average income [54.2percent] is obtained from rubber tapping. The contribution of agriculture is 7.2 percent and that of animal husbandry 5.4 percent. The second largest source of income is tertiary sector [19percent].

Higher the income group, lower will be the share of tapping in the income and vice versa.

Pushpan, 40 years old, the head of household, is a tapper . His wife is a clerk in Housing Board. Pushpan is an asthma patient. Therefore he cannot go for tapping continuously and systematically. But financially the household is comparatively safe, because of the income earned by the wife. The share of tapping in the total income of the family is very low. But the number of such family is low.

The incomes from agricultural sector and tertiary sector are increasing with the rise in the level of income. While, in the lowest income group share of different sources is tapping 71, agriculture 0, animal husbandry 4.4, casual labour 19.6 and others 5. In higher income group the pattern of contribution of different sources is tapping 25.2, agriculture 26.2, animal husbandry 1.2, casual labour 7 and tertiary sector 40.4. Better socio- economic background of higher income group households helps them to engage in tertiary sector more effectively. As far as higher income group is concerned, income from tertiary sector represents major share of their total income pushing back income from tapping by a significant margin of 15.2 percentage. The average income of sample households from all sources is Rs. 18,388.00 limiting the percapita income to Rs. 3,875.00.

2.1.8 Consumption Pattern

Major share of the total expenditure (73.9percentage) is represented by the expenditure on food articles. Still the annual per capita expenditure on food materials reaches only an amount of Rs.3240/- i.e., a monthly rate of Rs.270/-.

Table 2.8

Relative Share of Various Expenditure Heads in the Total Expenditure

Items	Percentage
Food articles	73.90
Fuel	1.20
Entertainment	0.50
Clothing	10.30
Education	7.50

Newspaper and Magazines	0.70
Medical expenditure	5.90
Total	100

As more than 90 percentage of sample house holds depend solely on fire wood and most of the cases fire wood is collected from the working fields or their own land or from some other land with out any cost, average annual expenditure on fuel amounts only to Rs. 253/-. The second largest share in the total expenditure is on clothing (10.3 percentage). Greater part of expenditure on clothing is for students. Even though, now a day, education is increasingly becoming expensive, the annual average expense on education comes only to Rs.1542/-(Table2.8)

Mathew Joseph, 45 years old, has been tapping for 20 years. Other family members are mother, wife and two children. The house, though small, is sufficient .He is aware of the activities of Rubber Board. He can just manage the expenses of the house within the limited income. His children failed in S.S.LC. He decided to discontinue their study because of financial difficulties.

The lower level of education and socio-political awareness is represented by the total expenditure on newspapers and magazines. (0.7 percentage) i.e., an annual average of Rs.151/-. Only 11 percentage of total sample households are subscribers of newspapers.

A good proportion of households do not get proper medical facilities due to their difficulties in approaching private hospitals and the backwardness of government hospitals.

Thomaskutty, 50 years old, has been a tapper for 20 years. Wife and two children

are unemployed. He has a land area of half an acre of his own from which he gets an annual income of Rs. 3000/-. He taps 300 trees of his neighbour. The annual total income of the household is Rs.14000/-. He is struggling to meet the day-to-day expenses. At the same time he has been suffering from unsickable back pain for five years. He has not approached a doctor because he fears that may lead to a medical treatment, which is not affordable. What he is doing now is using some painkilling balm and ointment. Most of the sample households depend on government hospitals for medical purpose. The average annual medical expense is estimated as Rs. 1204/-. i.e., 5.9 percentage of total expenditure.

2.1.9 Debt position

Out of two hundred sample households, 86.5 percentage are indebted. Important sources of their debt are commercial banks, co-operative banks, moneylenders, merchants, friends and relatives. Rate of interest varies depending

Table 2.9
Distribution of Sample House Holds according to Debt

Debt (in Rs.)	Number of house holds	Percentage
Below 1000	27	13.50
1000-2000	26	13.00
2000-5000	43	21.50
5000-10000	25	12.50
10000-15000	19	9.50
15000-25000	25	12.50
25000-35000	16	8.00

35000-50000	9	4.50
50000-75000	3	1.50
75000-100000	3	1.50
Above 100000	4	2.00
Total	200	100

on the sources of debt. Usually merchants, friends and relatives do not charge any interest at all. Loans from organised sectors' financial institutions such as commercial banks and co-operative society charge less than 18-percent interest per year. However, the unorganised sector which consists of moneylenders and indigenous banks are imposing exorbitant rate that may come to 125 percent per annum.(Table2.9)

Relative share of commercial banks,Co-operative banks and Moneylenders in the total volume of debt is 30.9 percent, 36.4 percent and 4.3 percent respectively. Sample households depend more on Co-operative sector than on commercial banks because of its democratic set up in the organisation level and comparatively simple procedures in loans and advances. (Table2.10)

Out of the total sample house holds 13.5 percentage have no debt at all and 34.5 percent have debt less than Rs.5000/-. Average debt of households is estimated as Rs. 15206/-, which amounts to 82.7 percent of their average annual earnings.

Table2.10
Relative Share of Different Sources of Debt

Sources	Amount (in Rs.)	Percentage
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Commercial banks	940600.00	30.90
Co-operative banks	1104000.00	36.40
Money lenders	132100.00	4.30
Others	864550.00	28.40
Total	3041250.00	100

As the annual income is less than expenditure these households are compelled to be debtors. Thus, an average amount of Rs. 2413/-, the difference between average earnings and expenditure, is added annually to the above amount of Rs.15206/-. Thus, the debt burden is always increasing.

2.2 Details of Tapping

Generally tapping is a process of ‘controlled wounding’ during which the shavings of bark are removed. The important factors responsible for harvesting a rubber tree are the height of opening, slope and direction of tapping cut, etc. Skilled tapping is necessary for the good health of rubber tree and for maintaining the longevity of its production period. According to the survey only 56 percent of the tappers are aware of the recommendations of the Rubber Board.

Tapping system varies from clone to clone. Generally budded trees are tapped as half spiral alternate daily system and seedlings as half spiral third daily system. To avoid tapping panel disease, the Rubber Board recommends third daily system. More over there are intensive tapping systems such as high level tapping, controlled upward tapping and puncture tapping .

Out of 200 sample tappers about 90 percent follow half spiral alternative system (Tble2.11)

Table2.11
Adoption of Tapping System

Type of tapping	Number of tappers	Percentage
Daily	2	1.00
Alternate daily	179	89.50
Third daily	19	9.50
Total	200	100

The general trend is that growers of even small land area are hiring tappers and tapping and allied works are fully undertaken by tappers. Out of the total sample tappers, 93 percent are full time tappers and 7 percent are farmers or small-scale businessmen rather than tappers. They engage in tertiary sectors also.

According to the nature of the trees, there are different types of tapping systems such as daily tapping system, intensive tapping, high-level tapping, controlled up ward tapping etc. Half spiral alternate daily tapping system is adopted by 89.50 percent of farmers though various diseases affect their trees. Only 9.5 percent has followed the improved tapping system like third daily. Another reason for such a selection is the labour problem. The entire tappers are using only ordinary knife for tapping. According to the tappers, it does not make any benefit by adopting the new techniques.

Male tappers dominate the field of tapping. Female tappers are interested more in estate tapping because there is no gender discrimination regarding wage or allowances. Only 4 percent of the entire tappers are women.

On average a tapper taps around 275 trees per day. Out of the total tapping fields, 79 percent of tappers are working in one holding whereas 18.5 percent in two holdings and only 2.5 percent in three holdings.

As per the survey, the time of tapping generally adopted is 6 AM to 7.30AM. Only 24.5 percent of sample tappers use head light for tapping.

Rain guarding is one of the better techniques suggested for enhancing rubber production by increasing the number of tapping days. It is estimated that 35 to 75 tapping days are lost every year during the rainy season. The technique of rain guarding is recommended, if the lost of tapping days is above 25. Three types of rain guard viz; polythene sheet (skirt), tapping shade, and guardian rain guard are recommended and popularised.

The rain guard is water tightedly stick on the bark of rubber tree above a few inches to the tapping cut in such a manner that the tapping cut, tapping panel (surrounding area), the plastic cup or coconut shell tied to the tree for collecting latex etc. are protected from rain fall. It helps to reduce loss of tapping days in rainy season. In 59.50 percent of sample holdings, rain guarding is adopted thereby getting an additional average tapping days of 44 annually. But most of the tappers and farmers are anxious of the adverse effect of rain guarding, especially brown bast.

The average time taken for tapping and allied works by a tapper is estimated separately. Average time of 2.8 hours is taken for tapping; 1.16 hours is taken for collection of latex and 0.53 hour is taken for rolling. Almost all the cases drying and smoking of the sheets are done by the owner of the land himself. In some rare cases the owner him self may manage all allied works of tapping.

2.3 Wage details

Generally tappers are given wages on the basis of the number of trees tapped. The average wage rate for tapping 100 trees is estimated at Rs.25.8/-.

Table 2.12

Distribution of Sample Tappers on the Basis of Wage Rate

Wage per 100 trees (Rs.)	No.of Tappers	Percentage
25	132	66.00
30	30	15.00
23	5	2.50
26.5[min.wage]	12	6.00
Half of sheet	2	1.00
No Specific rate	4	2.00
Farmer him self	15	7.50
Total	200	100

During the period of 1990-92 the rising tendency of natural rubber price caused an abnormal rise of wage by 33 percent bringing the average wage rate from Rs.18 per 100 trees to Rs.24/-. During 1995-96 wage rate attained Rs. 30/- for 100 trees. After mid 90`s the price of natural rubber began decreasing.

Even though the reduction in price caused reduction in wage rate, it is not proportional. The rate of reduction in wage rate is less than that of price. When price decreased by 50 percent, the reduction in wage rate is only 13.7 percent. The reason behind this phenomenon is the deficiency of skilled rubber tappers in the labour market. The wage rate recognized by the Plantation Labour Act is given to 12 percent of the tappers .They get Rs.26.5/- for 100 trees which is slightly above the average market rate now i.e;Rs.25.8/-.

The average daily remuneration of tapper is estimated to be Rs.70.5/-.That means on average a tapper taps 272 trees daily. In most of the cases wage is given to the tappers on a weekly basis.

Advance payment is given to 62.40 percent of tappers. Additional nominal benefit like bonus, festival allowance etc. are enjoyed only by 31.30 percent

2.4 Impact of People's Plan

Almost all the sample tappers are aware of the People's Plan and majority of the sample tappers have participated in the GRAMASABHA. The percentage of sample house holds who became direct beneficiaries of People's Plan is 42. Important types of benefits are financial assistance for building house, latrine, buying cattle, sheep, for electrification of the house etc. But the sample family members are not elevated to such a level to understand the depth or spirit of People's Plan. They consider the new venture as a scheme of some welfare measures for personal beneficiaries rather than a deviation from the conventional mode of development and planning. Moreover, there has not been specialised study regarding the problems of rubber tappers during the period of preparing projects for the implementation of Peoples' Plan, though a notable percent of population of the panchayath belongs to tappers' families.

2.5 Conclusion

Based on the above facts, we can conclude that the living conditions of tappers are poor. Their average income lags behind average expenditure by a significant margin. Their debt position is becoming worse. Most of them have no alternative sources of income. Backwardness in the field of education and culture is evident. They are deprived off proper education due to lack of money and awareness.

As the wage is price elastic to some extent, the decreasing tendency of natural rubber price may cause further worsening of the living conditions of tappers.

Women tappers represent only a small percent of total sample tappers. Generally, they are forced to enter the field of tapping because of financial crisis of concerned families. They do not have any job satisfaction, because it is difficult to manage both tapping and household works. Majority of the sample tappers are even unaware of institutions such as Rubber Board, Marketing Societies, Rubber Producing Societies etc. They have not had any training in the techniques of tapping.

Most of the sample tappers are aware of the People's Plan and have participated in the GRAMA SABHA. About half of the total sample households are direct beneficiaries of People's Plan.

CHAPTER III

Rubber Tappers' Labour Market

Nearly 70 percent of the working population of India depends on agriculture for their lively hood. Small size of land holdings, out- dated production techniques, low price of agricultural products, financial constraints of farmers, lack of institutional frame work, dependence on rain fall etc. contribute to low productivity. Therefore, those who are engaged in agriculture have to suffer from unemployment. Different forms of unemployment in Indian agricultural sector are open unemployment, under employment, seasonal unemployment and disguised unemployment. Globalisation and operation of WTO have aggravated the misery of agricultural sector.

Most of the studies of agricultural labour market of Kerala start with the statement that there is labour shortage. Two peculiar features of agricultural sector of Kerala are the dominance of smallholdings and perennial tree crops. These features have highly influenced the agricultural labour market which necessitate a deviation from the conventional theories.

Small growers over-whelmingly dominate the field of rubber cultivation. About 95 percent of smallholdings have an area of cultivation below 8 acres and 57.33 percent are of below 2.5 acres.

3.1 Demand Side

Tree crops, including rubber are not generally labour absorbing. The question of demand for labour arises only during the early three or four years and in the later tapping period. Once the trees become mature for tapping , then the demand for labour arises mainly in tapping. Majority of small holders have a tendency to hire tappers, though they are unemployed. Only 9 percent of total

Table 3.1
Distribution of Family Tapper and Hired Tapper

Nature of labourer	Number	Percentage
Family labour	18	9
Hired labour	164	82
Others	18	9
Total	200	100

small growers become ready to tap themselves. They may have some other engagements. The percent of small growers family members engage in tapping is very low. Educated members of the growers` family, even if unemployed, are not interested in tapping. This phenomenon naturally increases the demand for tapping labourers.

In the light of decline in world rubber economy, different rubber producing nations

are seriously trying to sort out some measures to increase productivity by limiting cost of production. In Malaysia where the problem of skilled rubber tappers is crucial, chance of deviation from cultivating rubber as a monocrop for latex to planting rubber for timber as a primary product and latex as an important by product can be seen. They are trying to adopt labour saving techniques even in tapping. But the nature of smallholdings may not permit large-scale mechanization. Moreover, whatever may be the technique, there is limitation in reducing the number of tappers. So the demand for tapping labourers may continue in the future also.

3.2 Supply Side

It is argued that the labour supply in a rural economy is influenced by land holdings of labour households. All of the sample tappers in the study area except 1.05 percent have their own land, though 76 percent of them possess a land area, below 50 cents. The income from this land, however low it may be, helps them to keep the reserve price of labour comparatively at a level.

The caste structure of labour households is a determinant of labour supply. Here 32 percent of tappers are Roman Catholics, 29 percent belong to Ezhava community, and only 20 percent belong to Scheduled Caste. Decline in the share of scheduled caste labour indicates a supply constraint. Land reforms in the state provide scheduled castes some land and homestead. Comparing with agricultural labour market of Kerala as a whole, the share of Scheduled Caste is low. The reason behind this phenomenon is the difference in wage rate between agricultural labour and tapping labour. In spite of land reforms, most of the sample households having a land area below 5 cents belong to scheduled caste. They cannot depend solely on income from tapping for their livelihood because, the prevailing wage rate of tappers is comparatively low and there is the absence of income

from agriculture. But most of the tappers who belonged to Roman Catholic and Ezhava communities have got a land area above 20 cents. They can have additional revenue, though small, from land. Thus, while labour force belonged to scheduled caste have a tendency to move to other sectors where they get comparatively higher wage, the latter group of households are tied to their own land and tapping in other holdings. Besides, as tapping is a piece work, there is an advantage of getting leisure time after completing the task as early as possible.

The total labour force in the sample families is estimated to be 406 ie; 42.8 percent of total population. The labour force consists of persons coming within the age group of 18 to 60 except students, disabled and housewives. Out of the total labour force, only 298 persons are employed causing unemployment of 108persons(26.6percent)

Out of the total employed persons 76.5 percent are tappers, 3.4 percent

Table3.2

Occupational Pattern of Employed Persons

Occupation	No.Of Workers	Percentage
Tapping	228	76.50
Agriculture & Animal Husbandry	10	3.40
Casual labour	25	8.40
Others	35	11.70

Total	298	100
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represent agriculture and animal husbandry, 8.4 percent are engaged in casual labour (Table 3.2). Secondary and tertiary sectors absorb 11.7 percent of total employed persons.

Majority of the sample tappers in the study area belong to the age group 40-50 years. The new generation is averse to rubber tapping. The study shows that only 6 percent of the tappers come under the age group of below 30 years. Unemployment is high in the age group of 18-30 years. Even though sample family members within the age group of 30-40 years are also not interested in tapping, a majority of them are able to engage themselves in fields other than tapping.

3.3 Nature of Wage Payment

Wage rate is considered as the important determinant of labour supply. A weakness of major standard theories of agricultural wage determination is the lack

Table 3.3

Distribution of Sample Tappers on the Basis of Wage Rate

Wage per 100 trees (Rs.)	No. of tappers	Percentage
25	132	66.00
30	30	15.00
23	5	2.50
26.5(min.wage)	12	6.00
Half of sheets	2	1.00
No specific rate	4	2.00

Farmer tap himself	15	7.50
Total	200	100

of sufficient empirical foundation. Even though the agricultural wage rate in India is considered to be sensitive to demand and supply factors, market forces can not be considered as major determinants of wage rate in the labour market of rubber tappers.

Generally, tappers are given wages on the basis of the number of trees tapped. The average wage rate for tapping 100 trees is estimated at 25.8. During the period 1990-92, the rising tendency of natural rubber price caused an abnormal rise of wage by 33 percent bringing the average wage from Rs.18 per 100 trees to Rs. 24/-. During 1995-96 average wage rate attained Rs.30/- for 100 trees. Since then, the price of natural rubber has been decreasing.(Table3.3)

In almost all the cases the nature of wage payment is piece rate. The mode of wage payment in 98 percent of cases is payment by cash. The rest of tappers ie; 2 percent are receiving wages as half of rubber sheets they produced. Along with wage, perquisites like meals or snacks are enjoyed by negligible number of tappers ie; below 5 percent.

Even though the working ability varies from tapper to tapper, there cannot be seen a corresponding discrimination in wage rate. Wage discrimination is avoided because probable discontentment among tappers by such discrimination may affect the smooth functioning of tapping and allied works. But the better tapper can have some advantages such as being given priority in work when there is a decline in demand due to slaughtering of rubber trees of a portion of the holding. More over, he may be considered for some agricultural work in holding other than tapping.

There is no wide difference in wage rate between various regions of Kanjirappally panchayath. In the study area 81 percent of tappers are getting a wage rate of Rs. 25-30 per 100 trees. The system of sharing of crop is adopted in holdings where only 2 percent of sample tappers are working. There is no specific rate for 4 percent of tappers. In small holdings having number of trees below 50, it is difficult to get tappers in the prevailing piece rate, because, it is sheer wastage of time on the part of tappers. So a consolidated amount is fixed as daily wage by mutual understanding of tapper and grower rather than unilaterally implementing the terms and conditions of existing piece rate. Average wage rate estimated, by avoiding 5,6 and 7 categories of the table, is Rs. 25.8/- per 100 trees.

In some holdings where 12 percent of total sample tappers are working, the average wage rate is fixed as Rs.26.5/- per 100 trees that is termed by the concerned growers and tappers as minimum wage. Actually it is the wage rate which prevailed in plantation rather than smallholdings. Tapping labourers of smallholdings will come under Minimum Wages Act 1948. According to this act, the daily wage of tapper comes up to Rs.25.9/- per 100 trees as on 31-03-2001. Thus, the daily wage of a tapper reaches Rs.77.69/-(300 trees). It is the sum of basic pay Rs. 33.29, wage differential Rs.3/- and then D.A (1995 wage revision).

According to the annual yield, holdings are divided into four classes namely class I (up to 170 Kg.), class II (170-270Kg.), class III (270-400Kg.) and class IV (above400Kg.). In class I holdings, the yield of which is below 170 Kg., the minimum quantity of latex to be collected by the tapper is 2 Kg. Class II consists of holdings with a yield range 170-270 Kg. Here the minimum quantity is 4 Kgs. The class III holdings are of the range 271-400 Kgs and the minimum task is 6.5 Kgs. The last class represents holdings of highest quantity of crop. Here the minimum task is 8Kgs of latex.

The Minimum Wages Act has made provisions for providing better incentive to workers. In 1995-wage revision, incentive as over kilo rate for latex was enhanced from Rs. 1.15 to Rs.1.70 and over kilo rate for scrap is fixed as 60 paise. But there is not a single holding where these incentives are given. Out of the total employed persons 76.5 percent are tappers. But income from tapping represents only 71 percent of total income of even lowest income group. In the highest income group of sample households, the share of tapping in total income is only 25.2 percent. It shows that income from tapping is comparatively low and therefore less attractive. That is one of the reasons behind the movement of family members of rubber tapping households from tapping to other fields. Certainly, the most important determinant of labour supply is the wage rate .It is a fact that wage rate of tapping is lower than that of casual labour and other agricultural labour. The tapping labourers are aware of it.

3.4 Present Trends of labour market

The study reveals that the shortage of tapping laboureres has not reached a serious extent now, though there is scarcity of skilled tappers. Unemployment in the sample households is 26.6 percent. But unemployed persons are not ready for tapping labour. The major reason is low wage rate. Some other factors including market imperfections are also to be brought under study. Not only objective factors like market forces but also subjective factors like perspectives of growers and labour force are to be taken in to consideration.

When we analyse various aspects of supply side, there can be seen excess supply of labour. At the same time there is excess demand for labour. Present problem is not a high shortage of labour, but shortage of skilled tappers. The old generation of tappers has

a tendency to stick on to system of tapping which is more or less out dated. Various types of high yielding clones are introduced later. Subsequently, modifications in tapping techniques have also been proposed and implemented. But the old generation of tappers who represent a lion share of total tapping community is usually unaware of these changes due to lack of training facilities. On the contrary, the new generation of tappers are not interested in tapping and they consider only as a temporary engagement. They also do not try to follow better techniques of tapping which is indispensable for better crop and durability of trees. A substantial proportion of growers are not satisfied with the performance of their tappers. But lack of skilled tappers compels them to retain the existing tappers.

The approach of tappers should also be considered. Majority of the tappers belong to the age group, above 40 years. Though they are not averse to tapping, it is not easy to train them in the modern technique of tapping due to their over age, 'personal bondage' with growers and a sufficient amount of 'ego' that they are the masters of tapping.

The younger generation is averse to tapping. Only 6 percent of tappers come under the age group below 30 years. They are more dissatisfied with the prevailing wage rate than the older generation. They consider tapping as a temporary livelihood. They are not interested to stick on to tapping like the older generation. An occasional movement between casual labour and tapping can be seen. The lack of 'skilled tappers' is the basic reason behind the complaint of shortage of labourers.

Behind the operation of supply and demand there is the working of personal relationship between tapper and grower.

Most of the tappers especially younger generation do not enjoy the pleasure of work. A feeling of being comfortable is far away from tappers. Low wage rate is not the

sole reason. There is a belief among tappers and growers that tapping is carried out by people of low status and tappers are always vigilant to get out of the field of tapping at the convenient occasion. Tappers who are parents of students are anxious of the social status of their children. However, due to the absence of alternative job opportunities they continue. But a notable proportion of senior tappers are not capable of being absorbed in other fields. They lack the minimum technical know how and abilities needed in other fields due to their long engagement in tapping and consequent ignorance of other fields. They are accustomed with tapping and do not try to move to another job.

Usage of rainguard reduces the loss of working days in rainy season. However, there is the presence of seasonal unemployment. Only 59.5 percent of tappers are working in rain guarded holdings. Even in rain guarded holdings, the growers may not allow tapping when there is leakage in rain guarding. Moreover the implementation of improved tapping system like 'third daily' has reduced the number of tapping days. At the same time there is not a single instance of providing over kilo incentive.

The traces of moral ties between grower and tapper can be seen in the case of some senior tappers. Benefits of old ties or patronage on the part of tappers are chances of getting other agricultural work in the holding in non- tapping days, meals and snacks, low probability of being terminated and the happiness out of keeping a smooth relation with the grower. The growers also enjoy some advantages. They need not supervise the work every now and then. The tappers will take utmost care in the work. Therefore the supervision cost is very low. Moreover there will not be a high bargaining on the part of tappers for better wage and working conditions. Besides, the tendency of tappers to move to other holdings or other fields of work can also be reduced. But the tappers have a disadvantage in following this tradition. The moral ties will adversely affect their bargaining power. When there is a rise in the wage rate of tapping in general, they cannot demand

the same at once, because of the personal bondage.

Another feature of labour market of tappers is the absence of trade union activities. The bargaining power is lesser than other agricultural works. The above-mentioned subjective factors like 'moral ties' have also contributed to this phenomenon. They adversely affect the consciousness of tappers as a class. The present trend of recession in rubber economy also aggravates the above situation, because the tappers are also aware of declining revenue of growers.

Low rate of trade union activities and working class consciousness are reflected in the number of disputes between tappers and growers, which come before the legal authority. The tapping laboureres problem had been settled under Agricultural Workers Act 1947 till 1997. The drawback of agricultural workers act is that it cannot deal with labourers of smallholdings below 1 hectare. Unfortunately, a major share of smallholdings is below 1 hectare. The high court judgment on Abraham Thomas V Labour court is a landmark in this respect. The judgment brought disputes of tappers in smallholdings under Industrial Dispute Act 1948, which covers holdings of area even below 1 hectare.

Agricultural labour dispute in Kottayam district are within the jurisdiction of District Labour Officer. An average of 20 cases from smallholdings come before this office annually. Out of these, only less than 4cases are from the study area. Most of the cases come before the labour office are associated with denial of employment after slaughtering trees in a portion of the holding. Disputes regarding wage rate are rare. Normally trade union leaders especially from the plantation participate in the conciliation for the tappers. Most of the cases are settled by a practical formula designed by employer, tapper or trade union workers and labour officer rather than depending on ID Act or any

other laws. Unsettled cases are forwarded to labour courts. Generally, such disputes are coming from holdings of large area and the growers belong to higher income group. Here moral ties and personal relationship between tapper and grower are comparatively weak.

Generally, there is no scarcity of tapping labourers to a notable extent, though there is scarcity of skilled labour force. But the situation is going to be serious in the future. The younger generation is averse to rubber tapping and they now represent only 6 percent of total tappers. (Table 3.4)

Table 3.4

Distribution of Sample Tappers on the Basis of Age

Age Group	Number of tappers	Percentage
20-30	12	6.00
30-40	60	30.00
40-50	81	40.50
50and above	47	23.50
Total	200	100

As many as 64 percent of the tappers belong to the age group above 40. In the next 15 or 20 years this group will naturally have retired. These places may not be filled in by younger generation due to their unwillingness to be engaged in tapping . So in future the problem of shortage of tappers may become as serious as in Malaysia.

3.5 Conclusion

The demand and supply conditions of tappers' labour market are determined by

objective factors as price of natural rubber, wage rate, nature of work etc. and subjective factors such as the perspective of tapper and grower, moral ties etc. Decline in the natural rubber economy causes decline or stagnation in wage rate and reduction in number of working days. The wage rate is comparatively low. There is absence of bargaining power and trade union activities. Traditional moral ties and personal relationship between some senior tappers and growers have also helped to mitigate the basic instinct of labourers for organized movements. At present there is no serious scarcity of tappers, though there is scarcity of skilled persons. The trend shows that in the future the situation of scarcity of tappers, whether skilled or unskilled, will become chronic due to the nature of younger generation not to depend on tapping for livelihood, decline in rubber economy and consequent reduction in wage rate.

CHAPTER IV

Problems And Prospects Of Women Tappers

The socio-economic status and decision-making power of women in a society can be assessed only by analyzing the nature of distribution of labour contribution and benefits of production among the members. Women constitute the largest section of the unemployed in not just urban areas but rural areas as well.

Nature of crop and social and economic factors are determinants of participation of women in agricultural works. For example as far as plantation crops are concerned, women participation is highest in tea because, the harvest is more or less completely carried out by women. In smallholdings of rubber the participation of women in tapping labour is very low. Along with the nature of crop, economic backwardness of family, social factors, the approach of rural households to tapping job, the wage rate etc. are also to be considered as determinants of demand and supply conditions of women tappers.

This part of study tries to understand whether the problems of women tappers are similar to those of agricultural women workers as a whole, to see the peculiar problems and prospects of women tappers etc. But the study has a limitation that there are only 15 women tappers in the study area. Even though a generalization with the findings from this limited sample may have its own drawbacks, we can reach some general ideas regarding the socio- economic status of women tappers.

Total number of agricultural labourers of Kanjirappally taluk is 11067 where 9557 are male and 1510 are females. The predominant involvement of men is vivid. Since male domination in tapping is obvious it is clear that the need for employing females arises under a condition of shortage of male labour as a result of their out migration and increase

in demand for tappers. The participation of women in tapping seemed to be very low. The study area, which covers four wards of Kanjirappally panchayath, consists of only 15 women tappers where the total number of tappers in the area goes beyond 200.

All the women tappers are above 40 years of age and married. It shows the approach of the society to the job of tapping. Social customs and strong traditions force unmarried women not to participate in tapping . People believe that persons of low status, especially in the case of women tappers, carry out tapping. So women tappers do not enjoy any pleasure of work. Actually they enter the field of tapping only when it is indispensable for keeping the standard of living of the family even at the minimum level. In 3 households the husband is a patient or physically so weak that he cannot undertake any work.

Achamma is a housewife of 50 years old. Husband is 20 years older than her and is a mental patient. They have got a son and three daughters. The son who is a tailor is married. But he is unable to contribute a notable amount to the income of the family because he is an asthma patient. Daughters are school going students. So she is forced to undertake the financial needs of the family.

Out of the total sample women tappers, 10 belong to scheduled caste or Christian converts from scheduled castes; two Roman Catholics, one Muslim and two Ezhavas. The higher participation of scheduled caste people is due to their lower level of family income, low educational standard, and consequent difficulty in getting alternative occupations.

Bhageerathy Amma is a tapper of 50 years old. She has got a husband and a son. They live in a scheduled caste colony. The roof of her small house is made up of tiles. It is not electrified. The residential facilities are very poor. Years ago her husband lost one

leg in an accident. Then she became fulltime tapper. Treatment of her husband was highly expensive. Their only son is a casual labour who assists mother. However, she is satisfied with the job and physically fit. Efficiency in managing household affairs is evident in her words.

The educational standard of women tappers is very low. Out of the total sample, only one person could complete the VII th standard. All others could not go beyond primary levels.

As far as tapping is concerned, performance of women tappers is better than that of men. However, most of the growers do not prefer women for tapping mainly due to the peculiar nature of work. It is necessary to commence tapping early in the morning, as late tapping will reduce the exudation of latex. The suitable time for tapping prescribed by Rubber Board is 4 A.M to 7 A.M. In spite of their best efforts, women tappers cannot reach the holdings within this time, because they have to attend the household works before going for tapping.

All the sample women tappers except five households, have to carryout the household works themselves. In the five households daughter, daughter in law etc. will help in household works. There are complaints on the part of the growers of the failure of women tappers in attending the work regularly. The burden of varieties of household engagements adversely affects their regular presence in the holding. All the sample women tappers prefer holdings near to their house. It is a limitation in the supply side of women tappers.

Women tappers have to carry out domestic works as well as tapping continuously. In rare cases children or husband may help them in the allied works of tapping.

There is no gender discrimination regarding wage rate in the field of tapping .

Women engaged in tapping have got an advantage. In other agricultural works labourers have to work up to 5'O clock in the evening. In most of the holdings, rubber tapping and allied works are completed in the forenoon. So women tappers get more time for household works than women workers in other sectors. But they have to get up early in the morning for starting tapping .

Though the time period of work is comparatively low, tapping is heavy and strenuous. As most of the male tappers are free in the afternoon they get enough time for taking rest. But most of the women tappers are forced to undertake household work after completing the tedious job of tapping . All the sample women tappers get up within the time period 4 A.M to 5.30 A.M.Out of the sample women, 7 persons can go for tapping only after doing some urgent kitchen works like making bed coffee, break fast etc. After tapping, only 5 women can reach their home in the forenoon; the rest return only about 2 PM.The working day of a women tapper is longer than that of men by significant margin. But at the same time they eat much lesser than men and as the last person in the family.

General health condition of women tappers is very poor because of their continuous engagement in household works or tapping from dawn to dusk. Moreover, the gravity of occupational physical problems such as back pain, chest pain etc. is high among them.

Leela Babu has been tapping for 26 years. Now she is 49 years old. Husband is working in a hotel. He is under the treatment of a psychiatrist, which worsens the financial position of the household. Now she becomes the 'head of the household'. They have a daughter of 25 years old. The residential facilities are very low. Leela is suffering from back pain and chest pain due to the household work and the hard work of tapping. However she is confident with the tapping work. She explains their financial difficulties to get their daughter married. She is anxious of her future. She tries her level best to save

some amount out of their income. Now she can be a subscriber of a local chitty of Rs.15000/-.

It is believed that participation of women in paid employment results in individual independence and active participation in family decision making. The study shows that the level of improvement among women tappers in this respect is not appreciable. Even in cases where the main contributor to the family income is a woman, husband and other male members of the family dominate in the decision making in household affairs. They do not keep money obtained by themselves under their own custody. Male members determine the way in which the family income is spent. The women tappers say that their opinion is also considered in this respect.

The disturbing reality found in the study is that women tappers are poverty-stricken members of the backward classes who are unable to find other suitable alternative occupations for livelihood. The social customs, traditions and low 'status' given to tapping job have adversely affected the participation of women in the field. The inconveniences of housewives to start tapping early in the morning aggravate the problem. The health condition of women tappers is very poor because they have to undertake the household works and tapping which is heavy and hard; and they do not get enough time for taking rest.

Summary And Conclusions

Among plantation crops rubber is the most important as far as area under cultivation is concerned. An important feature of Kerala's rubber economy is that it is overwhelmingly smallholder- oriented. More than 10 folds of tappers in estate sector are working in the small holding sector. There is the absence of well-defined wage rate and working conditions. Yet the problems and prospects of tappers have not been analysed adequately even by the institutions related to rubber.

The present micro level study covers 4 wards of Kanjirappally pachayath. The study analyses the socio-economic conditions of rubber tappers, the features of labour market, the problems of women tappers etc. The following are the findings and conclusions of the study.

Roman Catholics, Ezhava and Scheduled caste are the prominent communities of rubber tappers. Even though the percentage of illiterates in the sample is below 10, more than 90 percent of the literates could not go beyond the level of secondary education. More than 85 percent of the sample families have got only a land area below 50 cents. Hence, the share of agriculture in the total income is very low.

All the householders except one got their own houses. But the residential facilities are few. The average plinth area of houses of the sample households is below 400 sq. feet. About 60 percent of houses have got electricity connection. Modern amenities like television electric fans, telephone, fridges etc. are available only to a small proportion of

tappers' households. As cooking fuel, all of them use firewood. In addition to fire wood, about 10 percent of households use LPG or Kerosene.

Major sources of sample households' income are tapping, casual labour, agriculture and animal husbandry. Income from tapping forms more than 50 percent of their total income. This proportion is higher in the lower income groups. Rise in income out of tapping has a limitation. Households have to depend on sources other than tapping for the betterment of their standard of living beyond a level. Higher the income group, higher will be the share of tertiary sector.

The wage of tappers is determined on a piece rate basis. Average wage rate for 100 trees is estimated to be Rs. 25.8/-. A person taps on average of below 300 trees daily. About 80 percent of tappers are working in one holding. The average daily wage of a tapper is estimated to be Rs.70.5/-. Average number of tapping days in a month is 12. Therefore, the monthly earning of a tapper cannot go beyond Rs.900/-.

The wage rate of the tapper is proportional to the price of rubber to some extent. During 1990-92 the rise in price of rubber brought the wage rate from Rs.18/- per 100 trees to Rs.30/-. Since then the price of natural rubber has been decreasing. But the corresponding reduction in wage rate is not proportional; it is less than that of price. The reason is that reduction in wage beyond a minimum level will adversely affect the supply side of tappers and there will not be sufficient tappers available for work at that rate.

More than 70 percent of total expenditure is represented by purchase of food materials followed by clothing (10 percent) and education (7.5 percent). Level of education and culture is reflected by low share of education, newspaper and magazines etc. in the total expenditure. As most of the households depend on government hospitals for medical needs, the share of medical expense is very low.

Most of the tappers' families are indebted. They depend more on co-operative sector because of its democratic set up in organisational level and simple procedures for

getting small loans. Other sources are commercial banks, moneylenders etc. As the income is not enough to meet even the day-to-day expenses, the debt burden is always increasing.

A note worthy fact is that about 40 percent of sample families have become direct beneficiaries of Peoples' Plan. Almost all the sample tappers have participated in the GRAMASABHAs. Important types of benefits they enjoy are financial assistance for building houses and latrines, buying cattle and sheep, for electrification of houses etc.

A majority of the sample tappers are unaware of institutions such as the Rubber Board, Marketing Societies, Rubber Producing Societies, etc. They have not got any training regarding techniques of tapping. This is the major reason behind the scarcity of skilled tappers.

A detailed study with respect to the features of tappers' labour market has been carried out. Dominance of smallholdings and perennial tree crops are peculiar features of agricultural sector of Kerala. The influence of these factors on labour market has caused a deviation from the conventional theories. Demand for labour arises in rubber cultivation only during the early three or four years and tapping periods.

Majority of small growers have a tendency to hire tappers even when unemployed. Educated members of the growers' family are not interested in tapping. This phenomenon naturally increases the demand for tappers.

Decline in world rubber economy has forced different rubber producing nations especially Malaysia to deviate from cultivating rubber as a mono-crop for latex to planting rubber for timber as a primary product and latex as an important byproduct. More over, they try to adopt labour saving techniques in tapping. But mechanization in tapping has its own limitations.

Area of land holdings of tappers' family and caste structure are some major determinants of labour supply. Roman Catholics form the largest proportion of tappers followed by Ezhavas and then the scheduled castes. Most of these sample households

having a land area below 5 cents belong to scheduled castes. Here the income from agriculture is negligible. At the same time wage rate of tapping is low compared to that of either agricultural sector as a whole or casual labour in particular. It will be difficult for them to depend solely on tapping for their livelihood. Therefore, compared to the agricultural labour market as a whole, the share of scheduled castes is much lower here.

Total labour force consists of persons within the age group, 18 – 60 excluding students, disabled and housewives. Total labour force in the sample families is estimated to be 406 which formed 40 percent of the total population. Tappers represent about 75 percent of labour force. The study reveals that majority of the tappers belong to the age group of above 40 years. It shows that the new generation is averse to tapping.

The study shows that wage rate in tapping is not so sensitive to market forces as in agricultural sector as a whole. There is no discrimination in wage rates in terms of ability of tapping. But there are cases where better tapper enjoys some advantages such as being given priority in work during off-season.

In most of the cases the nature of wage payment is piece rate and is by in cash. Sharing of crops is adopted only in 2 percent of the cases.

Tapping labourers of smallholdings will come under Minimum Wages Act. The average wage rate paid in the study area is not different from that fixed under the Minimum Wage Act. But incentive as overkilo rate for latex prescribed by the Act is unknown to the study area.

The proportion of tappers in the total workforce of sample households is about 75 percent. But the contribution of tapping in the total income of sample household community is only 54.2 percent. It is only 71 percent even in the case of lowest income group i.e; an annual income level below Rs. 10000, where the scope of income from agriculture and tertiary sector is very low. It is only 25 percent in the case of highest income group. It means that wage rate of tapping is lower than that of casual labour and other agricultural labour. As tapping labourers are aware of it, they have a tendency to

move to other fields of employment. Wage rate is the most important factor affecting the supply of labour.

The shortage of tappers has not yet become a serious problem, though there is the scarcity of skilled tappers. Besides, low wage rate, market imperfections and some subjective factors are the determinants of labour supply.

Majority of tappers belong to the age group 40 years and more. They are not averse to tapping. But it is very difficult to train them in scientific methods of tapping because of their inflexibility out of overage, personal bondage with growers and their belief that they are 'masters of tapping'. On the contrary, the younger generation is averse to tapping which is reflected by very low percentage of tappers below the age of 30 years.

Tapping is considered a job of low social status, especially in the case of younger generation. So they are always trying to get out of the work on the earliest opportunity. Only due to the absence of suitable job opportunities they continue. But the long engagements in tapping, ignorance of other fields, lack of physical abilities etc. of the elderly tappers make them unsuitable for other opportunities.

Adoption of rain guarding is said to have raised the number of working days. Only below 60 percent of tappers are working in rain-guarded holdings. Moreover, the decline in natural rubber economy has made some growers uninterested in rain guarding. On the other hand improved tapping methods like third daily has reduced the number of tapping days.

Traces of moral ties between grower and elderly tappers can be seen in some holdings. On the one side, when the tapper enjoys some benefits like getting agricultural works in the holding during non-tapping days, meals, snacks, job security etc. on the other side, the grower or 'patron' is able to minimise the supervision costs because tapper takes utmost care and shows sincerity in the work. But this personal bondage, absence of trade union activities, recession in rubber economy etc. have reduced the bargaining

power of tappers to a level below that of agricultural works as a whole. The tapping labourers' problems are settled under the Industrial Dispute Act, 1947. Disputes in the study area are under the jurisdiction of Kottayam district labour office. On average in a year only less than ten cases are brought before the office. Most of the cases relate to denial of employment. Trade union leaders especially from plantations participate in the conciliation proceedings. Generally, disputes are settled by a practical formula designed by employer, tapper or trade union and labour officer rather than depending on the provisions of ID Act. Unsettled cases are forwarded to the labour court.

At present there is only scarcity of skilled tappers. But the trend shows that in the future the scarcity of tappers, whether skilled or unskilled, will become chronic due to the nature of younger generations not to depend on tapping for their livelihood.

Nature of crop, social factors, wage rate and economic status of family are determinants of demand and supply conditions of the women tappers. The participation of women in tapping is very low in smallholdings. In the study area women tappers form only 7.5 percent.

Social customs and traditions force women not to engage in tapping. Society believes that tappers are of low status, especially in the case of women tappers. Still the financial difficulties of the family compel them to resort to tapping. Majority of women tappers belong to scheduled castes. This is due to their lower family income, low educational standard and difficulty in getting other opportunities.

The performance of women in tapping is better than that of men. But due to a peculiar characteristic of the work, growers do not like to recruit women as tappers. Tapping should commence very early in the morning for better crop. But women tappers cannot reach the holding within the prescribed time because of the burden of household works. It will affect their regular presence in the holdings. Compared to the agricultural work, the only advantage for the women tappers is that they get more time for household works.

Most of the women tappers are compelled to undertake household works after the heavy job of tapping. The continuous engagement in house hold works and tapping from dawn to dusk makes the general health conditions of women tappers poor. The study reveals that the participation of women in tapping does not improve appreciably the level of individual independence and participation in family decision making.

In brief, the decline in the world rubber economy and trade liberalisation policies of the nation have drastically affected the price of the natural rubber in India. This, in turn, adversely affect the income of small-scale rubber growers and the socio- economic conditions of rubber tappers. More over, Disappointed with the decreasing remuneration, growers are reluctant to adopt better techniques of rubber cultivation and tapping. The subsequent fall in the growth of productivity increases the gravity of the crisis.

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