

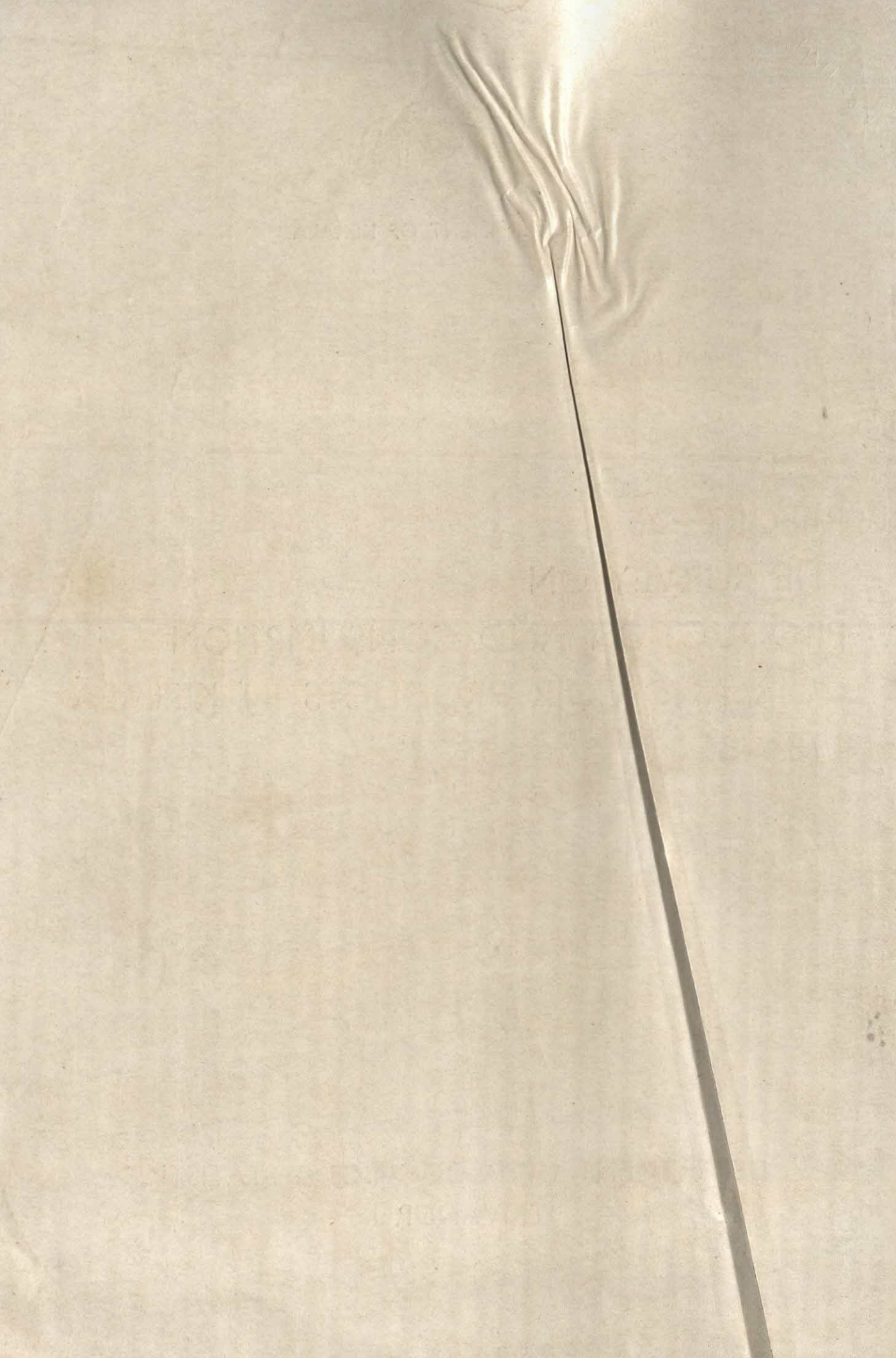
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GOVERNMENT OF KERALA

REPORT OF
THE SURVEY ON
PRODUCTION AND CONSUMPTION OF
COIR AND COIR PRODUCTS IN KERALA
1984-85

DEPARTMENT OF ECONOMICS & STATISTICS
TRIVANDRUM



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TRIVANDRUM, NOVEMBER 1986

P R E F A C E

Kerala is the traditional home of coir industry which prospered here in view of the strong demand for coir and coir products from foreign countries. The industry witnessed considerable changes in the last two decades during which Kerala lost its virtual monopoly in the production of coir and coir goods. The Indian market expanded and now accounts for the major share of the total market for coir and coir goods produced in the country.

But no authentic data on the quantity of coir and coir goods produced and consumed in different States are available. It is in this context that the Coir Board and the Government of Kerala decided to conduct a survey to estimate the production and consumption of coir and coir goods in Kerala and the survey was entrusted to the Department of Economics and Statistics.

The survey team was headed by Sri. C. R. Parameswaran, Joint Director. The survey and tabulation of data were carried out under immediate supervision of Smt. A. Sarasamma and Smt. C. Vijayanthi, Assistant Directors. The report was drafted by Smt. C. Vijayanthi under the guidance of Dr. M. Kuttappan, Joint Director. Sri. N. George John, former director took keen interest at all stages of the survey and in drafting of the report.

I am grateful to all members of the Committee of Direction, especially Sri. John Chandy, Deputy Director (Statistics) and Sri. K. Mohammed Kunju, Deputy Director (Economic Research) of the Coir Board for their unstinted co-operation at all stages of the survey.

K. Balakrishnan Nair
Director of Economics & Statistics

Trivandrum,
24--11--1986.

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Chapter I

INTRODUCTION

1. General

Production of coir and coir products is one of the most important traditional occupations of the people in the coastal areas of Kerala State. The abundant supply of coconut husk, the basic raw material for the industry, and the unique natural retting facilities available in the lakes and lagoons of the coastal belt of Kerala are the two most important factors responsible for the concentration of the industry in Kerala. Since coir industry is by and large an export oriented industry and provides employment to a sizeable rural population, mostly women, both the Central and State Governments have been paying considerable attention for the promotion of the industry. In order to re-organise the industry on co-operative basis and to improve the living conditions of the workers, considerable amount of money has been spent during the last three and half decades. The Coir Board took several steps for modernisation and diversification of production and to enhance the consumption of coir and coir products within India and abroad. It was felt that the effectiveness of these measures has to be evaluated so as to enable the authorities concerned to take corrective steps to make them more successful and purposeful. The effectiveness of the various measures initiated for the development of the coir industry can be measured in terms of production and consumption of coir and coir goods, number of persons employed and the socio-economic conditions of the coir workers. With this end in view the Coir Board requested the State Government to take up the following surveys.

- i. A survey on coir producing units to estimate the production of coir and coir goods and employment in the industry.
- ii. A survey to estimate annual consumption of coir and coir products in the household and non-household sectors of Kerala.
- iii. A bench mark survey in three villages selected by the Coir Board as model coir villages for the integrated development of socio-economic conditions of the people especially the coir workers.

In G.O. (Rt) 597/83/Plg. dated 31-10-1983 the State Government issued sanction for the conduct of the surveys. Government also constituted a Committee of Direction consisting of the following persons for guiding the survey.

1. The Director of Economics & Statistics, Kerala (Chairman)
2. The Director of Coir Development, Kerala.
3. The Deputy Director (Statistics) Coir Board.
4. The Deputy Director (Economic Research) Coir Board.
5. Sri. S.N. Narang, Officer on Special Duty, Central Statistical Organisation and
6. The Joint Director (Surveys & Design) Department of Economics and Statistics, Kerala (Member Secretary).

The report on the third survey viz. the Bench Mark Survey of Model Coir Villages - Kunnamkulam, Keerikkad and Perumbalam - has already been submitted to the Coir Board. The results of the surveys to estimate the production of coir and coir goods and their consumption in Kerala are presented in this report.

2. Coverage of the survey

The survey covered the entire State except Idukki, Palghat and Wayanad districts where the industry is a rarity. For the purpose of this survey the producing units were classified under two categories viz.

- i. Organised sector ie. units registered under the Factories Act 1948 and
- ii. Un-organised sector ie. units not registered under the Factories Act.

Data relating to the organised sector are collected regularly through the Annual Survey of industries by the National Sample Survey Organisation. However, data relating to the unorganised sector, which accounts for the bulk of production are not collected and there is no regular source of information on the annual production of coir and coir goods in Kerala and the number of persons engaged in the industry. Hence this survey was organised covering only the un-organised sector.

The main objectives of this survey were to estimate -

- i. the number of coconut husks used for coir production,
- ii. the production of coir fibre, coir yarn and coir products and
- iii. the number of persons employed in the unorganised sector of the industry.

3. Method of enquiry

The survey was conducted by enumerating the selected units by the Investigators.

4. Sample Design

A two stage stratified sampling design was adopted for the selection of coir units for enumeration. Information available from the survey of Coir Workers conducted by the Economics & Statistics Department in 1981 was used as the frame for sample selection. The revenue districts were the strata, and census village/wards were the first stage units. The units engaged in the production of coir and coir goods were the second stage units.

The survey on Coir Workers 1981 was conducted in 1215 census villages/wards in the State, where coir industry was concentrated. From these, 500 census villages/wards were selected for the present survey. The allocation of villages/wards to districts was done in proportion to the number of villages/wards covered in the 1981 survey. In addition to this 7 census villages were selected from 44 census villages having coir producing units which were not covered in the 1981 survey.

A list of census villages in each district was prepared in ascending order of the number of coir producing units and the required number of census villages were selected from the list using systematic sampling method. For the selection of second stage units, a list of coir and coir goods producing units was prepared for each selected census village.

The production units in the selected villages were classified into two (i) spinning and (ii) others. 10 per cent of the spinning units and 20 per cent from the second category were selected using systematic sampling method.

5. Period of the enquiry

The survey on coir producing units was conducted from February 1984 to January 1985. The reference period of enquiry was the 365 days preceding the date of enquiry.

6. Field work

The field work of the survey was attended to by the investigators of the Department of Economics & Statistics. The field work was supervised by the Taluk Statistical Inspectors and the officers at the district and state level.

7. Survey on consumption

The data on consumption of coir and coir goods in Kerala was collected along with the 39th round of the National Sample Survey (January to June 1984). An additional schedule was filled-up for all houses (residential and non-residential) listed for the National Sample Survey.

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Chapter II

COIR PRODUCTION POTENTIAL IN KERALA

I. General

Coconut husk being the raw material of coir industry, coir production depends primarily on the production of coconuts. Coconut is cultivated in more than 30 countries belonging to the tropical belts in Asia, Africa and West Indies. Region-wise analysis of world coconut production reveals that Asian countries account for more than 80% of the total production. Country-wise production data indicate that Philippines, Indonesia, India and Sri Lanka are the four important coconut producing countries in descending order in the world. India, with an annual production of about 6000 million nuts occupied the third rank in world coconut production. According to latest statistics available the world coconut production is around 35,000 million nuts and India's share is 17% of world production. Although coconut is cultivated in a number of countries, coir industry could develop on a commercial scale only in India and Sri Lanka. Therefore only a very small fraction of coir production potential in the world is exploited.

In India, coconut cultivation is concentrated in the four southern States of Kerala, Tamilnadu, Karnataka and Andhra Pradesh. The other important coconut producing states are Orissa, Maharashtra, Assam, West Bengal and Union Territories of Andaman and Nicobar Islands, Goa Daman and Diu, Lakshdweep and Pondicherry. The distribution of the area under coconut cultivation in India during 1962-63 to 1982-83 is given in Table 1 and that of production in Table 2. It is seen that 91 per cent of the area under coconut is concentrated in the four southern states and Kerala alone accounts for 60 per cent.

Kerala State with 60 per cent of the area under coconut contributed to only 52 per cent of the production whereas the neighbourer Tamil Nadu with only 11.3 per cent of the total area accounts for 20.3 per cent of the production. It could be seen that there has been a sharp decline in the share of Kerala to the total production of coconut in India. The share was 73 per cent in 1956-57 and it declined to 52 per cent during 1980-83.

Table 1 - Changes in the area under coconut in important producing States 1960-61 to 1982-83

State	[Area in '000 hect.]					
	Average area during the triennium ending 1962-63	Percent- age to total area	Average area during the triennium ending 1972-73	Percent- age to total area	Average area during the triennium ending 1982-83	Percent- age to total area
1	2	3	4	5	6	7
Kerala	514.9	69.3	731.6	68.1	664.0	60.0
Tamil Nadu	61.1	8.2	104.5	9.7	125.4	11.3
Karnataka	99.7	13.4	133.2	12.4	175.4	15.9
Andhra Pradesh	34.1	4.6	38.2	3.6	43.4	3.9
Other States & union territories	33.6	4.5	66.9	6.2	98.4	8.9
Total	743.4	100.0	1074.4	100.0	1107.1	100.0

Source: Directorate of Economics & Statistics, Ministry of Agriculture, Govt. of India.

Table 2 - Changes in coconut production in important producing States during 1960-61 to 1982-83

State	[Production in million nuts]					
	Average annual production during the triennium ending 1962-63	% to total	Average annual production during the triennium ending 1972-73	% to total	Average annual production during the triennium ending 1982-83	% to total
1	2	3	4	5	6	7
Kerala	3257	69.4	3986	65.8	3066	52.0
Tamil Nadu	602	12.8	950	15.7	1195	20.3
Karnataka	445	9.5	676	11.2	913	15.5
Andhra Pradesh	223	4.8	163	2.7	180	3.0
Other States & Union territories	167	3.5	279	4.6	541	9.2
Total	4694	100.0	6054	100.0	5895	100.0

Source: Directorate of Economics & Statistics, Ministry of Agriculture, Govt. of India.

2. Coconut production in Kerala

The trend in the area under and production of coconut in Kerala since 1956-57 is given in Table 3. It can be seen from the table that there was an increasing trend in the production of coconut in the State till 1971-72 when production reached 4054 million nuts and thereafter a declining trend. Coconut production touched the lowest level of 2602 million nuts in 1983-84 due to the unprecedented drought experienced in 1982-83.

**Table 3 - Trends in the area under production of coconut in Kerala
1956-57 to 1983-84**

Year	Area in '000 hectares	Index of area	Production in million nuts	Index of production
1	2	3	4	5
1956-57	458		3182	
1957-58	463		3199	
1958-59	476		3248	
Average of 1956-59	466	100.00	3210	100.00
1960-61	501	107.51	3320	103.43
1965-66	586	125.75	3293	102.59
1970-71	719	154.29	3981	124.02
1975-76	693	148.71	3439	107.13
1976-77	695	149.14	3348	104.30
1977-78	674	144.63	3053	95.11
1978-79	661	141.85	3211	100.03
1979-80	663	142.27	3032	94.45
1980-81	651	139.70	3008	93.71
1981-82	667	143.13	3006	93.64
1982-83	674	144.64	3184	99.19
1983-84	682	146.35	2602	81.06
Average of 1981-84	674	144.64	2931	91.31

Source: Department of Economics & Statistics, Govt. of Kerala.

Coconut husk being a bulky commodity the extent of utilisation for coir production depends to a great extent on the distance of production centres from the retting centres. Topographically the State can be divided into three natural regions viz. lowland, midland and highland. Although coconut is cultivated in all these three regions, more than 50 per cent of coconut production is from lowland region followed by midland region with about 40 per cent, highland region accounted for only less than 10 per cent. The district-wise distribution of annual average production for the three year period 1981-84 presented in Table 4 reveals that the predominantly highland districts of Pathanamthitta, Idukki, Palghat and Wayanad together accounted for only 7.5 per cent of the total production in the State (see also the map) Kozhikode district with 18.36 per cent of the total coconut production in the State occupies the first rank followed by Trichur district (12%).

Table 4 - District-wise production of coconut in Kerala 1981-84

District	[production in million nuts]				
	1981-82	1982-83	1983-84	Average	%
Trivandrum	355	279	290	308	10.51
Quilon	301	317	223	280	9.56
Pathanamthitta	107	113	79	100	3.41
Alleppey	243	256	180	226	7.71
Kottayam	200	226	153	193	6.59
Idukki	44	45	40	43	1.47
Ernakulam	344	332	264	313	10.68
Trichur	381	355	322	353	12.05
Palghat	77	80	63	73	2.49
Malappuram	247	261	162	223	7.61
Kozhikode	443	622	549	538	18.36
Wayanad	4	6	2	4	0.14
Cannanore	260	292	275	276	9.42
State	3006	3184	2602	2930	100.00

Source: Department of Economics & Statistics, Govt. of Kerala.

3. Coir production potential

The fibre content of husk varies from place to place and depends on many factors such as the size and maturity of the nut, methods of dehusking and fibre extraction, retting conditions etc. Two important types of fibres are obtained from coconut husk viz.

- (i) white fibre or yarn fibre extracted from green husks retted for 6 to 12 months.
- (ii) brown fibre mechanically extracted from dried husks.

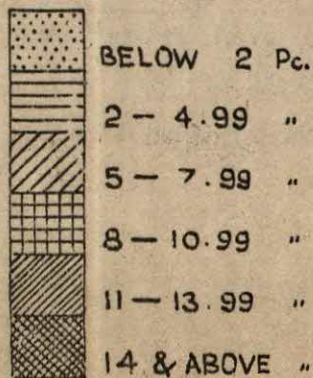
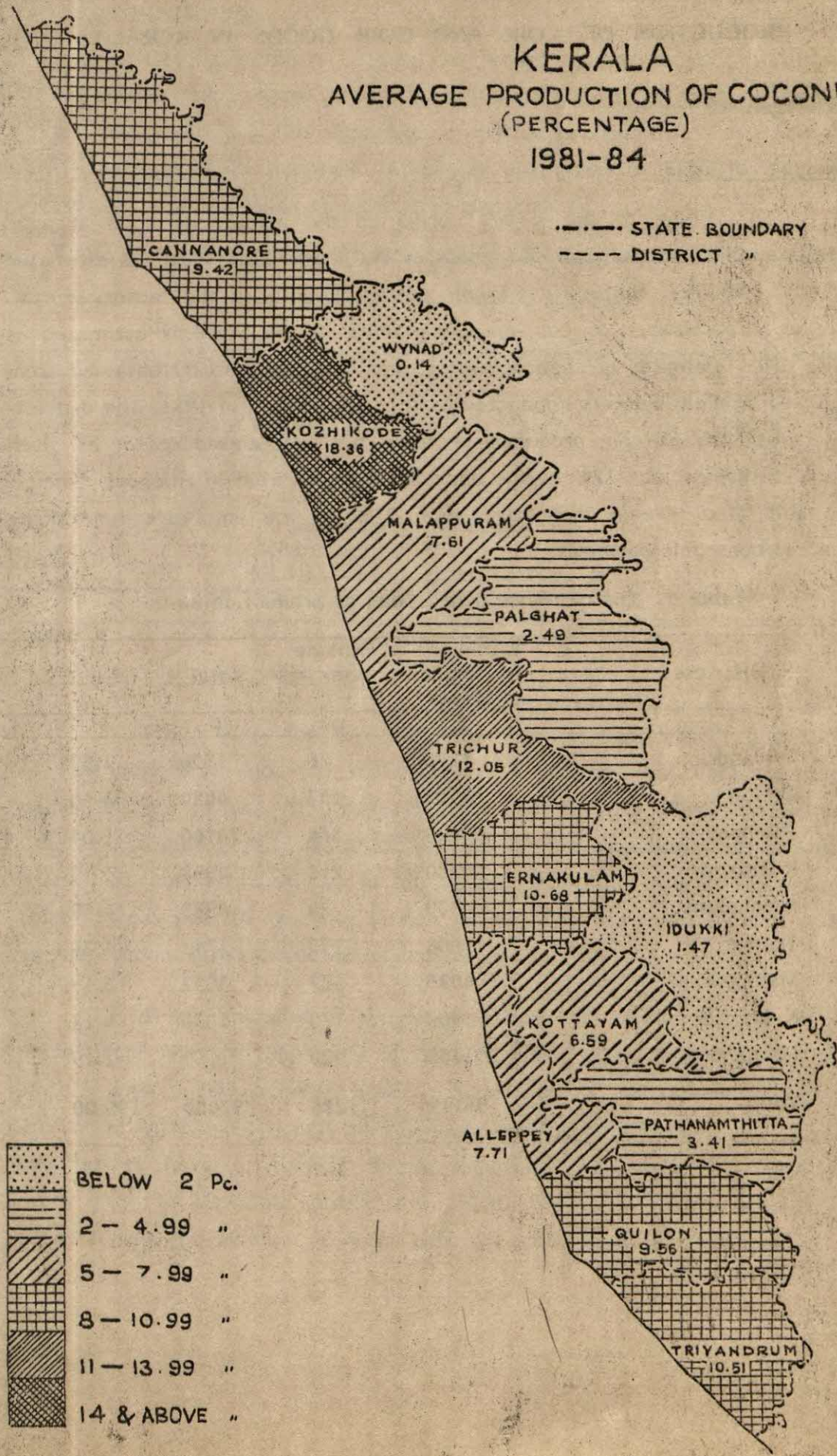
In India on an average 85 tonnes of fibre can be extracted from one million coconut husks. The coir production potential of Kerala from the average annual production of 3066 million nuts during 1980-83 is about 2.6 lakh tonnes. However, since coconut husk is used as domestic fuel in rural areas, it is practically impossible to collect all the husks for coir production and to achieve cent percent utilisation of husk for coir production.

KERALA

AVERAGE PRODUCTION OF COCONUT (PERCENTAGE)

1981-84

- - - - STATE BOUNDARY
- - - - DISTRICT "



PRODUCTION OF COIR AND COIR GOODS IN KERALA

A - Unorganised Sector

1. Number of units

According to the survey conducted the number of units engaged in the production of coir and coir goods in the unorganised sector is estimated at 97405. Besides, there are 84 coir producing units in the factory sector. Thus the total number of coir producing units in the State is estimated as 97489. This estimate is slightly higher than the one (94127) obtained from the survey of Coir Workers conducted by this department in 1981. The district-wise distribution of coir producing units in the unorganised sector as given in Table 5 reveals that 72% of the units are concentrated in Alleppey district. The table also reveals that more than 92% of the units are functioning within the household premises.

Table 5 - District-wise distribution of production units

Districts	Within the household premises	Outside premises	Total	%
1	2	3	4	5
Trivandrum	1280	76	1356	1.39
Quilon	4323	157	4480	4.60
Alleppey	69806	354	70160	72.03
Kottayam	4780	218	4998	5.13
Ernakulam	4359	24	4383	4.50
Trichur	1608	135	1743	1.79
Malappuram	4925	127	5052	5.19
Kozhikode	3900	170	4070	4.18
Cannanore	1138	25	1163	1.19
Total	96119	1286	97405	100.00

2. Type of activities

Retting of husk, beating the retted husk to extract fibre, cleaning the fibre, spinning fibre into yarn and manufacture of mats, mattings and other coir goods are the important activities in coir industry. The number of units engaged in important activities are given in Table 6. It may be noted that a unit attends to more than one activity.

Table 6 - Distribution of producing units according to important activities

Sl.No.	Type of activity	No. of units
1	2	3
1	Retting	69456
2	Beating	83240
3	Fibre cleaning	438
4	Spinning	92615
	a) Hand spinning	73201
	b) Spindle spinning (Ratt)	19414
5	Rehanking	1328
6	Manufacture of mats, matting & other coir goods	3765

3. Number of husks collected

The process for the production of coir begins with the collection of raw husk from coconut cultivators. As pointed out earlier coconut is cultivated throughout the State but coir industry is concentrated on the coastal and other low lying areas in view of the availability of retting facilities. So coconut husk has to be brought from the interior regions to the retting areas and the quantity of coir produced in the State depends primarily on the coconut husks collected by the retters.

A large number of people are engaged in retting activity in Kerala professional ones retting lakhs of coconut husks every year and coir worker retters with a few hundred husks. According to the present survey there are 69456 retting units, bulk of them are worker household units. The licenced retters have to submit details regarding the number of husks retted every year to the Coir Directorate. But they have always a tendency to under report the number of husks retted. Since it is very difficult to count

the number of husks retted under water, the officials of the Coir Directorate can not verify the data furnished by the retters. Hence we have no authentic data on the number of husks retted in the State every year.

An attempt was made in this survey to estimate the number of husks collected through different sources in an year for retting and the results are presented in Table 7. It could be seen from the table that out of 841.6 million coconut husks collected for retting nearly 93% were purchased by the retting units and about 7% their own home produce. The total cost of 841.6 million raw coconut husks at the retting site was estimated at Rs.1726 lakhs and the average value for 1000 husks is Rs.205. At the same time the price for 1000 coconut husks fixed by the Government according to the Husk Control order range from Rs.85 to 105.

Table 7 - Source-wise collection of coconut husks for retting

Source	No.of husks collect- ed (No.in lakhs)	Percentage	Cost of husk (Rs.in lakhs)
1	2	3	4
Purchased	7798.44	92.66	1647.32
Home grown	579.06	6.88	74.38
Purchase from co-operative societies	18.86	0.22	1.90
Other sources	19.80	0.24	2.25
Total	8416.16	100.00	1725.85

Besides 841.6 million raw husks collected for retting in the un-organised sector, 25.7 million coconut husks were used in the factory sector for the extraction of coir fibre. Thus the total number of raw husks used by coir industry during 1983-84 is estimated at 867.3 million accounting for one-third of the estimated production of 2602 million coconuts in the State during 1983-84. In this connection it is worth noting that this estimate is based on the information furnished by the retters. In view of the Husk Control Order of 1973 and other restrictions in coir industry, this estimate is likely to be an under estimate. Another point to be remembered in this context is that coconut production in Kerala during 1983-84 was the lowest in recent years due to the unprecedented drought experienced in the State in 1982-83.

The number of mandays involved for the collection of 841.6 million coconut husks is estimated at 4.50 lakhs and the wages paid for hired labour is estimated at Rs.64.12 lakhs. The average wage for one hired manday engaged in the collection of husk is estimated at Rs.14.25.

4. Cost of retting husk

The expenses incurred for retting husks are mainly (i) rent for retting yard (ii) cost of materials such as coir yarn, coconut leaves, mud etc. for preparing the retting net and (iii) labour charges. The total estimated expenditure for retting 841.6 million of coconut husks is Rs.93.17 lakhs and its distribution is given in table 8. The average retting cost for 1000 coconut husk is calculated at Rs.11.07. Labour charges alone account for about 53% of the cost of retting husk.

Table 8 - Expenses incurred in connection with retting of raw husk

Type of expenses	Amount in lakhs	Percentage
1	2	=3
i. Rent for retting yard	9.22	9.90
ii. Cost of materials	34.91	37.47
iii. Labour charges	49.04	52.63
Total	93.17	100.00

5. Husks available for fibre extraction

Normally husks are retted for a period of 6 to 12 months and therefore husks put into water for retting in a particular year will be available for extraction of fibre only in the next year. Therefore major portion of the retted husks available for extraction in 1983-84 is from the coconut production relating to the year 1982-83. During the year under survey 1049.5 million retted husks valued at Rs.2314.75 lakhs were available for fibre extraction. The average cost of 1000 retted husks is calculated at Rs.220.55 as against the Government controlled price of ranging between Rs.103 to 130 at different places. More than 73 per cent of the retted husks available to the fibre producing units were those retted by themselves and only about

27% purchased. In other words retting units themselves extract the fibre of three-fourths of the retted husks in the State. The district-wise distribution of retted husks given in Table 9 shows that the three southern districts of Trivandrum, Quilon and Alleppey together accounted for nearly 75% of the husks retted in the State.

Table 9 - District-wise distribution of retted husks 1983-84

District	No. of husks collected (in lakhs)	Percentage
1	2	3
Trivandrum	226746	21.60
Quilon *	252708	24.08
Alleppey *	296467	28.25
Kottayam	59494	5.67
Ernakulam	64440	6.14
Trichur	48751	4.64
Malappuram	52024	4.96
Kozhikode	33583	3.20
Cannanore	15282	1.46
Total	1049495	100.00

* Include portions of newly formed Pathanamthitta district.

6. Disposal of retted husks

The retted husks available with the retting units are processed for fibre extraction either by the regular employees of the units or given to smaller units on piece rate. The mode of disposal is given in Table 10 here under.

Table 10 - Disposal pattern of retted husks

Type of disposal	No. of husks (in million)	Percentage	Value (Rs.in lakhs)
1	2	3	4
i. Used in self production			
a) by regular employees	335.8	32.00	603.69
b) by smaller units	595.3	56.72	1511.53
ii. Sold to society and others	34.8	3.31	62.49
iii. Stock	83.6	7.97	137.04
Total	1049.5	100.00	2314.75

The number of mandays involved for the collection of 841.6 million coconut husks is estimated at 4.50 lakhs and the wages paid for hired labour is estimated at Rs.64.12 lakhs. The average wage for one hired manday engaged in the collection of husk is estimated at Rs.14.25.

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iii. Stock	83.6	7.97	137.04
Total	1049.5	100.00	2314.75

7. Fibre production

Extraction of fibre from retted husks is a very important process in coir industry. Retted husk has a foul smell and beating it by hand is an unhygienic work. Majority of the workers engaged in husk beating are women. For the extraction of fibre the husks are first washed to remove the mud and other impurities and the outer skin is then peeled off. Then they are placed on wooden blocks and beaten with wooden or iron mallets to separate the fibre from the pith. One female worker, on an average extract the fibre of 100 to 150 husks and a male worker 150 to 200 husks in a day of 8 hours.

During the year under reference, 932.1 million husks were processed for the extraction of 89454 tonnes of fibre valued at Rs.3037 lakhs. An amount of Rs.348.47 lakhs were paid to the hired labourers for the extraction of fibre. For cleaning fibre 2.92 lakhs mandays were utilised and the wages paid were Rs.54.70 lakhs. During the reference period, 86,000 tonnes of cleaned fibre worth Rs.3308 lakhs were produced.

8. Production of coir yarn

From the point of employment, spinning of coir fibre into yarn is the most important activity in coir industry. Nearly 50% of the total employment in the industry is in this field. Coir fibre can be spun by hand and by using spinning wheels or ratts. In view of the low output by worker, hand spinning is being largely replaced by ratt spinning. According to the present survey, out of the estimated number of 92,615 spinning units in the State, 73,201 units are hand spinning units and only 19,414 are spindle spinning units (see table 6). For wheel spinning, two spinning wheels, one stationary and the other moving, are required. Usually two women and one child operate the wheels. These three persons working on a set produces on an average 15 kgs. of yarn per day of 8 hours. Nearly 90% of the coir fibre produced in Kerala is spun into coir yarn.

Different varieties of coir yarn are produced in Kerala. Each variety is usually named after the place of its production as the yarn produced in each place has its own special quality distinct from others. The 12 important varieties of coir yarn produced in Kerala are listed in Table 11. Under

each main variety there are a multiplicity of sub-grades known by different names in the trade. The important characteristics by which the quality of coir yarn is judged are colour, absence of impurities, fineness, evenness of twist texture and thickness (ie. scorage and runnage).

The present survey revealed that during the year under reference 84,257 tonnes of coir yarn valued at Rs.4689 lakhs were produced in the State in the unorganised sector. Among the important varieties of yarn, 'Mangadan' yarn produced mainly from Quilon district is the most important and accounted for 32% of the total yarn produced in the State followed by Beach yarn (14%) produced mainly in Alleppey district. 'Anjengo' yarn the most superior variety, produced mainly in Trivandrum district accounted for 13% and 'Vaikom' yarn produced mainly in the districts of Alleppey and Kottayam accounted for 11.6% of the total yarn production in the State. The above mentioned four varieties of coir yarn together accounted for over 70% of the coir yarn produced in the State. The unit prices of different varieties of yarn are also given in table 11.

Table 11 - Production of coir yarn 1983-84

Sl. No.	Variety of yarn	Quantity		Value	
		in tonnes	%	Rs.in lakhs	Average price per tonne
1	2	3	4	5	6
1.	Anjengo	11239.8	13.34	751.17	6683
2.	Mangadan	26945.3	31.98	1692.23	6280
3.	Vaikom	9799.1	11.63	551.42	5627
4.	Alapat	101.1	0.12	5.63	5568
5.	Rope	455.0	0.54	25.79	5668
6.	Beach yarn	12107.7	14.37	465.14	3842
7.	Aratory	3917.9	4.65	188.03	4799
8.	Parur	4221.3	5.01	184.74	4376
9.	Unsoaked	92.7	0.11	5.63	6073
10.	Quilandy	463.4	0.55	19.69	4249
11.	Bey pore	994.2	1.18	39.39	3962
12.	Muppiri	2847.9	3.38	169.74	5960
13.	Others	11071.3	13.14	590.33	5332
	State	84256.7	100.00	4688.93	5565

9. Labour charges for spinning

Hired labour involved in the spinning sector is estimated at 71.17 lakhs mandays and the wage paid are estimated at Rs.516.82 lakhs and the average wage per day works out at only Rs.7.25.

Table 12 - Mandays hired and wages paid for the production of different varieties of yarn 1983-84

Sl. No.	Variety of yarn	Hired mandays		Wage paid	
		No. in lakhs	%	No.in lakhs	%
1	2	3	4	5	6
1.	Anjengo	20.80	29.22	139.54	27.00
2.	Mangadan	24.01	33.74	208.54	40.35
3.	Vaikom	5.25	7.38	23.67	4.58
4.	Alapat	0.05	0.07	0.88	0.17
5.	Rope	0.22	0.31	2.06	0.40
6.	Beach yarn	0.13	0.19	0.16	0.03
7.	Aratory	2.61	3.67	12.61	2.44
8.	Parur	3.10	4.35	32.61	6.31
9.	Quilandy	0.81	1.14	1.86	0.36
10.	Beypore	2.30	3.23	6.56	1.27
11.	Muppiri	2.89	4.06	20.78	4.02
12.	Others	9.00	12.64	67.55	13.07
	Total	71.17	100.00	516.82	100.00

10. Rehanking of coir yarn

Different varieties of yarn meant for export are rehanked to definite length and dried before further disposal. It is estimated that 10823 tonnes of yarn were rehanked during 1983-84. The different varieties of yarn rehanked are listed in table 13. It shows that Beach yarn, the most important variety, accounted for 40% of the total yarn rehanked during the reference year, followed by Aratory and Vaikom varieties.

Table 13 - Quantity of coir yarn taken for rehanding and its value

Sl. No.	Variety of yarn	Quantity		Value	
		in tonnes	%	Rs.in lakhs	%
1	2	3	4	5	6
1.	Anjengo	436.2	4.03	33.20	5.48
2.	Mangadan	460.0	4.25	25.02	4.13
3.	Aratory	1545.5	14.28	111.37	18.38
4.	Vaikom	1486.0	13.73	72.47	11.96
5.	Beach yarn	4300.0	39.73	225.10	37.15
6.	Alappat	115.8	1.07	8.73	1.44
7.	Parur	421.0	3.89	21.03	3.47
8.	Roping	180.7	1.67	5.76	0.95
9.	Quilandy	33.5	0.31	2.24	0.37
10.	Muppuri	257.6	2.38	10.91	1.80
11.	Others	1586.7	14.66	90.10	14.87
	Total	10823.0	100.00	605.93	100.00

11. Labour charges for rehanding

The units engaged in rehanding have to incur three important items of expenditure. The mandays hired and wages paid are given in table 14.

Table 14 - Mandays hired and wages paid for rehanding

Type of operation	Mandays hired		Expenses incurred	
	in lakhs	%	Rs.in lakhs	%
1	2	3	4	5
1. Transporting yarn to the rehanding site	0.37	29.17	8.38	56.26
2. Wages to workers for rehanding	0.88	69.79	6.20	42.62
3. Transporting rehanding yarn for disposal	0.01	1.04	0.31	2.12
Total	1.26	100.00	14.89	100.00

12. Manufacture of coir products

The manufacturing sector of coir industry consists of the production of coir mats, coir mattings, rugs and carpets. The manufacture of coir products on an organised and factory scale was started by the Europeans during the middle of last century and till independence European capital dominated

this sector. This sector got decentralised after independence, more particularly after the formation of the State in 1956, in view of the labour legislations providing minimum wages, gratuity, provident fund, employees state insurance scheme etc. in coir factories. Consequently the number of factory sector coir goods producing units declined considerably and now there are only 84 factory sector units as against 170 in 1975. At the same time the estimated number of coir goods producing units in the unorganised sector as per the present survey is 3765. Thus bulk of coir goods production takes place in the unorganised sector. More than 70% of the coir products manufacturing units are concentrated in Alleppey district where there are large number of skilled labourers. The estimated quantity of various coir products produced by the unregistered manufacturing units are presented in table 15.

Table 15 - Manufacture of coir products - un-organised sector

Sl.No.	Item	Unit	Quantity	Value	
				Rs.in lakhs	Percentage
1	2	3	4	5	6
1.	Rope	Qtl.	10661	66.63	4.10
2.	Mat	"	5769	39.98	2.46
3.	Corridor mats	"	1375	11.05	0.68
4.	Rod mats	Sq.Metre	204852	206.24	12.69
5.	Creel mats	"	64526	54.12	3.33
6.	Fibre mats	"	63387	3.41	0.21
7.	Loop mats	"	35703	37.05	2.28
8.	Mech mats	"	1098	0.33	0.02
9.	Coir mattings	"	7186	1.63	0.10
10.	Others (i)	"	1522210	1057.35	65.06
	(ii)	Qtl.	22282	119.61	7.36
	(iii)	"		27.79	1.71
	Total	-	-	1625.20	100.00

It could be seen from the table that mat is the most important coir product in Kerala. Mats of different varieties are produced and important among them are rod mats, fibre mats, creel mats, loop mats, corridor mats.

Coir yarn when woven into fabrics takes various forms like mattings, mourzouks, rugs and carpets according to the type of material used, the pattern of weaving, texture thickness etc. Till two decades back coir matting was produced only in handlooms, but now there are four factories in Kerala producing mattings in powerlooms. The table shows that out of Rs.1625 lakhs worth of coir goods produced in the unorganised sector, coir matting accounted for only Rs.1.63 lakhs.

13. Hired labour and wages paid

The total quantum of hired labour engaged by the manufacturing units during the reference period was 16.02 lakhs mandays and wages paid to them was Rs.241 lakhs. For transportation of finished products 4.16 lakhs mandays were engaged and Rs.18.70 lakhs were paid for them.

Table 16 - Mandays hired and wages paid 1983-84

Type of operation	Mandays hired (in lakhs)	Wages (Rs.in lakhs)
1	2	3
Labour	16.02	241.05
Transporting charges	4.16	18.70
Total	20.18	259.75

14. Equipments used in coir production

Coir producing units in the unregistered sector possess a wide variety of small and simple equipments and tools required for the production of coir and coir goods. Beating machine, ratts, cleaning machines, looms, frames, pressing machines etc. are the important equipments used in coir production. Besides a large number of simple tools such as mallets, triangular blocks, scissors, needles, knives, hammers etc. are used in coir industry. Details regarding the number of equipments, year of manufacture, value at the time of purchase and at the time of enumeration etc. are given in table 17. The total value of all these equipments is estimated at Rs.202 lakhs at the time of purchase and the market value at the time of enumeration is estimated at Rs.190 lakhs. Out of an estimated number 23420 ratts

in the State, nearly 70 per cent are two spindle ratts. Among the equipments used in the manufacture of coir products, looms are the most important. There are 8474 looms for weaving mats, mattings etc.

Table 17 - Number of equipments

Sl. No.	Name of equipment	Number	Year of manufacture					Value at the time of purchase
			Before 1950	1951 to 1960	1961 to 1970	1971 to 1980	1981 to 1984	
1	2	3	4	5	6	7	8	9
1.	Ratt - Two spindle	14970	321	352	1501	8922	3874	3949703
2.	Ratt - Three spindle	388	-	-	97	201	90	104339
3.	Ratt - Four spindle	2282	24	24	388	1233	613	539905
4.	Ratt - Six spindle	4456	238	312	572	1692	1642	965638
	Ratts - Total	22096	583	688	2558	12048	6219	5559585
5.	Cleaning machine	289	-	12	61	123	93	1520497
6.	Beating machine	92	-	-	24	44	24	1902795
7.	Loom for weaving mats & matting	8474	64	225	1917	4212	2056	6127586
8.	Pressing machine	21	-	-	-	21	-	344144
9.	Other machines	700	-	-	-	509	191	269785

Present market Value	Percentage of utilisation				Reason for under utilisation				
	upto 25	26-50	51-75	76-100	Lack of raw materials	Short-Labour		Lack of demand	Others
						age of	trouble		
10	11	12	13	14	15	16	17	18	19
1. 2824338	1448	7300	4548	1674	13899	453	-	493	125
2. 86693	49	227	112	-	388	-	-	-	-
3. 461803	1649	288	258	87	2153	87	-	21	21
4. 753674	1899	1028	577	952	4156	64	-	-	236
4126508	5045	8843	5495	2713	20596	604	-	514	382
5. 1539521	24	219	34	12	289	-	-	-	12
6. 1739995	-	57	23	12	92	-	-	-	-
7. 6910782	921	4629	2110	814	5882	161	2913	203	1328
8. 299880	-	-	21	-	21	-	-	-	-
9. 226775	51	318	280	51	458	127	102	-	13

15. Extent of utilisation of capacity

In coir industry lack of demand for coir and coir products is generally attributed for the non-utilisation of production capacity. But during the present survey it was found that lack of raw materials at reasonable

price is found to be the most important reason for the non-utilisation of production capacity. More than 90 per cent of the ratts are under utilized due to lack of raw material.

16. Employment

According to the present survey, total number of persons - both full time and part time - employed in the unorganised sector is estimated at 275319. The composition of employment given below shows that women workers constitute 80% of the total employment in the industry.

Table 18 - Distribution of workers in the coir producing units

Category	Number	Percentage
1	2	3
Men	36446	13.24
Women	219989	79.90
Children	18884	6.84
Total	275319	100.00

Coir industry is a seasonal industry and does not offer employment to the workers throughout the year. The following statement reveals that nearly two thirds of the workers get only part time employment in the industry.

Table 19 - Nature of employment

Category	Number employed					
	Full time	%	Part-time	%	Total	%
1	2	3	4	5	6	7
Men	24177	66.34	12269	33.66	36446	100.00
Women	73150	33.25	146839	66.75	219989	100.00
Children	6385	33.81	12499	66.19	18884	100.00
Total	103712	37.67	171607	62.33	275319	100.00

Classification of workers as regular wage paid employees and unpaid family workers given in table 20 below shows that over 70 per cent of the total workers in coir industry constitute unpaid family workers. This is more conspicuous among women workers and child workers whereas among men workers 52% of the total male workers are regular paid workers.

Table 20 - Regular employees & family workers

Category	Wage paid employees		Unpaid family workers		Total
	Numer	%	Number	%	
1	2	3	4	5	6
Men	18925	51.93	17521	48.07	36446
Women	52850	24.02	167139	75.98	219989
Children	5665	30.00	13219	70.00	18884
Total	77440	28.13	197879	71.87	275319

17. Working hours and number of days worked

The table 21 gives the percentage distribution of units according to the average number of hours worked. A majority of the units work less than 4 hours a day. Only about 5 per cent of them work 8 hours or more.

Table 21 - Distribution of units according to number of hours worked per day

Working hours	Number of units	Percentage
1	2	3
Less than 2 hours	9984	10.25
2 - 4 hours	40914	42.00
4 - 6 hours	25502	26.18
6 - 8 hours	16181	16.61
Above 8 hours	4824	4.96
Total	97405	100.00

The distribution of units by number of days worked during the reference year is given in table 22. It could be seen from the table that 56 per cent of the units worked only for less than 180 days during the year. Nearly 30 per cent worked upto 270 days and 15 per cent for more than 270 days.

Table 22 - Distribution of units by number of days worked in a year

Number of days worked	Units	
	Number	Percentage
1	2	3
Upto 90 days	14017	14.39
91 - 180 days	40519	41.60
181 - 270 days	28735	29.50
Above 270 days	14134	14.51
Total	97405	100.00

B - Organised sector

Regarding the organised sector of coir industry, Annual Survey of Industries (ASI) is the most important source of industrial statistics in the country. The Director, National Sample Survey Organisation (NSSO) in his capacity as 'Statistics Authority' under the 'Collection of Statistical Act 1953' collects statistics from registered industrial units. Even though submission of correct data is obligatory on the part of the units, the field staff of NSSO personally contact the owners of the units and assist them in filling the returns. The returns are scrutinised by officers of the NSSO.

Data regarding the organised sector coir manufacturing units in Kerala were collected from the schedules of the Annual Survey of Industries 1983-84 and the results are presented below.

During 1983-84 there were 3103 manufacturing establishments in Kerala registered under Factories Act of 1948. Out of this 84 factories were engaged in the manufacture of coir and coir products. Only 18 coir product manufacturing units come under the Census sector i.e. employing 50 or more workers with power or 100 or more workers without power and 66 units come under non-census sector or sample sector. In the Annual Survey of Industries while details of all the census sector units are collected, details from only 50% of the sample sector units are collected every year. Even though manufacture of coir and coir goods is a very important industry in

Kerala this formed only 2.71% of the total factory sector units in the State as bulk of the production of coir and coir goods takes place in the unorganised sector.

Data relating to the production of coir and coir products from the registered factories are presented in table 23. The fixed capital employed in the coir factories is estimated at Rs.387 lakhs. Fixed capital represents the depreciated value of fixed assets owned by the factories as on the closing date of the accounting year. Fixed assets are those which have a normal productive life of more than one year. In coir factories land and buildings accounted for about 60% of the total fixed capital.

Table 23 - Manufacture of coir and coir products (Factory sector)

Sl. No.	Aggregates	Units	Census sector	Sample sector	Total
1	2	3	4	5	6
1.	Factories	Nos.	18	66	84
2.	Fixed capital	Rs.in lakhs	136.25	250.57	386.82
3.	Workers - Male	No.	772	1104	1876
4.	Female	"	164	260	424
5.	Total	"	936	1364	2300
6.	Mandays worked by workers only	"	273733	328996	602729
7.	Total persons engaged	"	1200	1892	3092
8.	Wages to workers only	Rs.in lakhs	48.03	76.89	124.92
9.	Salaries & wages to all employees	"	71.33	120.70	192.03
10.	Bonus to workers	"	10.47	12.77	23.24
11.	Bonus to all employees	"			
12.	Imputed value of benefit in kind	"	0.22	0.68	0.90
13.	Total emoluments to workers	"	58.72	90.35	149.07
14.	Old age benefits social security benefits & other benefits	"	11.58	14.83	26.41

The 84 factories employ a total number of 3092 persons; of which 2300 ie. 74.4% are workers directly engaged in manufacturing process and the remaining ones are holding administrative or supervisory positions. While

in the unregistered sector majority of the workers are females, in the organised sector 81.6% of the workers are males. The average wage per manday is worked out at Rs.20.73 and the average emoluments including bonus and imputed value of benefits in kind besides wages is worked out at Rs.24.72.

Table 24 - Basic materials used in coir factories 1983-84

Sl.No.	Name of materials	Unit	Qty.consumed	Value (Rs.)
1	2	3	4	5
1.	Coconut husk (dry)	thousand	5255	515784
2.	Coconut husk (green)	tonne	13636	2430246
3.	Coir	"	10948	47484206
4.	Coir yarn	"	31051	165135390
5.	Coir husk	"	2924	376239
6.	Coir fibre	"	1031	1979292
7.	Aloe yarn	"	43	315860
8.	Mats	sq.metre	535330	17457826
9.	Mattings	"	1493260	24275629
10.	Jute products	tonne	430	287982
11.	Rubber Latex	"	225	1113285

Table 25 - Products & by-products manufactured in coir factories 1983-84

Sl.No.	Item	Unit	Quantity	Value (Rs.in lakhs)
1	2	3	4	5
1.	Coir fibre	tonne	3244	57.01
2.	Coir yarn	"	29818	1018.23
3.	Pressed coir yarn	"	901	55.20
4.	Coir mats	sq.metre	727775	325.44
5.	Coir mattings	"	3883875	772.37
6.	Carpet	"	41158	6.19
7.	Cotton carpet	"	5153	3.28
8.	Rubberised coir product	tonne	33702	43.94
9.	Pressed coir	"	3140	223.24
10.	Other sorts of coir	"	328	13.35

The estimates of raw husk used and production of various coir and coir goods both in the unorganised and organised sector together are given in table 26 below.

**Table 26 - Total production of coir & coir products in Kerala
1983-84**

[Value Rs.in lakhs]								
Sl. No.	Item	Unit	Unorganised sector		Organised sector		Total	
			Qty.	Value	Qty.	Value	Qty.	Value
1	2	3	4	5	6	7	8	9
1.	Coconut raw husk	No.in lakhs	8416	1726	53	5	8469	1731
2.	Coconut retted husk	"	10495	2315	110	24	10605	2339
3.	Coir fibre	tonne	89454	3037	3244	57	92698	3094
4.	Cleaned fibre	"	86000	3308	-	-	86000	3308
5.	Coir yarn	"	84257	4689	29818	1018	114075	5707
6.	Mats	Qtl.	29101	352	68520	326	97621	678
7.	Mattings	"	12	2	6363	772	6375	774
8.	Coir other sorts							
	(i)	tonne	3294	186	38071	336	41365	522
	(ii)	sq.mtr.	1522210	1085	-	-	1522210	1085

Chapter IV

CONSUMPTION OF COIR AND COIR GOODS IN KERALA

Industrial fibres are divided into two groups viz. natural fibres and synthetic fibres. All fibres have several over-lapping end uses and can be substituted for each other. Coir is an important natural hard fibre and Kerala is considered to be the traditional home of coir industry. Coir yarn and rope were used in Kerala from time immemorial. As time moved on this golden fibre from coconut husk found multifarious uses in the hands of the people in Kerala. The uses for coir have been diversified by the middle of 19th century when Europeans started a number of coir factories in and around Alleppey to manufacture coir mats, mattings and other coir goods mainly to cater the European market.

Kerala is not only the most important producer of coir and coir goods in India but is also an important consumer. But no authentic data on the consumption of coir and coir goods in Kerala are available. Therefore in the present survey an attempt was made to estimate the consumption of coir and coir goods in the State and the results obtained are presented below.

2. Coir yarn

The bulk of coir fibre produced in Kerala is utilised for making coir yarn, which in turn is used for various purposes. It could be seen from table 27 that next to coir rope, coir yarn is the most important item consumed in Kerala and in terms of value it accounted for 37% of the total value of coir and coir goods consumed in the State. In Kerala coir yarn is used for various purposes such as building roofs for thatched houses, construction of fences around homesteads, tying bundles and packages agricultural purposes scaffolding for making coir bags and net and also for making various coir goods such as ropes, mats and mattings etc. According to the present survey, out of 6474 tonnes of coir yarn consumed in Kerala during the year 1983-84, 94.5% was in the household sector.

**Table 27 - Value of coir & coir products consumed in Kerala
1983-84**

[Value Rs. in lakhs]							
Sl. No.	Item	Household sector	%	Non-household sector	%	Total	%
1	2	3	4	5	6	7	8
1.	Coir yarn	378.82	94.7	21.25	5.3	400.07	36.9
2.	Coir rope	541.29	96.6	18.82	3.4	560.11	51.6
3.	Coir mats	58.51	84.9	10.38	15.1	68.89	6.3
4.	Coir mattings	40.36	82.2	8.74	17.8	49.10	4.5
5.	Rubberised coir mats	7.26	100.0	-	-	7.26	0.7
	Total	1026.24	94.5	59.19	5.5	1085.43	100.0

District-wise analysis of coir yarn consumption reveals that Alleppey district occupies the first place with 19.3% of the total consumption followed by Kottayam district (13.9%). The extensive area under backwaters and the use of country boats as a regular and cheap mode of transport and the large proportion of thatched houses etc. are the important reasons attributed to the large consumption of coir yarn in Alleppey district. In Kottayam district large quantity of coir yarn is used for vegetable cultivation. Coir yarn consumption is the lowest in Idukki district and this can be attributed to the absence of water transport facilities in the district and availability of cheap substitutes from the vast forest area of the districts for tying purposes and for many other uses where coir yarn is used in other districts.

3. Coir rope

Rope is the most important item of coir goods consumed in Kerala. According to the present survey 6537 tonnes of coir rope valued at Rs.560 lakhs was consumed in Kerala and this constituted 51.6% of the total value of coir and coir goods consumed in the State. The ability of coir to withstand the prolonged action of sea water makes coir rope especially suitable for boats and ships. In the case of coir rope also household sector consumes 92% and the non household sector accounted for only 8% of the total consumption. District-wise consumption of coir rope presented in table 28 shows

Table 28 - District-wise consumption of coir and coir goods in Kerala 1983-84

District	Coir yarn		Coir rope		Coir mats		Coir mattings		Total in terms of value	
	Quantity in tonnes	%	Quantity in tonnes	%	Quantity in sq.metre	%	Quantity in sq.metre	%	Rs.in Lakhs	%
1	2	3	4	5	6	7	8	9	10	11
Trivandrum	174.89	2.70	648.76	9.92	8333	4.67	590	0.35	89.79	8.27
Quilon	487.20	7.53	615.25	9.41	18528	10.38	9002	5.38	116.64	10.75
Alleppey	1252.49	19.35	733.30	11.22	23073	12.92	43803	26.16	124.84	11.50
Kottayam	901.93	13.93	538.47	8.24	23018	12.89	14835	8.86	118.66	10.93
Idukki	116.16	1.79	18.74	0.29	3613	2.02	5447	3.26	10.09	0.93
Ernakulam	560.86	8.66	296.43	4.53	50345	28.20	32201	19.23	93.89	8.65
Trichur	507.85	7.84	992.46	15.18	12864	7.21	33938	20.27	113.67	10.47
Palghat	327.12	5.05	616.87	9.44	4899	2.74	1875	1.12	70.60	6.51
Malappuram	299.20	4.62	427.93	6.55	17864	10.01	4361	2.60	71.77	6.61
Kozhikode	834.49	12.89	515.47	7.88	168	0.09	-	-	104.82	9.66
Wayanad	700.30	10.82	155.61	2.38	878	0.49	108	0.06	59.59	5.49
Cannanore	311.70	4.82	978.21	14.96	14962	8.38	21286	12.71	111.07	10.23
Total	6474.19	100.00	6537.50	100.00	178545	100.00	167446	100.00	1085.43	100.00

that Trichur district consumed the largest quantity (15.2%) followed by Cannanore (15%) and Alleppey (11.2%). Here also the share of Idukki district is the lowest.

4. Coir mats

The manufacturing sector of coir industry consists of production of coir goods like mats, coir mattings, rugs and carpets manufactured in various sizes and designs. Among the manufactured goods coir mats is the most important item produced and consumed Kerala. Mats are usually woven on ordinary handlooms and therefore craftsman's skill plays an important role in the appearance of the final product. The important types of mats consumed in Kerala are rod mat, fibre mat, creel mat, loop mat etc. It could be seen from the table 28 that 1.78 lakhs square metres of coir mats valued at Rs.68.69 lakhs were consumed in Kerala during the year under reference, of which 87% was in the household sector and only 13% in the non household sector. In most of the middle income and high income households at least one or two door mats are used and there is an increasing trend in the use of door mats in Kerala. District-wise consumption reveals that Ernakulam district accounts for over 28% of the total consumption of mats followed by Alleppey (12.92%) and Kottayam (12.89%). These three districts together accounted for 50 percent of the total consumption of mats in the State.

5. Coir mattings

Coir yarn when woven into fabrics takes various forms viz. mattings, rugs, mourzouks and carpets according to the type of the material used, the pattern of weaving, texture, thickness etc. Coir mattings are primarily used as floor furnishing material in houses, offices meeting halls etc. It is used both for decorative and functional purposes. In Kerala coir mattings are made largely on handlooms. Manufacture of coir mattings on powerlooms is a recent development and now there are four powerloom factories in Kerala manufacturing coir mattings.

Coir mattings were produced mainly for export and production was based on firm orders and not on the basis of anticipated demand. In view of the competition from floor coverings made of synthetics and other natural fibres like sisal the foreign demand for Indian coir mattings has declined considerably. But there is a growing demand for coir mattings from Indian market.

According to the present survey 1.67 lakhs sq.metres of coir mattings worth Rs.49 lakhs was consumed in Kerala during 1983-84 and out of this 85 per cent was in the household sector and 15 per cent in the non household sector. Alleppey district with 26 per cent of the total consumption in the State occupies the first rank followed by Trichur and Ernakulam. These three districts together consumed two-thirds of the total matting consumption in the State.

Consumption details of the different coir products in the household and non household sectors are given in table 29. It can be seen that household sector is the major consumer of coir products accounting for about 95 per cent of the produce in terms of value. District-wise consumption in terms of value is given in table 30. Quilon, Alleppey, Kottayam, Trichur, Kozhikode and Cannanore districts consume more or less equal share every year.

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Table 29 - Quantity and value of coir yarn and coir products consumed in Kerala

Item (i) Coir yarn	(Quantity in tonnes; Value Rs. in lakhs)															
	Households						Non households						Total			
	Quantity Last month	Quantity Last year	Value Last month	Value Last year	Quantity Last month	Quantity Last year	Value Last month	Value Last year	Quantity Last month	Quantity Last year	Value Last month	Value Last year	Quantity Last month	Quantity Last year	Value Last month	Value Last year
1	2	3	4	5	6	7	8	9	10	11	12	13				
Trivandrum	14.99	165.05	1.63	17.28	0.31	9.84	0.03	1.10	15.30	174.89	1.66	18.38				
Quilon	25.34	419.49	1.93	34.33	2.78	67.71	0.22	5.55	28.12	487.20	2.15	39.88				
Alleppey	112.45	1160.15	4.98	56.05	9.24	92.34	0.28	4.61	121.69	1252.49	5.26	60.66				
Kottayam	150.30	870.38	8.59	48.12	3.99	31.55	0.24	1.82	154.29	901.93	8.83	49.94				
Idukki	13.41	102.84	0.75	5.76	-	13.32	-	1.10	13.41	116.16	0.75	6.86				
Ernakulam	39.30	533.61	2.45	33.47	0.99	27.25	0.05	1.60	40.29	560.86	2.50	35.07				
Trichur	52.70	491.36	3.71	36.41	-	16.49	-	1.47	52.70	507.85	3.71	37.88				
Palghat	50.38	317.16	3.28	20.14	0.10	9.96	0.01	0.71	50.48	327.12	3.29	20.85				
Malappuram	22.14	260.84	1.64	14.28	3.00	38.36	0.06	1.17	25.14	299.20	1.70	15.45				
Kozhikode	67.29	832.08	3.84	47.48	0.05	2.41	-	0.14	67.34	834.49	3.84	47.62				
Wayanad	35.48	690.97	2.00	33.56	-	9.33	-	0.85	35.48	700.30	2.00	34.41				
Cannanore	12.73	302.49	1.75	31.94	0.37	9.21	0.07	1.13	13.10	311.70	1.82	33.07				
Total	596.51	6146.42	36.55	378.82	20.83	327.77	0.96	21.25	617.34	6474.19	37.51	400.07				

(cont...34)

(Table 29 contd.)

Item (ii) Coir rope

	1	2	3	4	5	6	7	8	9	10	11	12	13
Trivandrum	63.56	647.81	6.41	64.66	-	0.95	-	-	0.10	63.56	648.76	6.41	64.76
Quilon	11.74	578.06	1.14	58.07	-	37.19	-	-	4.15	11.74	615.25	1.14	62.22
Alleppey	41.30	699.45	2.21	41.72	1.31	33.85	0.08	0.08	2.27	42.61	733.30	2.29	43.99
Kottayam	50.37	500.05	5.30	50.09	5.07	38.42	0.67	0.67	4.56	55.44	538.47	5.97	54.65
Idukki	1.97	18.74	0.16	2.08	-	-	-	-	-	1.97	18.74	0.16	2.08
Ernakulam	10.09	288.91	0.88	27.25	0.21	7.52	0.02	0.02	0.82	10.30	296.43	0.90	28.07
Trichur	50.83	979.95	3.38	62.03	0.46	12.51	0.03	0.03	0.82	51.29	992.46	3.41	62.85
Palghat	43.14	605.93	3.13	45.88	-	10.94	-	-	0.83	43.14	616.87	3.13	46.71
Malappuram	19.30	371.45	2.28	43.30	0.94	56.48	0.09	0.09	1.88	20.24	427.93	2.37	45.18
Kozhikode	34.83	512.67	3.52	56.79	-	2.80	-	-	0.37	34.83	515.47	3.52	57.16
Wayanad	4.84	139.36	0.81	23.55	0.63	16.25	0.10	0.10	1.02	5.47	155.61	0.91	24.57
Cannanore	41.99	968.20	2.70	65.87	-	10.01	-	-	2.00	41.99	978.21	2.70	67.87
Total	373.96	6310.58	31.92	541.29	8.62	226.92	0.99	0.99	18.82	382.58	6537.50	32.91	560.11

(cont....35)

(Table 29 contd.)

Item (iii) Coir mats

	1	2	3	4	5	6	7	8	9	10	11	12	13
Trivandrum	323	8173	0.15	4.26	-	160	-	0.10	323	8333	0.15	4.36	
Quilon	53	9192	0.04	4.97	-	9336	-	5.36	53	18528	0.04	10.33	
Alleppey	2771	22026	1.12	7.99	-	1047	-	0.59	2771	23073	1.12	8.58	
Kottayam	198	21200	0.07	6.55	-	1818	-	1.15	198	23018	0.07	7.70	
Idukki	-	2649	-	0.34	-	964	-	0.12	-	3613	-	0.46	
Ernakulam	3600	45252	1.13	15.26	235	5093	0.05	1.37	3835	50345	1.18	16.63	
Trichur	875	12282	0.38	4.24	-	582	-	0.22	875	12864	0.38	4.46	
Palghat	319	4811	0.17	2.29	-	88	-	0.05	319	4899	0.17	2.34	
Malappuram	207	15336	0.08	8.07	-	2528	-	0.61	207	17864	0.08	8.68	
Kozhikode	-	168	-	0.04	-	-	-	-	-	168	-	0.04	
Wayanad	657	647	0.32	0.30	-	231	-	0.13	657	878	0.32	0.43	
Cannanore	1485	13192	0.66	4.20	212	1770	0.10	0.68	1697	14962	0.76	4.88	
Total	10488	154928	4.12	58.51	447	23617	0.15	10.38	10935	178545	4.27	68.89	

(cont...36)

(Table 29 contd.)

Item (iv) Coir mattings

1	2	3	4	5	6	7	8	9	10	11	12	13
Trivandrum	-	590	-	0.22	-	-	-	-	-	590	-	0.22
Quilon	86	8268	0.08	3.92	-	734	-	0.28	86	9002	0.08	4.20
Alleppey	1086	40123	0.16	6.66	-	3680	-	0.62	1086	43803	0.16	7.28
Kottayam	872	13111	0.31	5.74	69*	1724	0.02	0.62	941	14835	0.33	6.36
Idukki	-	4250	-	0.49	-	1197	-	0.20	-	5447	-	0.69
Ernakulam	1183	22289	0.35	8.42	35	9912	0.03	5.02	1218	32201	0.38	13.44
Trichur	505	32514	0.14	8.12	-	1424	-	0.35	505	33938	0.14	8.47
Palghat	-	1875	-	0.60	-	-	-	-	-	1875	-	0.60
Malappuram	160	4026	0.08	2.19	-	335	-	0.27	160	4361	0.08	2.46
Kozhikode	-	-	-	-	-	-	-	-	-	-	-	-
Wayanad	-	108	-	0.13	-	-	-	-	-	108	-	0.13
Cannanore	1344	14947	0.45	3.87	-	6339	-	1.38	1344	21286	0.45	5.25
Total	5236	142101	1.57	40.36	104	25345	0.05	8.74	5340	167446	1.62	49.10

(cont...37)

Item (v) Rubberised coir mats

(Table 29 contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13
Trivandrum	236	725	0.66	2.08	-	-	-	-	236	725	0.66	2.08
Quilon	-	-	-	-	-	-	-	-	-	-	-	-
Alleppey	-	1943	-	4.32	-	-	-	-	-	-	-	-
Kottayam	-	-	-	-	-	-	-	-	-	1943	-	4.32
Idukki	-	-	-	-	-	-	-	-	-	-	-	-
Ernakulam	-	916	-	0.68	-	-	-	-	-	-	-	-
Trichur	-	24	-	0.02	-	-	-	-	-	916	-	0.68
Palghat	66	111	0.07	0.10	-	-	-	-	66	111	0.07	0.10
Malappuram	-	-	-	-	-	-	-	-	-	-	-	-
Kozhikode	-	-	-	-	-	-	-	-	-	-	-	-
Wayanad	-	62	-	0.06	-	-	-	-	-	62	-	0.06
Cannanore	-	-	-	-	-	-	-	-	-	-	-	-
Total	302	3781	0.73	7.26	-	-	-	-	302	3781	0.73	7.26

Table 30 - Value of coir yarn and coir products consumed in Kerala

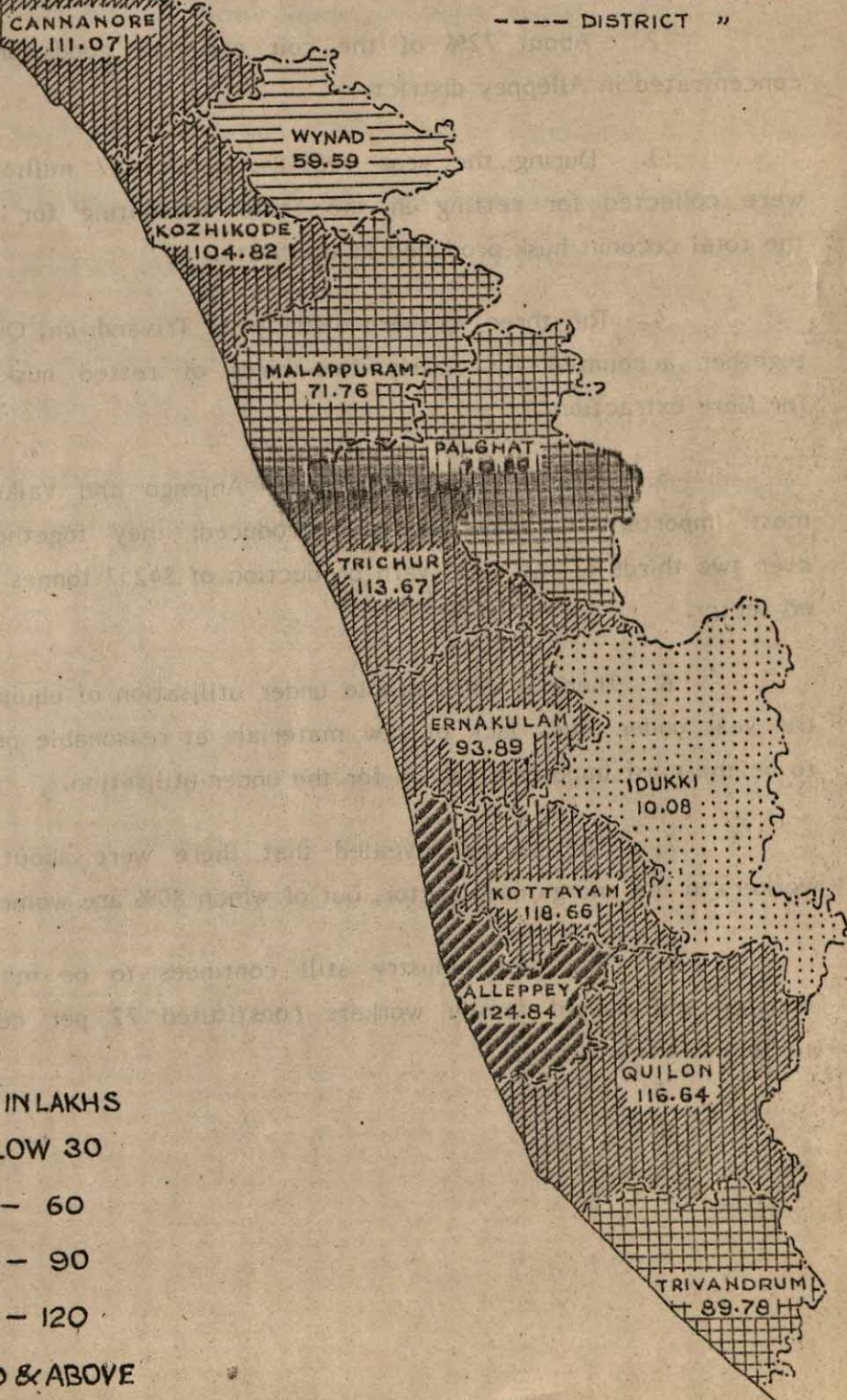
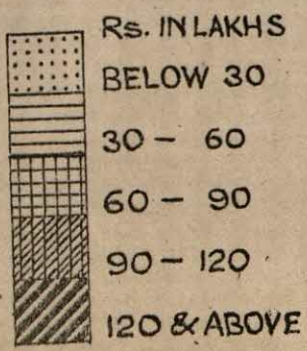
(Value Rs.in lakhs)

Districts	Households		Non households		Total	
	Value		Value		Value	
	Last month	Last year	Last month	Last year	Last month	Last year
1	2	3	4	5	6	7
Trivandrum	8.85	88.50	0.03	1.29	8.88	89.79
Quilon	3.20	101.29	0.22	15.35	3.42	116.64
Alleppey	8.47	116.74	0.36	8.10	8.83	124.84
Kottayam	14.27	110.51	0.93	8.15	15.20	118.66
Idukki	0.91	8.66	-	1.43	0.91	10.09
Ernakulam	4.81	85.08	0.15	8.81	4.96	93.89
Trichur	7.61	110.82	0.03	2.85	7.64	113.67
Palghat	6.65	69.01	0.01	1.59	6.66	70.60
Malappuram	4.08	67.83	0.15	3.94	4.23	71.77
Kozhikode	7.36	104.31	0.01	0.51	7.37	104.82
Wayanad	3.13	57.59	0.10	2.00	3.23	59.59
Cannanore	5.55	105.88	0.17	5.19	5.72	111.07
Total	74.89	1026.22	2.16	59.21	77.05	1085.43

KERALA

VALUE OF COIR AND COIR GOODS CONSUMED-1983-84

----- STATE BOUNDARY
 - - - - - DISTRICT "



Chapter V**SUMMARY**

The survey revealed that there are 97405 units engaged in various activities connected with the manufacture of coir and coir goods in the unorganised sector where as in the factory sector there are only 84 units. Nearly 92% of these units are household sector units.

2. About 72% of the coir and coir goods producing units are concentrated in Alleppey district.

3. During the year 1983-84, about 867 million coconut's husks were collected for retting in the State accounting for only one-third of the total coconut husk produced in the State.

4. The three southern districts of Trivandrum, Quilon and Alleppey together accounted for nearly two-thirds of retted husks made available for fibre extraction.

5. 'Mangadan', Beach yarn, Anjengo and Vaikom yarn are the most important varieties of yarn produced; they together accounted for over two thirds of the total yarn production of 84257 tonnes in the un-organised sector.

6. There is considerable under utilisation of equipments and during the year under study lack of raw materials at reasonable price was reported to be the most important reason for the under utilisation.

7. The survey revealed that there were about 2.75 lakhs coir workers in the unorganised sector, out of which 80% are women.

8. The coir industry still continues to be mainly a household industry and unpaid family workers constituted 72 per cent of the total workers in the industry.

9. The survey indicated that there is considerable under employment in the industry. Nearly two-thirds of the coir workers in the unorganised sector are part-time workers.
10. More than 50 per cent of the units worked only four hours or less per normal working day and less than 181 days during an year.
11. In the factory sector there are 2300 workers of which about 80 per cent are males.
12. Total husk consumption in both sectors together is 847 million.
13. Yarn production in the two sectors is estimated at 1.14 lakhs tonnes.
14. The survey on consumption shows that coir and coir goods worth Rs.1085 lakhs were consumed during 1983-84. Household sector accounted for about 95 per cent.
15. Coir yarn and coir rope are the most important items accounting for about 89 per cent of the consumption.

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