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GOVERNMENT OF KERALA

REPORT ON  
COCOA SURVEY  
1980

DIRECTORATE OF ECONOMICS AND STATISTICS  
TRIVANDRUM  
1981



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DIRECTORATE OF ECONOMICS AND STATISTICS

TRINIDAD

1981

## P R E F A C E

This report presents the results of the Sample Survey on Cocoa conducted during November-December 1980. For the Agricultural year 1977-78 onwards, annual estimates of area under cocoa have been made available by the Sample Survey under the scheme for F. A. R. C. S. conducted by this Directorate. The need for additional data on cocoa cultivation was keenly felt in the context of the increasing importance of the crop in the economy of the State. The present survey has, therefore, collected information on yield rates of cocoa plants, distribution of the number of cultivators according to various aspects of cultivation, and cultivation practices, besides area under cocoa and the number of cocoa plants. The data thrown up by the survey may help to give a better perspective of the trends in cocoa cultivation and production of cocoa beans in the State.

The data collected through the Cocoa Survey were tabulated and the report was prepared in the Agriculture Division of this Directorate.

Directorate of  
Economics and Statistics,  
19-5-1981.

DR. P. A. NAIR,  
*Director.*

The first part of the results of the sample survey in 1936 are given in Table I. The results are given in the form of percentages of the total number of respondents. The results are given in the form of percentages of the total number of respondents. The results are given in the form of percentages of the total number of respondents.

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TABLE I

TABLE I  
RESULTS OF THE SURVEY

REPORT ON COCOA SURVEY 1980

ERRATA

<u>Page No.</u>	<u>Line</u>	<u>Instead of</u>	<u>Read as</u>
Preface	4	FARCS	EARCS
2	4	72	72
"	3rd table under lack of irrigation.	3708	37098
3	Ist table for Quilon	72.6	72.46
"	Ist table total	30.5	30.75
9	Table 12 - Quilon-yes all ages	3	32
"	Table 12 - Malappuram all ages	1	17
"	Table 12 'Yes' Cannanore All ages	2	20
"	Table 12 'No'	1	19
"	Table 12 - State all ages yes	6	26
"	Table 12 - State all ages No	Nil	22
"	Table 13 - Alleppey all ages No?	Nil	27
"	Table 13 - Kottayam all ages - yes	2	28
"	" " No	2	26
"	Table 13 - Idukki all ages - Yes	Nil	28
"	" " No	2	27
"	Table 13 - Ernakulam all ages - yes	Nil	25
"	Table 13 - Trichur all ages - No	3	23
"	Table 13 - Palghat all ages - Yes	3	23
"	" " No	1	19
"	Table 13 - Cannanore Age (2-4) - No	1	14
"	Table 13 - Cannanore all ages - No	1	17
"	Table 13 - State all ages - Yes	5	25

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**REPORT ON THE SURVEY TO ESTIMATE THE NUMBER, AGE  
DISTRIBUTION, AREA AND SURVIVAL RATES OF COCOA  
PLANTS IN THE STATE**

Cocoa is one of the upcoming commercial crops of the State. Till recently the area under the crop as well as its production was increasing rapidly. A large number of cultivators having been engaged in cocoa cultivation, the crop has assumed considerable economic importance. But the recent fall in prices of cocoa has been causing a severe set back in the tempo of cocoa cultivation. This situation is engaging the serious attention of Government. Ways and means are being sought out to assure reasonable prices for cocoa beans by restricting import, in view of the expanding indigeneous production and also to drawup suitable schemes on the basis of authentic data. In this context, data on area under the crop, production of cocoa beans etc., have become highly relevant.

Estimates on the area under cocoa as well as the number of plants in each district are being prepared for the agricultural years from 1977-78 onwards, through the sample survey under the scheme for Establishment of an Agency for Reporting Crop Statistics. But these estimates do not provide any information on the age composition of plants or the proportion of bearing or non-bearing plants. The survival rates of cocoa plants were also not available. A quick and reliable assessment of these items therefore became necessary. Government of Kerala in G. O. (Ms) No. 82/80, dated 21-7-1980 sanctioned a scheme for the conduct of sample survey to estimate the number, age distribution, area and survival rates of cocoa plants in the State, as part of the Employment Generation Programme.

*Objectives of the Survey:*—The main objectives of the survey were to estimate the number of cocoa plants, their age distribution, area under the crop, and survival rates of cocoa plants.

*Scheme:*—During the year 1979-80 a twenty per cent sample of the revenue villages in the State was enumerated, under the scheme for Establishment of an Agency for Reporting Crop Statistics, to estimate the area under crops and land use. During 1980-81, twenty-five per cent of the Investigator units enumerated during 1979-80 had to be re-enumerated to study the crop changes. The area covered under this twenty-five per cent enumerator units, which was about five per cent of the total area of the State was completely enumerated to collect data on the number of cocoa plants, their age distribution etc. The cocoa plants grown in this area were counted according to their age composition and other relevant details regarding cocoa cultivation were also collected.

Six hundred and fifty enumerators were appointed for the survey work. They were selected from the various employment exchanges in the State. Unemployed persons who have passed S.S.L.C. or possessing superior qualifications and borne on the live registers of the Employment Exchanges for a minimum period of three years were selected as enumerators. These enumerators attended to the field work under the guidance of the regular Investigators working in the selected areas. Additional Statistical Inspectors of the Directorate of Economics and Statistics supervised the work of enumerators. Additional District Statistical Officers were in-charge of the field work at district level and the Regional Deputy Directors at Quilon, Ernakulam and Kozhikode were in-charge of the work at the Regional level. The Director, Directorate of Economics and Statistics was in overall charge of the scheme in the State.

*Period of the Survey:*—The Survey covered a period of two months viz., November and December 1980.

*Cocoa Cultivation:*—Cocoa is cultivated as an inter crop in the dry land plots along with coconut, arecanut and other perennial crops. The plant begins to flower in about fifteen months since planting and bears fruits after that age. The plant attains the full bearing stage at the age of about four years. When the pods are ripe they are plucked from the plants, peeled and the wet beans are marketed as such by the cultivators.

### Findings

*Number and Area of Cocoa Plants:*—The estimated number of cocoa plants grown in the State during the period of the survey was 120.60 lakhs. It covers an area of 0.24 lakh hectares. The crop is largely cultivated in Kottayam, Ernakulam, Alleppey and Kozhikode districts. The estimated area under cocoa in Kottayam was 6,849 hectares and in Kozhikode was 2,209 hectares. The area under the crop in Palghat was comparatively low. The table below gives the district-wise area under the crop and its percentage distribution.

District	Area in Hectares	Percentage
Trivandrum	709	2.94
Quilon	1743	7.23
Alleppey	3167	13.13
Kottayam	6849	28.40
Idukki	1673	6.94
Ernakulam	4315	17.89
Trichur	1245	5.16
Palghat	379	1.57
Malappuram	470	1.95
Kozhikode	2209	9.16
Cannanore	1359	5.63
State	24118	100.00

*Age distribution and yielding type of standing plants* :—Among the standing plants in the State, only 7.60 per cent of them are above four years of age. Nearly 49 per cent are between two to four years and 36 per cent between one to two years. The percentage of plants below one year was 7.77.

At present about 77 per cent of the plants are not yielding and only about 23 per cent of them are yielding. The percentages of yielding plants in the different age groups are given in the following table.

Age of plants	No. of plants in ('000)			Percentage of yielding plants in the different age groups
	Yielding	Not yielding	Total	
Below one year	..	937	937	..
One to two years	392	3952	4344	9.02
Two to four years	2305	3558	5863	39.31
Four to six years	557	235	792	70.33
Six and above	105	19	124	84.68
All ages	3359	8701	12060	27.85

*Survival rates of cocoa plants* :—As already stated, the plants are grown as an intercrop in dry land areas among coconut, arecanut and other perennial crops. The seedlings generally survive without much care under favourable climate. The overall survival rate of cocoa plants in the State was found to be 81 per cent. Due to the variation in climatic conditions between the districts in the State, the survival rates was found to be varying between them. The highest survival rate of about 87 per cent was found in Kottayam, Ernakulam and Cannanore Districts and the lowest of about 72 per cent in Palghat District. The survival rates of the plants in the various districts are given below :

District	Total No. of seedlings planted ('000)	No. of plants lost (Nos. '000s)	No. surviving ('000s)	Survival rate in percentages
Trivandrum	427.8	72.8	355	82.98
Quilon	1092.1	265.1	827	79.85
Alleppey	2191.4	607.4	1584	72.28
Kottayam	3937.0	515.0	3422	86.92
Idukki	1104.0	269.0	835	75.63
Ernakulam	2493.9	336.9	2137	86.49
Trichur	823.2	200.2	623	75.68
Palghat	264.9	74.9	190	71.73
Malappuram	335.0	78.0	257	76.72
Kozhikode	1400.6	295.6	1105	78.89
Cannanore	780.6	100.6	680	87.11
State	14875.5	2815.5	12060	81.07

*Number of plants cut down and stage of loss of plants* :—Of the 28.16 lakhs of plants lost, 0.84 lakh were reported to be cut down by the cultivators (2.97 per cent) and the remaining 97 per cent (27.32 lakhs) were lost at different stages viz., 62.37 per cent below one year and 37.63 per cent after one year.

*Reason for loss* :—About two-thirds of the cultivators have reported loss of plants due to various reasons. The number of cultivators who have reported loss, according to main reasons for loss and the percentage distribution are given below :—

Reason for loss	No. of cultivators	Percentage
1. Insufficient rain	18148	10.18
2. Lack of irrigation	3708	20.81
3. Attack of pests and insects	50127	28.11
4. Defect of seedlings	21131	11.85
5. Others	51800	29.05
Total	178239	100.00

*Cocoa cultivation* :—The estimated number of cultivators is 2.69 lakhs out of which only 5.72 per cent have started before 1975. A large majority of them started cultivation since the year 1977.

*Source of information regarding cocoa cultivation* :—The main source of information regarding the spread of cocoa cultivation among the cultivators was from other fellow cultivators which accounts for about 43 per cent. About 21 per cent of the cultivators received information from newspapers and 20 per cent from the Agriculture Department and the remaining from other persons.

*Main Crop of cocoa area* :—The crop is cultivated mainly in coconut gardens. About 57 per cent of the cultivators have reported that the crop is cultivated along with coconut and about 12 per cent with arecanut and the remaining 31 per cent with other crops.

*Source of seedlings* :—The main source from which the cultivators obtained the seedlings was from other cultivators. About 40 per cent of the cultivators obtained the seedlings from this source. Nearly 22 per cent of the cultivators obtained seedlings from private nurseries and 20 per cent from Government nurseries.

*Use of inputs* :—Even though cocoa is cultivated as an inter crop along with other garden crops like coconut, arecanut and other perennial crops, a large number of the cocoa cultivators use various inputs like organic manures, chemical fertilizers, insecticides, pesticides and irrigation. About 84 per cent of the cultivators have reported using organic manures, 48 per cent using chemical fertilizers and 31 per cent using pesticides. Nearly 70 per cent of the cultivators are irrigating the cocoa plants. The percentage of cultivators using various inputs in the different districts can be seen in the following table :—

**Percentages of cultivators using various inputs in cocoa cultivation—Inputs**

District	Irrigation	Organic manures	Chemical fertilizers	Pesticides
Trivandrum	80.90	72.73	54.07	16.16
Quilon	72.6	88.46	50.65	24.90
Alleppey	85.89	92.62	54.21	32.93
Kottayam	61.15	88.02	49.74	38.46
Idukki	18.48	64.01	30.45	31.31
Ernakulam	76.09	91.27	48.11	37.41
Trichur	89.02	81.38	36.12	29.03
Palghat	69.31	63.50	31.25	14.00
Malappuram	71.22	68.91	32.00	7.84
Kozhikode	50.91	69.52	44.44	24.30
Cannanore	80.19	86.79	53.26	20.95
State	69.82	84.30	47.53	30.5

*Yield rates and production of dry cocoa beans* :—During the survey, a quick assessment of the yield rates of cocoa plants according to their age was made from a sample of the cultivators by enquiry method. According to the information collected the average yield of pods per tree is estimated to be about 24 per bearing plant. The maximum yield rate was reported to be within the age group of four to six years. Within this age group, the yield rate was 34 pods per bearing plant.

Based on the average yield rates of cocoa plants according to their age, the production of dry beans in the various districts has also been worked out. The average yield rates and the estimated production of dry beans in the various districts and state is given below :—

District	Yield rate pods per bearing tree	Production of dry beans in tonnes
Trivandrum	27	68
Quilon	31	118
Alleppey	22	431
Kottayam	28	1299
Idukki	28	275
Ernakulam	22	564
Trichur	23	144
Palghat	21	16
Malappuram	18	40
Kozhikode	20	260
Cannanore	19	76
State	24	3291

*Use of peelings of cocoa pods* :—The peelings are used as cattlefeed or as organic manure by the cultivators. Nearly 71 per cent of the cultivators use this as cattlefeed or as organic manure.

*Equipments for fermentation and drying* :—The pods are marketed either as such or the wet beans are taken out from the ripe pods and sold to the cocoa collection agency. The cultivators do not have their own equipments for fermenting the wet beans or any equipments for drying. The percentage of cultivators having own equipments for fermentation and drying were 1.34 and 0.52 respectively.

*Effect of cocoa cultivation on main crop* :—Nearly 85 per cent of the cultivators have reported that cultivation of cocoa has not affected the yield of their main crop. But about one-eighth of the cultivators have reported a decrease in the yield of main crop. Also a small per cent of the cultivators have reported as increase in the yield of main crop.

The detailed tables giving the data obtained from the survey are given in the Appendix.

## COCOA SURVEY 1980

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19. Distribution of number of cultivators reporting about change in production of main crop.
20. Estimates of area under cocoa for the agriculture years (July-June) from 1977-78 to 1979-80.

TABLE 1

## Estimates of Area and number of Cocoa Plants

District	Area in* hectares	No. of Cocoa trees ( '000)
Trivandrum	709	355
Quilon	1743	872
Alleppey	3167	1584
Kottayam	6849	3422
Idukki	1673	835
Ernakulam	4315	2157
Trichur	1245	623
Palghat	379	190
Malappuram	470	237
Kozhikode	2209	1105
Cannanore	1359	680
State	24118	12060

\*Will be revised on the basis of TRS data.

TABLE 2

## Distribution of area (Hectares) under Cocoa plants in the Districts and State according to age and yielding type

District	Less than one year	Age in years										Total
		One to two		Two to four		Four to six		Six and above		Yield- ing	Not yield- ing	
		Yield- ing	Not yield- ing	Yield- ing	Not yield- ing	Yield- ing	Not yield- ing	Yield- ing	Not yield- ing			
1	2	3	4	5	6	7	8	9	10	11	12	13
Trivandrum	113	9	273	71	186	35	12	9	1	124	585	709
Quilon	240	18	685	132	609	31	19	8	1	189	1554	1743
Alleppey	219	139	1060	741	850	108	41	8	1	996	2171	3167
Kottayam	440	437	2075	1514	1906	315	113	44	5	2310	4539	6849
Idukki	60	20	489	386	596	66	27	26	3	498	1175	1673
Ernakulam	356	98	1343	964	1237	208	95	11	3	1281	3034	4315
Trichur	41	25	323	232	535	61	22	5	1	323	922	1245
Palghat	100	Nil	154	19	85	16	3	2	Nil	37	342	379
Malappuram	32	4	158	98	168	5	3	1	1	108	362	470
Kozhikode	92	28	721	389	655	175	67	64	18	656	1553	2209
Cannanore	181	6	624	64	290	94	67	32	1	196	1163	1359
State	1874	784	7905	4610	7117	1114	469	210	35	6718	17400	24118

TABLE 3

## Distribution of the number of Cocoa plants in the Districts and State according to age and yielding type ('000)

District	Less than one year	Age in years										Total
		One to two		Two to four		Four to six		Six and above		Yield- ing	Not yield- ing	
		Yield- ing	Not yield- ing	Yield- ing	Not yield- ing	Yield- ing	Not yield- ing	Yield- ing	Not yield- ing			
1	2	3	4	5	6	7	8	9	10	11	12	13
Trivandrum	56	5	136	36	93	18	6	4	1	63	292	355
Quilon	120	9	342	66	304	16	10	4	1	95	777	872
Alleppey	110	70	530	370	425	54	20	4	1	498	1086	1584
Kottayam	220	218	1037	757	953	157	56	22	2	1154	2268	3422
Idukki	30	10	244	193	298	33	13	13	1	249	586	835
Ernakulam	178	49	672	482	618	104	47	6	1	641	1516	2157
Trichur	21	12	162	116	268	30	11	2	1	160	463	623
Palghat	50	..	77	10	42	8	2	1	..	19	171	190
Malappuram	16	2	79	49	84	3	2	1	1	55	182	237
Kozhikode	46	14	360	194	328	88	34	32	9	328	777	1105
Cannanore	90	3	312	32	145	47	34	16	1	98	582	680
State	937	392	3951	2305	3558	558	235	105	19	3360	8700	12060

TABLE 4

Estimated number of Cocoa plants surviving, No. cut down, No. lost by age group, total planted, total lost and percentage survival (Nos. in '000s)

District	No. of cocoa plants surviving	No. cut down	Number lost			Total planted	Total lost	Percentage age of survival
			Below one year	One year and above	5			
1	2	3	4	5	6	7	8	
Trivandrum	355	1.4	50.8	20.6	427.8	72.8	82.98	
Quilon	872	1.6	167.2	96.3	1092.1	265.1	79.85	
Alleppey	1584	12.8	437.0	157.6	2191.4	607.4	72.28	
Kottayam	3422	15.9	266.8	232.3	3937.0	515.0	86.92	
Idukki	835	2.3	196.5	70.2	1104.0	269.0	75.63	
Ernakulam	2137	14.3	182.5	140.1	2493.9	336.9	86.49	
Trichur	623	17.8	99.8	82.6	823.2	200.2	75.68	
Palghat	190	2.7	54.5	17.7	264.9	74.9	71.73	
Malappuram	257	1.7	41.9	34.4	335.0	78.0	76.72	
Kozhikode	1105	11.2	153.7	130.7	1400.6	295.6	78.89	
Cannanore	680	1.9	53.2	45.5	780.6	100.6	87.11	
State	12060	83.6	1703.9	1028.0	14875.5	2815.5	81.07	

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TABLE 5

Distribution of number of Cocoa cultivators who have lost plants according to the main reason for loss of plants

District	Total lost	Reason for loss of plants						
		Insufficient rain	Lack of irrigation	Attack of insects	Defect of seedlings	Others		
1	2	3	4	5	6	7		
Trivandrum	6281	1382	1131	1570	942	1256		
Quilon	16496	2804	4784	3299	1485	4124		
Alleppey	24346	4869	5356	5356	1217	7548		
Kottayam	38165	4580	11450	12594	2290	7251		
Idukki	10763	1614	3229	3552	431	1937		
Ernakulam	35850	1076	5378	6453	8246	14697		
Trichur	14960	299	1197	5386	1795	6283		
Palghat	3264	131	1208	424	718	783		
Malappuram	3918	353	940	862	940	823		
Kozhikode	17842	714	1784	8386	1784	5174		
Cannanore	6414	321	641	2245	1283	1924		
State	178299	18143	37098	50127	21131	51800		

TABLE 6

**Distribution of number of cultivators according to the years  
since commencement of cocoa cultivation**

District	No. of years since commencement					Total No. of cultivators
	1	2	3	4	5 and above	
Trivandrum	2642	4491	2312	2048	1916	13409
Quilon	8356	11005	5501	2037	1427	28326
Alleppey	11691	13428	14301	2440	1568	43428
Kottayam	7201	21852	19929	5787	1798	56567
Idukki	2144	6744	3662	1206	1027	14783
Ernakulam	8535	16263	11109	6443	2737	45087
Trichur	2257	9289	5905	2865	954	21270
Palghat	1146	1146	581	220	171	3264
Malappuram	1146	1608	702	240	222	3918
Kozhikode	3677	11407	5752	3582	2074	26492
Cannanore	2836	4298	2526	1683	1507	12850
State	51631	101531	72280	28551	15401	269394

TABLE 7

**Distribution of the number of cultivators according to the source  
from which information on cocoa cultivation was obtained**

District	Source of information				Total No. of cultivators
	Other cul- tivators	News- papers	Agri. Dept.	Other persons	
Trivandrum	3700	1386	5152	3171	13409
Quilon	12940	6011	5500	3875	28326
Alleppey	10288	14084	11513	7543	43428
Kottayam	30478	11494	4390	10205	56567
Idukki	8039	2457	1830	2457	14783
Ernakulam	23247	8418	7615	5807	45087
Trichur	6945	2865	7987	3473	21270
Palghat	973	377	1491	423	3264
Malappuram	1238	314	1035	1331	3918
Kozhikode	11826	5298	4162	5206	26492
Cannanore	6381	2526	2481	1462	12850
State	116055	55230	53156	44953	269394

TABLE 8

**Distribution of number of cultivators growing cocoa according to the  
main crop in cocoa area**

District	Main crop in cocoa area			Total No. of cultivators
	Coconut	Arecanut	Other crops	
Trivandrum	7795	463	5151	13409
Quilon	16463	921	10942	28326
Alleppey	30521	699	12208	43428
Kottayam	29319	3745	23503	56567
Idukki	2812	1632	10339	14783
Ernakulam	31723	6443	6921	45087
Trichur	13109	5643	2518	21270
Palghat	1773	455	1036	3264
Malappuram	1584	1646	688	3918
Kozhikode	12774	4824	8894	26492
Cannanore	4519	6115	2216	12850
State	152393	32586	84416	269394

TABLE 9

Distribution of number of cultivators according to source of seedlings

District	Source of seedlings				Total No. of cultivators
	Own	Other cultivators	Private nursery	Govt. nursery	
Trivandrum	2135	3536	2668	5070	13409
Quilon	3181	12316	6671	6158	28326
Alleppey	5059	16920	9589	11860	43428
Kottayam	19153	20568	12858	3988	56567
Idukki	2930	5768	4237	1848	14783
Ernakulam	6921	24153	8697	5316	45087
Trichur	2344	7379	3299	8248	21270
Palghat	204	863	502	1695	3264
Malappuram	297	1207	1151	1263	3918
Kozhikode	4337	10655	6787	4713	26492
Cannanore	976	5538	2260	4076	12850
State	47537	108903	58719	54235	269394

TABLE 10

Distribution of number of cultivators using various inputs in cocoa cultivation

District	Irrigation	Organic manure	Chemical fertilizer	Pesticides
Trivandrum	10848	9752	7250	2167
Quilon	20525	25057	14347	7053
Alleppey	37300	40223	23542	14301
Kottayam	34591	49790	28136	21756
Idukki	2732	9463	4501	4629
Ernakulam	34307	41151	21691	16867
Trichur	1935	17310	7623	6175
Palghat	2262	2073	1020	457
Malappuram	2790	2700	1254	307
Kozhikode	13487	18417	11773	6438
Cannanore	10304	11153	6844	2692
State	188081	227089	128041	82842

TABLE 11

Average Number of pods/yielding cocoa plant according to age and estimated production of dry beans

District	Age of plant in years				All ages	Production of dry beans (tonnes)
	1-2	2-4	4-5	6 and above		
Trivandrum	13	25	33	38	27	68
Quilon	15	32	34	37	31	118
Alleppey	14	22	29	25	22	491
Kottayam	20	27	44	37	28	1299
Idukki	16	26	36	39	28	275
Ernakulam	16	20	33	40	22	554
Trichur	13	21	32	28	23	144
Palghat	10	18	24	23	21	16
Malappuram	5	18	28	22	18	40
Kozhikode	8	18	26	19	20	260
Cannanore	9	17	21	22	19	76
State	17	23	34	29	24	3291



TABLE 12

## Yield rates of Cocoa Plants according to irrigation and by age groups

District	Irrigation	Age in years				All ages
		1-2	2-4	4-6	6 and above	
Trivandrum	Yes	11	25	29	36	26
	No	14	25	38	45	29
Quilon	Yes	18	33	33	40	32
	No	11	30	37	25	29
Alleppey	Yes	14	23	32	20	23
	No	14	18	25	40	19
Kottayam	Yes	21	29	44	39	31
	No	19	24	44	34	24
Idukki	Yes	12	30	38	38	31
	No	23	17	33	42	21
Ernakulam	Yes	20	21	33	40	23
	No	14	17	34	29	18
Trichur	Yes	13	22	32	28	23
	No	..	15	..	..	15
Palghat	Yes	..	22	25	24	24
	No	..	12	15	23	14
Malappuram	Yes	..	19	25	21	19
	No	5	17	31	24	17
Kozhikode	Yes	10	14	23	21	17
	No	7	21	29	16	22
Cannanore	Yes	9	18	20	23	20
	No	8	10	26	11	19
State	Yes	18	24	34	30	26
	No	17	21	32	26	22

TABLE 13

## Yield rates (No. of pods per tree) of Cocoa Plants according to the use of organic manure and by age groups

District	Using organic manure	Age in years				All ages
		1-2	2-4	4-6	6 and above	
Trivandrum	Yes	11	26	31	35	27
	No	14	23	34	40	27
Quilon	Yes	14	31	34	25	30
	No	20	34	Nil	40	34
Alleppey	Yes	14	22	26	25	21
	No	..	23	49	..	27
Kottayam	Yes	21	26	45	38	28
	No	18	30	32	35	26
Idukki	Yes	11	24	46	46	28
	No	19	29	18	30	27
Ernakulam	Yes	17	21	34	40	25
	No	15	19	10	40	17
Trichur	Yes	13	22	30	..	23
	No	..	15	41	28	23
Palghat	Yes	..	20	26	23	23
	No	..	14	23	24	19
Malappuram	Yes	5	28	40	25	27
	No	5	11	25	20	12
Kozhikode	Yes	8	19	28	19	21
	No	7	16	23	..	18
Cannanore	Yes	10	20	22	20	21
	No	7	14	17	25	17
State	Yes	17	24	35	28	25
	No	17	22	27	32	23

TABLE 14

**Yield rates of Cocoa Plants according to the use of Chemical fertilizers  
and by age groups**

District	Using chemical fertilizers	Age in years				All ages
		1-2	2-4	4-6	6 & above	
Trivandrum	Yes	14	27	36	40	29
	No	8	21	31	29	25
Quilon	Yes	19	36	34	38	34
	No	12	26	34	31	25
Alleppey	Yes	14	27	33	23	26
	No	15	14	23	30	15
Kottayam	Yes	20	29	41	38	28
	No	20	23	45	34	29
Idukki	Yes	12	17	46	32	24
	No	17	29	29	45	29
Ernakulam	Yes	17	14	44	39	19
	No	15	22	29	43	23
Trichur	Yes	..	20	48	..	26
	No	13	22	15	28	20
Palghat	Yes	..	19	25	26	21
	No	..	16	22	20	20
Malappuram	Yes	5	18	30	21	18
	No	..	17	25	30	18
Kozhikode	Yes	8	15	25	19	18
	No	8	22	27	19	23
Cannanore	Yes	12	24	23	23	23
	No	6	12	19	20	16
State	Yes	18	24	34	28	25
	No	17	22	34	32	24

TABLE 15

**Yield rates of Cocoa Plants according to the use of Pesticides  
and by age groups**

District	Using pesti- cides	Age in years				All ages
		1-2	2-4	4-6	6 & above	
Trivandrum	Yes	18	35	44	42	36
	No	11	21	27	23	17
Quilon	Yes	16	40	35	40	37
	No	14	26	33	25	26
Alleppey	Yes	15	23	33	26	23
	No	13	19	23	22	18
Kottayam	Yes	23	30	45	38	32
	No	18	21	30	34	21
Idukki	Yes	10	22	44	36	25
	No	22	32	20	40	31
Ernakulam	Yes	20	27	40	41	30
	No	12	15	16	33	15
Trichur	Yes	..	29	38	28	27
	No	13	14	25	..	18
Palghat	Yes	..	17	23	..	20
	No	..	20	28	23	23
Malappuram	Yes	..	18	35	24	18
	No	5	17	25	20	19
Kozhikode	Yes	10	13	18	16	15
	No	7	24	35	22	26
Cannanore	Yes	8	15	26	26	22
	No	10	18	19	18	18
State	Yes	20	26	38	30	28
	No	16	20	25	27	22

TABLE 16

## Distribution of Number of cultivators according to the use of peelings

District	Availability of own equipments for fermentation			Total No. of cultivators
	Available	Not available		
Trivandrum	2642	7315	3452	13409
Quilon	8498	10115	9713	28326
Alleppey	18557	9081	15790	43428
Kottayam	29132	15273	12162	56597
Idukki	4201	5758	4324	14783
Ernakulam	12124	21597	11366	45087
Trichur	7302	7619	6349	21270
Palghat	1172	1423	669	3264
Malappuram	240	2 59	1519	3918
Kozhikode	3470	10724	12298	26492
Cannanore	5539	6868	443	12850
State	92877	97932	78585	269394

TABLE 17

## Distribution of Number of cultivators according to availability of own Equipments for fermentation

District	Availability of own equipments for fermentation		Total No. of cultivators
	Available	Not available	
Trivandrum	288	13121	13409
Quilon	306	28020	28326
Alleppey	434	42994	43428
Kottayam	667	55900	56567
Idukki	Nil	14783	14783
Ernakulam	766	44321	45087
Trichur	893	20377	21270
Palghat	100	3164	3264
Malappuram	28	3890	3918
Kozhikode	Nil	26492	26492
Cannanore	122	12728	12850
State	3604	265790	269394

TABLE 18

## Distribution of Number of Cultivators according to Equipments for drying

District	Equipments for drying		Total No. of cultivators
	Available	Not available	
Trivandrum	149	13260	13409
Quilon	Nil	28326	28326
Alleppey	Nil	43428	43428
Kottayam	662	55905	56567
Idukki	Nil	14783	14783
Ernakulam	Nil	45087	45087
Trichur	149	21121	21270
Palghat	99	3165	3264
Malappuram	109	3809	3918
Kozhikode	Nil	26492	26492
Cannanore	239	12611	12850
State	1407	267987	269394

TABLE 19

**Distribution of number of cultivators reporting about change  
in production of main crop**

District	Production of main crop			Total No. of cultivators
	Decreased	No change	Increased	
Trivandrum	2606	10710	93	13409
Quilon	1660	25318	1348	28326
Alleppey	3153	39928	347	43428
Kottayam	6986	45095	4486	56567
Idukki	1008	13487	288	14783
Ernakulam	7516	37571	Nil	45087
Trichur	3510	17654	106	21270
Palghat	229	2920	115	3264
Malappuram	605	3313	Nil	3918
Kozhikode	3984	22209	299	26492
Cannanore	2384	10415	51	12850
State	33641	228620	7133	269394

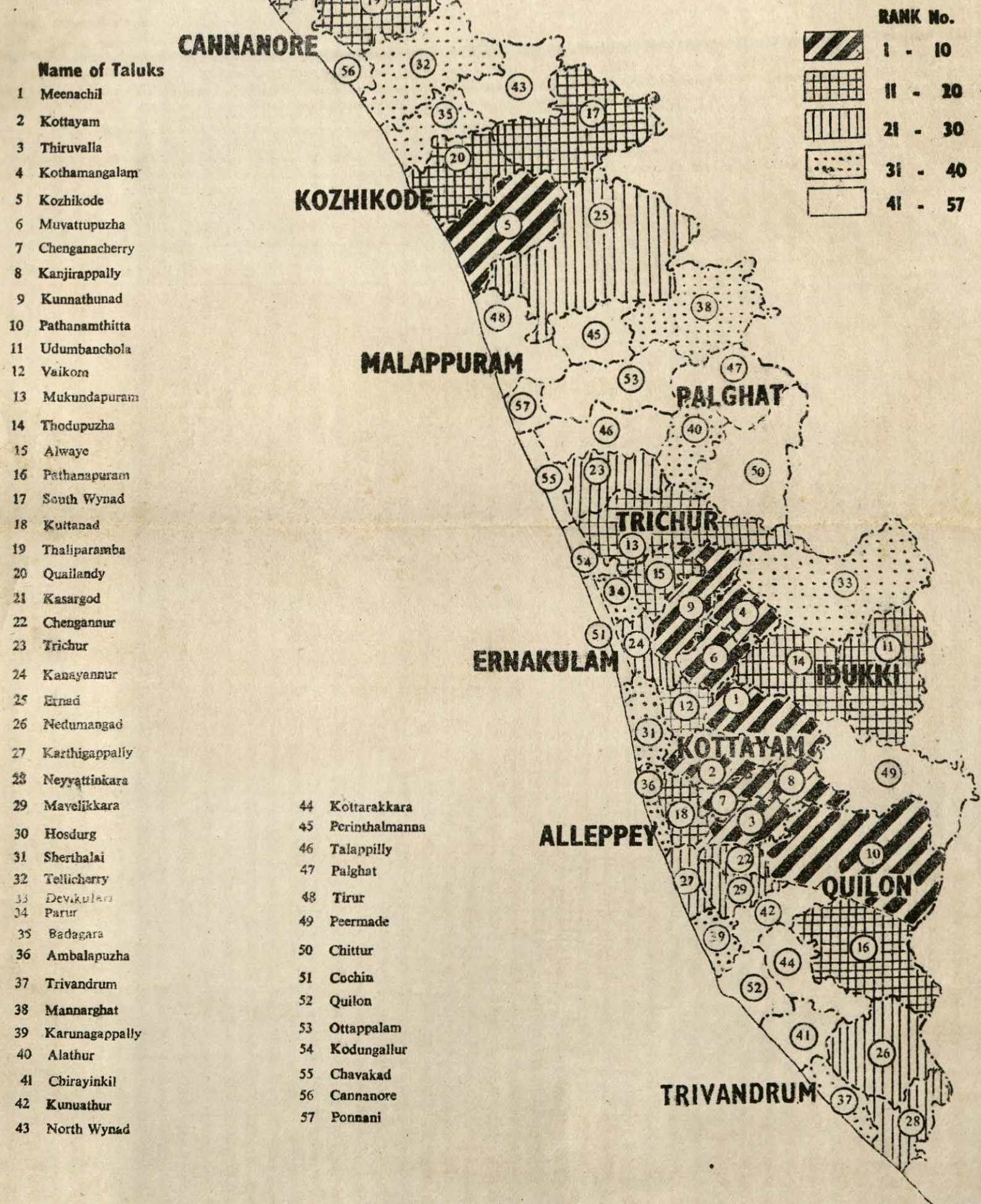
TABLE 20

**Estimates of Area under cocoa for the Agricultural years  
(July—June) from 1977-78 to 1979-80  
(Area in hectares)**

District	1977-78	1978-79	1979-80 (provisional)	Cocoa Survey 1980
Trivandrum	76	265	537	709
Quilon	180	924	1048	1743
Alleppey	903	1539	2706	3167
Kottayam	1162	3913	6433	6849
Idukki	428	566	1495	1673
Ernakulam	1767	2388	3542	4315
Trichur	385	801	894	1245
Palghat	101	122	276	379
Malappuram	43	143	344	470
Kozhikode	296	1177	2028	2209
Cannanore	716	931	1082	1359
State	6057	12769	20385	24118

# KERALA

## TALUKS RANKED ACCORDING TO AREA UNDER COCOA - 1980



**Name of Taluks**

- 1 Meenachil
- 2 Kottayam
- 3 Thiruvalla
- 4 Kothamangalam
- 5 Kozhikode
- 6 Muvattupuzha
- 7 Chenganacherry
- 8 Kanjirappally
- 9 Kunnathunad
- 10 Pathanamthitta
- 11 Udumbanchola
- 12 Vaikom
- 13 Mukundapuram
- 14 Thodupuzha
- 15 Alwaye
- 16 Pathanapuram
- 17 South Wynad
- 18 Kuttanad
- 19 Thaliparamba
- 20 Quailandy
- 21 Kasargod
- 22 Chengannur
- 23 Trichur
- 24 Kanayannur
- 25 Ernad
- 26 Nedumangad
- 27 Karthigappally
- 28 Neyyattinkara
- 29 Mavelikkara
- 30 Hosdurg
- 31 Sherthalsi
- 32 Tellicherry
- 33 Devikulam
- 34 Parur
- 35 Badagara
- 36 Ambalapuzha
- 37 Trivandrum
- 38 Mannarghat
- 39 Karunagappally
- 40 Alathur
- 41 Chirayinkil
- 42 Kunuathur
- 43 North Wynad

- 44 Kottarakkara
- 45 Perinthalmanna
- 46 Talappilly
- 47 Palghat
- 48 Tirur
- 49 Peermade
- 50 Chittur
- 51 Cochin
- 52 Quilon
- 53 Ottappalam
- 54 Kodungallur
- 55 Chavakad
- 56 Cannanore
- 57 Ponnani

**RANK No.**

- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 57

