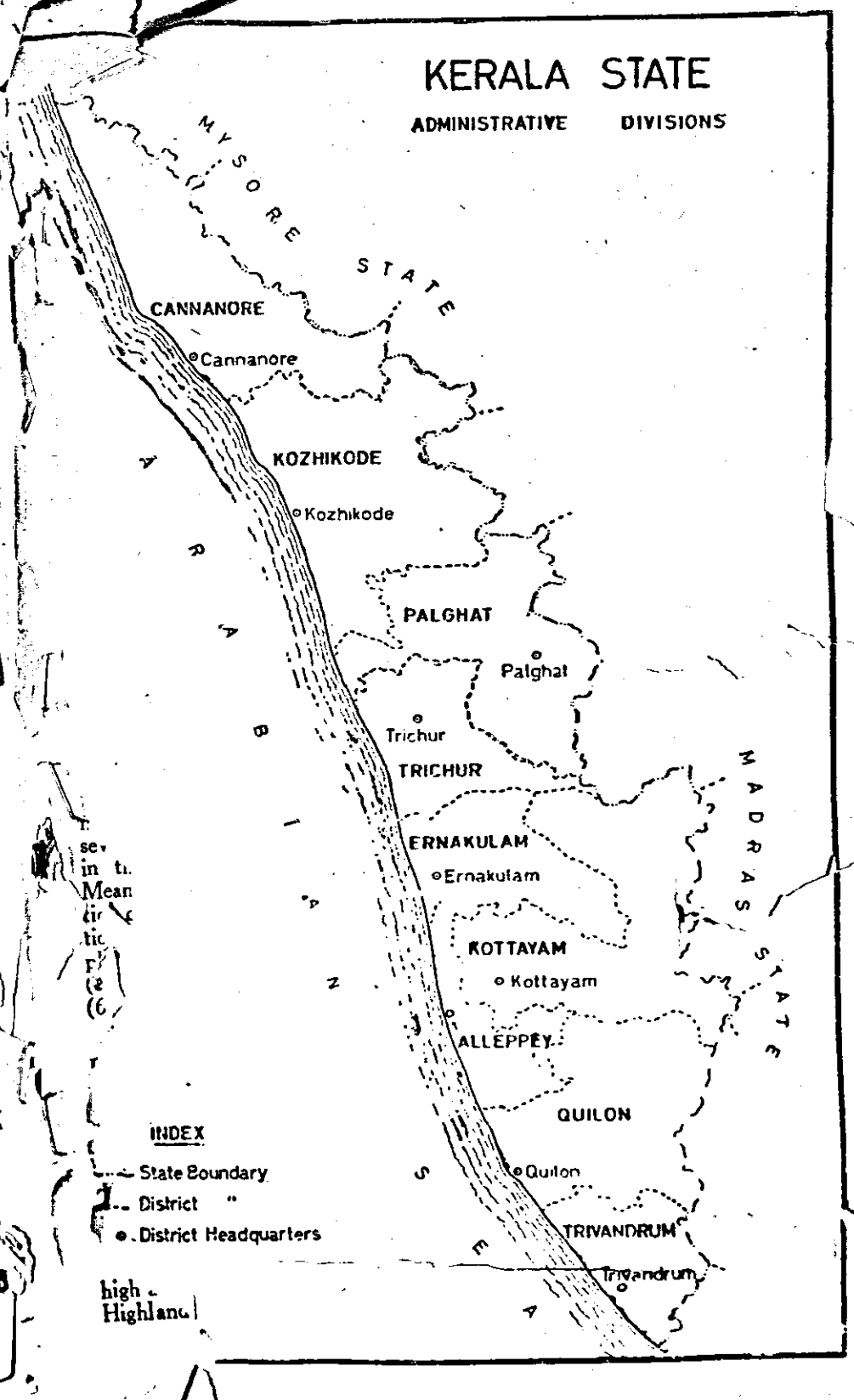


KERALA STATE

ADMINISTRATIVE DIVISIONS



1000 feet
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high
Highland

**KERALA STATE SEASON AND CROP REPORT FOR THE
YEARS 1957-58 AND 1958-59**

PART I—REPORT

1. Introduction

Kerala is the smallest State in the Indian Union. The area of the State according to the professional survey is 15,002 sq. miles. It consists of the old Travancore-Cochin State (excluding the 4 southern taluks and the major portion of Shenkottah taluk) and the Malabar and Kasaragod portion of the old Madras State transferred to Kerala on the reorganisation of States in November 1956.

The State lies at the southern top of the Indian peninsula between north latitudes 8°-18' and 12°-48' and east longitudes 74°-52' and 77°-22'. It is bounded on the west by the Arabian sea and on the east by the Western Ghats which form almost a continuous barrier except for a break of 30 miles at the Palghat pass. The coastal line is nearly 360 miles. The breadth of the State varies from 20 miles in the extreme north and south to about 80 miles in the middle.

Topographically the State is divided into three natural regions, namely, the Highland, the Midland and the Lowland. The Highland lies along the eastern boundary and includes the high ranges of the Western Ghats. The long narrow strip of flat country lying all along the sea coast forms the Lowland region. The country between these two regions forms the midland.

The Highland contains most of the reserve forests of the State. The major forest produces are teakwood, rosewood, other kinds of hardwood and several varieties of softwood. The annual rainfall ranges between 2,540 mms. in the south and 5,080 mms. in the north. Climate is cool and bracing. Means of communication are poor and cultivation is largely limited to plantation crops like, tea, rubber and cardamom. The Western Ghats has an elevation of 5,000 feet on an average, the highest going up to 8,000 feet at certain places. Some of the important peaks in the Western Ghats are Mukunni (8,380 feet) Anamudi (8,887 feet) Nilagiri (8,118 feet) and Pullangudi (6,392 feet).

The Midland consists of uplands of varying elevation through which rivers have curved out long narrow valleys. Rainfall ranges from 1,400 mms. to 4,000 mms. Rice is grown in the valleys while tapioca, coconut, pepper, ginger and rubber are cultivated on the hill slopes.

The Lowland is a narrow strip of land bordering the Arabian Sea in the west. It has an almost unbroken line of lagoons and backwaters receiving the drainage of several rivers. The rainfall ranges from 890 mms. in the extreme south to 3,560 mms. in the north. The soil is particularly suited for rice and coconut cultivation.

The Lowland region is the most densely populated, the density going as high as 2019 per sq. mile in certain places followed by the Midland and the Highland in that order.

The State is divided into 9 districts for administrative purposes. They are Trivandrum, Quilon, Alleppey, Kottayam, Ernakulam, Trichur, Palghat, Kozhikode and Cannanore.

A heavy annual rainfall, a warm humidity of the atmosphere and a fair uniform temperature throughout the year are characteristic features of the State. The seasons are mainly controlled by the two periods of rainfall, namely, the south-west monsoon from June to August and north-east monsoon from October to December. The period from December to February is mainly a clear bright season with cool nights. The atmosphere gets hotter and more moist during the next three months. The sky becomes increasingly overcast with clouds and afternoon showers occur during the latter half of the period.

The State has got an equable climate. Mean temperature varies from 75° to 90°. In the Highland region the climate is cool and bracing. There is high percentage of humidity in the coastal tract going as high as 93 during the months of July and August. Even during the dry weather in December and January the percentage humidity seldom goes below 60. The humidity decreases gradually as we advance towards the foot of the Ghats.

With the mountain ranges all along the eastern border precipitating heavy rains, the State has got a number of rivers originating in the Ghats. 41 of these rivers are west flowing and 3 east flowing. The latter are all tributaries of the Cauvery river. The west flowing rivers after traversing the high mountainous regions, descend rapidly to the midland and are therefore rich in hydel power. These rivers then flow into the plains of the coastal region. Some of these rivers lose their identity in the numerous lagoons and backwaters of this region. These backwaters are inter-connected by a network of canals, thus affording cheap water communication facilities. These waterways extend uninterruptedly from Trivandrum, in the south to Tirur in the north.

The important rivers of the State are (1) Bharathapuzha, (2) Periyar and (3) Pamba. In point of its length Bharathapuzha is the biggest river of the State.

The rivers collect in their progress towards the sea, the rain water and the subsoil water and carry it to all regions of the State. They are full during the two monsoon periods. Even in the dry months they do not dry up completely so that water for irrigation purposes are available. As the State receives the benefit of both the monsoons complete failure of crops and famines are unknown.

The State receives the greater portion of the rainfall from the south-west monsoon. It bursts on the coast towards the end of May and is usually associated with a depression or storm. The rainfall is heaviest in June and July. About two by third of the annual rainfall occurs during this season. The skies are heavily clouded and rain occurs on almost all days. In September the rainfall decreases and the number of rainy days is also smaller.

The south-west monsoon retreats during October and November and the north-east monsoon establishes itself over the country. During this period the rainfall is usually more on the hills than on the plains. It is also less compared to the period of the south-west monsoon.

The annual rainfall is heavy and is also fairly regular and uniform. Two noteworthy features of the distribution of the rainfall are its progressive increase from south to north and a similar increase from the stations on the coast to stations at the foot of the Ghats.

The soils of the State can be classified into 7 types, namely, (1) the hill and forest soil seen all along the eastern portion of the State, (2) the sandy soil seen all along the coastal belt, (3) the laterite soil seen all along the midland portion, (4) black soil which occur as a patch on the eastern border of the Palghat district, (5) peat or kari soil in Alleppey district, (6) the alluvial soil which occurs along the eastern and southern parts of the Vembanad lake in Ernakulam, Kottayam, and Alleppey districts and also as a small patch in Trichur district and (7) the red soil found at the extreme tip of the Trivandrum taluk.

The geological formations met with in Kerala are of the following three types, viz., (i) recent deposits generally found along with the coastal areas, (ii) old alluvium and laterite found in the interior and (iii) unclassified crystalline geneisses. Major portions of the State are of unclassified crystalline geneiss formations. Map shows the geographical distribution of these soil types.

Diversity in crops and heterogeneity in cultivation are the key notes of agriculture in the State. While the Highland is mainly under plantation crops and the lowland is virtually monopolised by paddy and coconut, the midland is under a host of both major and minor crops, often cultivated intermixed with one another. The more important crops in the region are pepper, rubber, coconut, arecanut, tapioca, ginger, etc.

The population of the State according to the 1951 Census was 135.52 lakhs with a density of 904 persons per sq. mile. Kerala is thus the most densely populated State in India. The population of the State has been increasing steadily for the last few decades. It has increased by about 110 or more during the course of the last 50 years. The rate of growth is considered to be one of the highest in the world. During the decade 1941 to 1951 alone the population increased by more than 20 per cent.

The more important aspects of the State are discussed in detail in the following pages.

2. Population

According to the last Census the population of the State was 13,551,529. It is growing at a rapid rate. The variation in population over the last 5 decades is given in the table below.

Year	Area in sq. miles	Population in lakhs			Number of women per 1,000 males	Density per sq. mile	Per cap. land (Acres)
		Total	Male	Female			
1901	15,002	63.38	31.66	31.72	1,002	422	1.51
1911	15,002	70.15	35.48	35.67	1,005	468	1.37
1921	15,002	78.13	38.91	39.22	1,008	521	1.23
1931	15,002	95.02	47.06	47.96	1,009	633	1.01
1941	15,002	110.37	54.53	55.84	1,024	736	0.87
1951	15,002	135.52	66.83	68.69	1,028	903	0.71

The State is the most thickly populated in India, with more than 900 persons per sq. mile on an average. The population has been steadily increasing for the last 50 years as is seen from the above table. It has more than doubled during this period. In the period 1941 to 1951 alone the percentage growth was about 23. The latest district-wise density of population is given in the following table.—

District	Area in *sq. miles	Density of population (1959)
Trivandrum	844	1,815
Quilon	1,827	862
Alleppey	708	2,499
Kottayam	2,456	768
Ernakulam	1,289	1,136
Trichur	1,137	1,374
Palghat	1,980	888
Kozhikode	2,570	905
Cannanore	2,191	691
State	15,002	1,033

*Latest figures furnished by the Director of Survey and Land Records, Trivandrum.

Alleppey is the most thickly populated district with about 2,500 persons per sq. mile. Cannanore on the other hand comes last in this respect with only about 691 persons per sq. mile. Females outstrip males in number. The number of females to 1,000 males in the State is 1,028.

Among the 27 municipal towns (1958-59) in the State, Trivandrum, Kozhikode and Cannanore have a population of more than a lakh, 5 others are in the group 50,000 to 100,000; 7 in the group 20,000 to 50,000; 10 others in the group 10,000 to 20,000 and only two come in the group 5,000 to 10,000 (1951 Census figures).

The rural population of the State according to the 1951 Census is 117.22 lakhs and forms 86.5 per cent of the total population. The remaining 13.5 per cent, i.e., 18.30 lakhs only live in the urban areas. Urbanisation is highest in Trivandrum district and is lowest in Cannanore district (23.1 per cent and 9.1 per cent respectively). According to the 1951 Census 39.5 per cent of the population is under the age of 15, 53.3 per cent is in the age group 15-54 and the remaining 8.2 per cent in the age group 55 and above. The following table gives the detailed break-up:—

Age group	No. of persons in lakhs	Percentage to the total
All ages	135.52	100.00
Below 5 years	19.27	14.20
5-14	32.88	24.30
15-24	27.80	20.50
25-34	19.13	14.10
35-54	25.36	18.70
55 and above	11.08	8.20

The State leads India in literacy. The percentage of literates is 40·5 as per the 1951 Census.

According to means of livelihood, the population can be divided into two main classes, namely, the agricultural population and the non-agricultural population. 53·65 per cent belong to the former category and the rest to the latter. Among the agricultural population the most numerous class is the agricultural labourers forming 39·3 per cent. Even among the non-agricultural population a considerable portion (17·2 per cent) have agricultural pursuits as subsidiary occupations. The percentage among agricultural population is 82·5. The remaining 17·5 per cent have non-agricultural pursuits as subsidiary source of income.

By and large agriculture is the mainstay of the people. The fact that a substantial portion of the population depend on non-agricultural occupation for their living may give the impression that the State is industrialised. But this is not so. The non-agricultural operations mainly relate to handicrafts, trade, small-scale business and industry which require only low investment and the returns are also poor. The number of large scale industries is few and they accommodate only one per cent of the population. The number of persons engaged in small-scale and cottage industries has been roughly estimated at 2·5 lakhs.

The average per capita income of the agricultural labourer is very low. It is Rs. 68·50 per mensem according to the results of a survey conducted by this Department in 1955 in the Travancore-Cochin area. It may in this context be remembered that more than about 20 per cent of the population are agricultural labourers.

The pressure of population on land is very heavy as can be seen from the high density of population. The per capita land is only 0·71 cents. This includes forests and other uncultivable areas also. The net area available for cultivation (excluding the above) was 6,030,688 acres in 1957-58 and 6,037,998 acres in 1958-59. The per capita land available for cultivation in these years was 4·5 cents. This is the lowest in India and is comparable to Jammu and Kashmir only.

This extreme pressure on agricultural land has resulted in excessive fragmentation of holdings. This is borne out by the fact that 67 per cent of the cultivated holdings in Travancore-Cochin area are below one acre. Nearly one-third of the holdings are between 1 and 5 acres. Only 5 per cent are above 5 acres. In the Malabar portion also conditions similar to this prevail (vide Report on Census of Land Holdings and Cultivation conducted in Travancore-Cochin area in 1955).

The average monthly income of about 85 per cent of the families in the State is below Rs. 100. The burden of dependency on the earners in the family is very heavy. Among the population 28 per cent only are self-supporting, 6 are partial earners and the remaining 66 per cent are dependents. Majority of the female population are dependents, but among males it is not so keen. Among females only 13 per cent are self-supporting 7 per cent are partial earners and 8 per cent are non-earning dependents. But among males 43 per cent are self-supporting, 5 per cent are earning dependents and only 52 per cent are non-earning dependents. On an average the size of an average household is 6.

3. Rainfall

Agriculture depends largely on the soil and climatic conditions. As stated earlier the State receives heavy rainfall from both the monsoons. It is heaviest during the south-west monsoon. Two-third of the annual rainfall occur during the period from May to September.

The rainfall increases progressively from the south to the north. A similar increase is noted from stations on the coast to those at the foot of the ghats.

Even though the State receives rain from both the monsoons this does not rule out the possibility of the seasonal distribution of rainfall being unfavourable to agriculturists. Heavy floods which occur frequently also cause substantial damage to crops in the basins and banks of rivers.

Table 1'2 of the summary tables gives the average rainfall in each district for the years 1957-58 and 1958-59. The normal rainfall for seven districts are given in table 1'1.

4. Soil

The classification of soils in the State is given in Appendix 7.

Trivandrum District.—The soil types in the three natural regions in this district are different. In the highland, the soil is clay loam and rests on a bed of rocks. It is rich in organic matter nitrogen and potash. It is slightly acidic and is black in colour. The soil in the midland is also clay loam, but of laterite, origin with an admixture of gravel and sand. The soil in the valleys is also clay loam, but has high sand content. The coastal strip is sandy with a laterite foundation.

Quilon District.—Pure crystalline sand is seen all along the coastal tract. The swamp paddy lands of some taluks in this district contain clay soils of different depths mixed with varying proportions of organic matter at different stages of decay. In the valleys and deltas the soil is alluvial in nature and consists of mainly of silt. In the hills, loamy soil with a great admixture of humus is found.

The soils in this district are deficient in nitrogen and phosphorus while the coastal tract is deficient in potash also. Lime deficiency is a general defect in this district.

Alleppey District.—The soil types in this district are generally the same as in Quilon District. Peaty marsh soil occurs in parts of two taluks in this district.

Kottayam District.—The soils in the hills are loamy with a great admixture of humus. Swamp paddy lands occur in two taluks patches of peaty marsh soil are found in another taluk. The soils in this district are generally deficient in nitrogen, phosphorus and lime.

Ernakulam District.—Generally the soil types in the high land and midland are more or less the same as in Kottayam District. In the coastal tract the soil is sandy. Swamp paddy lands occur in the low land region.

Trichur District.—The soils in this district is a red ferruginous loam. In several places on the slopes of the ghats is found an overlaying layer of black mould formed of decayed vegetable matter. In the midlands the soil is

laterite, varying in quantity from rich loam to uncultivable laterite. In the low land region the soil is arenacious consisting mainly of recent deposits of sand and mud due to river alluvium.

Malabar Region (Palghat, Kozhikode and Cannanore Districts).—A narrow belt of arenacious soil is found on the shores of the coastal taluks. The soils in the plains belong to the red ferruginous series composed of a mixture of clay and river sand. They are classified further as red clay, red loam and red sand. Red loam is the common soil type in all taluks except in Ponnani and Chittur, clay is found only in those areas inundated by monsoons and in shallow lakes and lagoons of Ponnani taluk. Black cotton soil is found in some parts of Chittur taluk. In Wyanad the soil are of red ferruginous series with rijar soils in the north of the taluks. The black and blackish soil derived from the forest washes are highly fertile.

5. Communication facilities

The State is more advanced than other Indian States in the matter of communication facilities. There is a good system of roads which connects the State with other States and also interlinks the districts. This net work of roads connects the remote parts of the State with each other. The average length of roads in the State is 0.56 miles per sq. mile. There is also a rail link from Trivandrum in the South to Kasargod and Hosdurg in the north. This connects the important centres in the State and also the State with the neighbouring Madras and Mysore States. The backwaters along the coast also afford cheap transportation facilities from Trivandrum in the south to Tirur in the north. The backwaters are interconnected with a system of canals to facilitate this. The State is linked to the other States by airways also. There are daily air services from Trivandrum and Ernakulam to Madras, Bombay, etc.

Trivandrum District.—The main southern road from Trivandrum the capital of the State and the headquarters of the district connects this district with Kanyakumari District of the neighbouring Madras State. A net work of subsidiary and feeder roads are linked to this road within the district. The main Central Road, and the National Highway connect the district with the neighbouring Quilon District.

The backwaters and the system of canals that interlink them afford facilities of cheap water transport within the district.

The Southern Railway has its southern terminus at Trivandrum. The length of road within the district is about 30 miles.

Trivandrum has got an air port. Regular services operate from here to Cochin, Madras, Bombay, etc.

Quilon District.—The National Highway and the main central road pass through this district. A number of subsidiary and feeder roads linked to them afford communication facilities to every corner of the State.

Quilon, the headquarters of the district is connected by rail road to the neighbouring districts of Trivandrum and Kottayam in the State and also with neighbouring Thirunelveli District of Madras State. The rail link from Trivandrum branches off at Quilon, one line going to Kottayam and the other to Madras.

The backwaters and canals afford in the case of this district also facilities for cheap water transport.

Alleppey District.—The main Central Road on the eastern part and the National Highway on the west link this district with Ernakulam and Kottayam District. These two highways are connected within the district by the Alleppey-Changanacherry road and the Ambalapuzha-Thiruvalla road. Rivers also afford cheap water transportation facilities between the eastern and western portions of the district. On the western part water transport is the most common form of inland transport.

Kottayam District.—The main Central Road passes through this district on its western portion and connects it with the other districts in the State. The Cochin-Munnar road connects the high ranges in this district with the Cochin Port.

Rail roads connect the district with the neighbouring districts.

The Vembanad lake affords cheap water transportation facilities in the western portion of the district.

Ernakulam District.—The district has got ample facilities for road transport. A net work of roads connect almost all parts of the district with Ernakulam, the headquarters of the district.

The western portion of the district has got a system of backwaters which extends south-wards to Alleppey and beyond. A large volume of traffic is carried on through these natural water ways.

The port of Cochin, the most important in South India is near Ernakulam. It is connected by road, rail and water to the rest of the country. There is also a Naval Base at Cochin.

Trichur District.—Trichur, the headquarters of the district is connected by road, and rail to the neighbouring districts. A net work subsidiary and feeder roads connect the distant parts of this district.

The railway line connecting Ernakulam in the south to Trichur extends to Shorannur. From here it branches off, one line going to Madras and the other via Kozhikode and Cannanore to Mangalore.

The Malabar Region (Palghat, Kozhikode and Cannanore Districts).—Communication facilities are poor over this region compared to the other parts of the State. There is only 38 miles of road per sq. mile. The condition is still poorer in the interior parts.










There are trunk roads which connect the main centres in this region to the Mysore State, the Nilgiris and Coimbatore Districts in the Madras State and to Trichur District in the State.

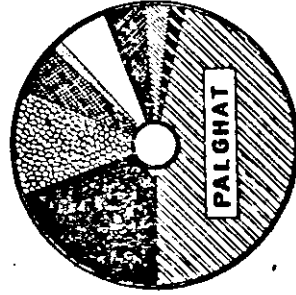
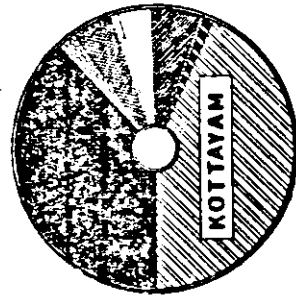
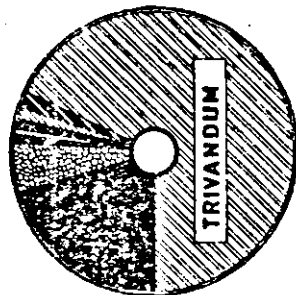
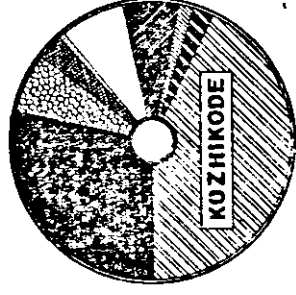
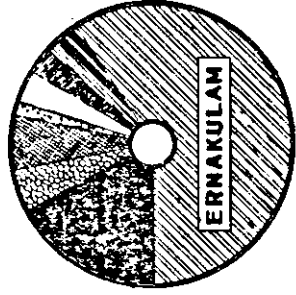
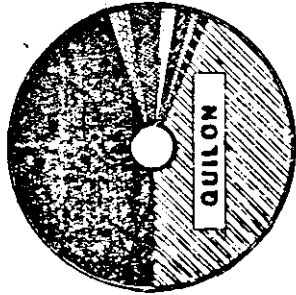
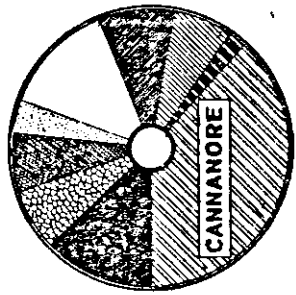
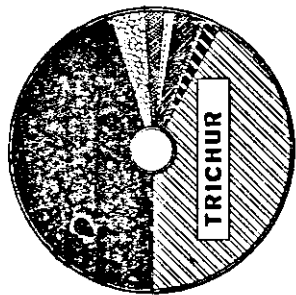
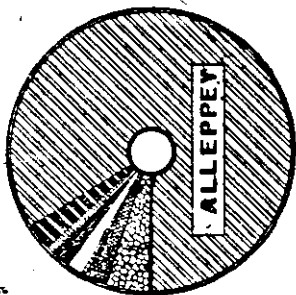
Many of the rivers flow into backwaters along the coast. These backwaters are inter-connected by artificial canals to facilitate water transport along the coast. There is an uninterrupted waterway from Tirur in the Kozhikode District to Trichur in the south.

The broadgauge main line from Madras to Mangalore traverses the taluks of Palghat and Ponnani and proceeds north along the coast.

CLASSIFICATION OF AREA - 1958 - 59

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6. Classification of Area

The classification of area of the State for the years 1952-53 to 1958-59 is given in Table A of summary tables and the district-wise figures for the 2 years under report are given in Table 2'1 (Detailed tables).

(1) *Total area.*—The total area of the State according to professional survey is 15,002 sq. miles (9,601,299 acres). The area according to village papers was 95,34,611 acres. It thus accounted for 99·3 per cent of the area according to professional survey.

The following table gives the area according to village papers in each district as percentage to the professional survey area:—

District	Percentage
Trivandrm	98·9
Quilon	99·1
Alleppey	101·8
Kottayam	98·5
Ernakulam	95·1
Trichur	99·9
Palghat	99·5
Kozhikode	99·4
Cannanore	101·6
State	99·3

The district-wise area and the percentage to the total area are given below:—

District	Professional survey		Village papers	
	Area (acres)	Percentage	Area (acres)	Percentage
1	2	3	4	5
Trivandrum ..	540,147	5·6	533,983	5·6
Quilon ..	1,169,421	12·2	1,159,049	12·2
Alleppey ..	453,171	4·7	461,568	4·8
Kottayam ..	1,571,546	16·4	1,547,434	16·2
Ernakulam ..	8,25,210	8·6	784,381	8·2
Trichur ..	727,654	7·6	727,137	7·6
Palghat ..	1,266,867	13·2	1,261,285	13·2
Kozhikode ..	1,644,883	17·1	1,634,814	17·2
Cannanore ..	1,402,400	14·6	1,424,969	15·0
State ..	9,601,299	100·0	9,534,611	100·0

Kozhikode is the largest district and it covers about 17 per cent of the area of the State. It is followed by Kottayam, Cannanore, Palghat and Quilon in that order. The smallest district is Alleppey (4·8 per cent).

(2) *Forests.*—The area under forests was 25,15,388 acres in 1957-58 and 2,589,105 acres in the next year. This formed 26·38 and 27·15 per cent

of the corresponding total area of the State. The distribution of the area under forests among the various districts is given below :—

District	1957-58		1958-59	
	Area (acres)	Percentage	Area (acres)	Percentage
Trivandrum ..	1,10,352	4.4	1,10,241	4.3
Quilon ..	5,23,321	20.8	5,20,766	20.1
Alleppey ..	1,268	×	1,268	×
Kottayam ..	5,91,643	23.5	5,91,643	22.8
Ernakulam ..	1,36,556	5.4	1,36,551	5.3
Trichur ..	3,28,483	13.1	3,28,483	12.7
Palghat ..	2,46,328	9.8	2,46,275	9.5
Kozhikode ..	3,92,172	15.6	4,68,613	18.1
Cannanore ..	1,85,265	7.4	1,85,265	7.2
State ..	25,15,388	100.0	25,89,105	100.0

× = Less than 0.1

During the 2 years under report, there was no large change in the distribution of forest area among the districts. The difference of 76,441 acres between the two years is accountable to a wrong grouping of so much forest area in Wyanad taluk under barren and unculturable land for 1957-58.

Kottayam, containing about 23 per cent of the total forest area, is the leading district in this respect. It is followed by Quilon. The area under forest in Alleppey district is negligibly small. Private forests exist only in the Malabar region. The estimated area under them is about 3 lakhs of acres.

(3) *Land put to non-agricultural uses.*—The estimated area under non-agricultural uses in 1957-58 was 496,914 acres. It was about 5 per cent of the total area of the State. In 1958-59 this area decreased to 492,328 acres. A similar decrease is noted in the case of earlier years also. The area under non-agricultural uses in each district and the corresponding percentages to the area for the State are given below :—

District	1957-58		1958-59	
	Area (acres)	Percentage	Area (acres)	Percentage
Trivandrum ..	31,031	6.2	30,665	6.2
Quilon ..	28,873	5.8	26,797	5.4
Alleppey ..	25,502	5.1	21,893	4.4
Kottayam ..	31,537	6.3	31,537	6.4
Ernakulam ..	36,198	7.3	37,537	7.6
Trichur ..	29,614	6.0	27,956	5.7
Palghat ..	1,51,460	30.5	1,51,460	30.8
Kozhikode ..	64,883	13.1	64,883	13.2
Cannanore ..	97,816	19.7	99,600	20.3
State ..	4,96,914	100.0	4,92,328	100.0

The extent of land put to non-agricultural uses was largest in Palghat District. It contained nearly one-third of the area in the State. Next comes Cannanore with about 20 per cent. It was followed by Kozhikode (13 per cent). Thus it can be seen that the area of land put to non-agricultural uses was larger in the Malabar region, as compared to districts in the T-C region. In the districts in T-C area the percentage was about '6'.

(4) *Barren and unculturable land* accounted for 491,621 acres in 1957-58 and 415,180 in the next year. This sudden decrease is accounted for by the fact that 76,441 acres of land in South Wyanad under 'Forests' was wrongly included under this head in 1957-58. Excepting this there was no large change in area between the two years. The district-wise distribution for 1958-59 is given below :

District	Area (acres)	Percentage
Trivandrum ..	5,614	1.4
Quilon ..	42,247	10.1
Alleppey ..	11,978	2.9
Kottayam ..	70,236	17.0
Ernakulam ..	49,390	11.9
Trichur ..	16,456	4.0
Palghat ..	71,383	17.2
Kozhikode ..	49,041	11.8
Cannanore ..	98,835	23.7
State ..	4,15,180	100.0

In this case also the extent of area is comparatively larger in Malabar region. It contained more than half of the barren and unculturable land in the State. Trivandrum district with only 1.4 per cent of the total stood last in this respect.

(5) *Land not available for cultivation.*—The total area under the above three groups, viz., forests, non-agricultural uses and barren and unculturable land was 3,496,613 acres in 1958-59. This is nearly 37 per cent of the total area of the State according to village papers. It represents an area not easily available for cultivation. The corresponding figure for each district in 1958-59 are furnished in the following table.—

District	Land not available for cultivation (1958-59)		Percentage to the total area
	Acres	Percentage	
Trivandrum ..	146,520	4.2	27
Quilon ..	589,810	16.9	51
Alleppey ..	35,139	1.0	8
Kottayam ..	693,416	19.8	45
Ernakulam ..	223,478	6.4	29
Trichur ..	372,895	10.7	51
Palghat ..	469,118	13.4	37
Kozhikode ..	582,537	16.6	35
Cannanore ..	383,700	11.0	27
State ..	3,496,613	100.0	37

In Quilon and Trichur districts nearly half the area was not available for cultivation. The area was least in Alleppey District where only 8 per cent of the area came under the group. Considering the extent of land not available for cultivation, Kottayam District having nearly 20 per cent of the area in the State, stood first. Then came Quilon, Kozhikode, Palghat, Cannanore and Trichur districts. Alleppey district came last preceded by Ernakulam and Trivandrum in that order.

(6) *Permanent pastures and grazing lands.*—During both the years the area under permanent pastures and grazing lands was only about 1 per cent of the total area of the State. In Trivandrum district no area was reported under this classification during both the years. In Alleppey the area was negligibly small. In all the other districts, with the exception of Cannanore, the percentage stood around 1. In Cannanore it was about 4 and the sub-joined table gives the distribution among the districts.

District	1957-58		1958-59	
	Area (acres)	Percentage	Area (acres)	Percentage
Trivandrum ..	..	..	..	..
Quilon ..	7,415	6.2	4,162	3.8
Alleppey ..	2,103	1.8	1,180	1.1
Kottayam ..	12,676	10.6	12,676	11.4
Ernakulam ..	11,082	9.3	11,082	10.0
Trichur ..	6,858	5.8	3,463	3.1
Palghat ..	15,742	13.2	15,742	14.2
Kozhikode ..	8,570	7.2	8,554	7.7
Cannanore ..	54,704	45.9	53,903	48.7
State ..	119,150	100.0	110,762	100.0

(7) *Land under miscellaneous tree crops not included in net area sown.*—The area under miscellaneous tree crops was 540,847 acres in 1957-58. This decreased to 493,595 acres in the next year. (5.7 and 5.2 per cent respectively of the total area). The district-wise figures are given below:—

District	1957-58		1958-59	
	Area (acres)	Percentage	Area (acres)	Percentage
Trivandrum ..	1,880	0.3	1,880	0.3
Quilon ..	14,378	2.7	13,903	2.8
Alleppey ..	12,337	2.3	8,426	1.7
Kottayam ..	54,014	10.0	55,065	11.2
Ernakulam ..	26,459	4.9	28,908	5.9
Trichur ..	4,120	0.8	4,120	0.8
Palghat ..	107,765	19.8	72,316	14.7
Kozhikode ..	117,868	21.8	121,927	24.7
Cannanore ..	202,026	37.4	187,056	37.9
State ..	540,847	100.0	493,595	100.0

One remarkable feature is that the area under this group is comparatively larger in the districts of Malabar than in other districts. Together they contained about 80 per cent of the total area under this group. Cannanore led the other districts in this respect covering nearly 38 per cent of the area in the State. Then came Kozhikode, Palghat and Kottayam in that order.

The area was least in Trivandrum District (0.3%), preceded by Trichur (8%).

(8) *Cultivable waste.*—The area of cultivable waste land in each district, during the two years is furnished below:

District	1957-58		1958-59	
	Area (acres)	Percentage	Area (acres)	Percentage
1	2	3	4	5
Trivandrum ..	6,983	1	6,556	1
Quilon ..	19,041	4	19,041	4
Alleppey ..	10,320	2	10,320	2
Kottayam ..	92,981	20	89,737	19
Ernakulam ..	30,972	7	24,012	6
Trichur ..	13,488	83	22,034	5
Palghat ..	59,877	13	59,877	13
Kozhikode ..	1,09,728	23	1,09,316	23
Cannanore ..	1,27,843	27	1,27,075	27
State ..	4,71,233	100	4,67,968	100

Total area under cultivable waste land decreased to 4,67,968 acres in 1958-59, i.e., 3265 acres less than that in 1957-58. This was nearly 5 per cent of the total area of the State. More than one-fourth of the total cultivable waste land was in Cannanore district. It was followed by Kozhikode (23 per cent), Kottayam district with about 20 per cent ranked third. Then came Palghat, Ernakulam, Trichur, Quilon, Alleppey and Trivandrum in that order. Trivandrum accounted for only 1 per cent of the total.

(9) *Curent fallow.*—During the year 1957-58, one lakh forty-eight thousand six hundred and thirty acres of land were left fallow and this increased to 1,78,142 acres during 1958-59. This was nearly 2 per cent of the

total area of the State. The district-wise break-up of this area and the percentage variation on 1958-59 over the previous year is given below :—

District	1957-58		1958-59		Percentage variation
	Area (acres)	Percentage	Area (acres)	Percentage	
Trivandrum ..	6,704	4.5	9,935	5.6	+48
Quilon ..	6,210	4.2	11,176	6.3	+80
Alleppey ..	3,724	2.5	14,666	8.2	+294
Kottayam ..	12,318	8.3	17,400	9.8	+41
Ernakulam ..	21,765	14.6	21,765	12.2	0
Trichur ..	5,690	3.8	13,135	7.4	+131
Palghat ..	22,386	15.1	21,773	12.2	-3
Kozhikode ..	42,458	28.6	39,658	22.2	-7
Cannanore ..	27,375	18.4	28,634	16.1	+5
State ..	148,630	100.0	1,78,142	100.0	+20

Except in the case of Ernakulam district, the area under current fallow showed much variation between 1957-58 and 1958-59. The districts, which showed an increase were Alleppey, Trichur, Quilon, Trivandrum, Kottayam and Cannanore in that order, there being an increase of 29.4 per cent in Alleppey District. The area in the districts of Kozhikode and Palghat decreased by 7 and 3 per cent respectively. However, in both the years, Kozhikode district led the others in regard to the extent of fallow land.

(10) *Other fallows*.—Other fallow lands accounted for 2,05,769 acres, i.e., 1957-58, i.e., 2 per cent of the total area of the State. During the next year this area decreased to 2,00,617 acres. The sub-joined table gives the distribution of this area among the districts.

District	1957-58		1958-59	
	Area (acres)	Percentage	Area (acres)	Percentage
Trivandrum ..	7,526	3.6	6,567	3.3
Quilon ..	9,009	4.4	9,820	4.9
Alleppey ..	4,057	2.0	3,757	1.9
Kottayam ..	4,544	2.2	5,788	2.9
Ernakulam ..	8,130	3.9	10,406	5.2
Trichur ..	3,441	1.7	3,132	1.6
Palghat ..	36,000	17.5	36,000	17.8
Kozhikode ..	31,248	15.2	27,605	13.8
Cannanore ..	1,01,814	49.5	97,542	48.6
State ..	2,05,769	100.0	2,00,617	100.00

Compared to the T-C region, the extent of other fallow lands was larger in the Malabar region. It contained about 80 per cent of the land under this head in the State, Cannanore District alone containing about 50 per cent.

The total area under the three classification current fallow, other fallows and cultivable waste represents an area easily cultivable. The total area under these 3 groups was 2,53,251 acres in 1958-59. The net area sown during this period was 45,86,914 acres. Thus for every 100 acres of cultivated land, nearly 20 acres of easily cultivable land was lying as waste or as fallow. A half of this comes under the group 'Cultivable waste'. The total area under those 3 groups in each district, expressed as percentage to the net area sown in the district is given below :—

District	Percentage to net area sown	
	1957-58	1958-59
Trivandrum ..	6	7
Quilon ..	7	8
Alleppey ..	5	8
Kottayam ..	17	16
Ernakulam ..	13	12
Trichur ..	7	12
Palghat ..	22	20
Kozhikode ..	25	24
Cannanore ..	49	46
State ..	18	19

The percentages for the districts in the Malabar region show that there is much land left in this region which can be brought under the plough. This is particularly so in Cannanore District where for every 100 acres of cultivated land nearly 50 acres are left as current fallow, other fallows or cultivable waste.

(11) *Net area sown.*—The net area sown in the State was 45,45,059 acres in 1957-58 and 45,86,954 acres in the next year. Thus the area brought under the plough in 1958-59 over that in the previous year was only 41,895 acres (i.e., a 1 per cent increase). Roughly the net area sown was nearly half the area of the State in the two years. The net area sown in each district is given below: The percentages to the total for the State is also given alongside.

District	1957-58		1958-59	
	Area (acres)	Percentage	Area (acres)	Percentage
Trivandrum ..	3,63,893	8	3,62,525	8
Quilon ..	5,08,555	11	5,11,137	11
Alleppey ..	3,90,279	9	3,88,080	8
Kottayam ..	6,77,485	15	6,73,352	15
Ernakulam ..	4,63,829	10	4,64,730	10
Trichur ..	3,18,987	7	3,08,358	7
Palghat ..	5,50,344	12	5,86,459	13
Kozhikode ..	7,42,405	16	7,45,219	16
Cannanore ..	5,29,282	12	5,47,056	12
State ...	45,45,059	100	45,86,914	100

The percentage distribution of the cultivated area among the districts did not show much variation in the 2 years under report. Kozhikode, the largest district, containing 16 per cent of the area sown in the State led others in this respect. It was followed by Kottayam (15 per cent), Trivandrum came last with only 8 per cent of the net sown area in the State.

(12) *Area sown more than once.*—The area sown more than once in 1957-58 was 9,18,129 acres and in the next year there was an increase of 31,670 acres (3.4 per cent). Thus on an average about 1/5 of the sown area was cropped more than once in both the years. The percentage of area sown more than once to the net area sown in each district is given below:

Year	State	Trivandrum	Quilon	Alleppey	Kottayam	Ernakulam	Trichur	Palghat	Kozhikode	Cannanore
1957-58	20	32	16	25	6	14	45	34	13	17
1958-59	21	35	17	31	6	12	50	33	11	17

The percentage was largest in Trichur district followed by Palghat, Trivandrum and Alleppey in that order. It was a minimum in Kottayam.

(13) *Total cropped area.*—The total cropped area in the State was 54,63,188 acres in 1957-58 and it increased by 73,524 acres in the next year. A similar increase is noted in the earlier year also. Between 1952-53 and 1958-59 the total cropped area increased by 7 per cent. The per capita cropped area is 36 cents in 1958-59. The sub-joined table gives the percentage of total cropped area to the total area (village papers) in each district, the per capita cropped area in each district and also the distribution of the cropped area among the districts.

(Area in acres)

District	1957-58				1958-59			
	Total cropped area	Percentage to total area	Percentage to area according to village papers	Per capita cropped area	Total cropped area	Percentage to total area	Percentage to area according to village papers	Per capita cropped area
1	2	3	4	5	6	7	8	9
Trivandrum ..	4,81,951	8·82	90	0·32	4,87,801	8·8	91	0·32
Quilon ..	5,87,671	10·76	51	0·35	5,98,444	10·8	52	0·35
Alleppey ..	4,86,946	8·91	105	0·28	5,08,139	9·2	110	0·29
Kottayam ..	7,19,804	13·18	47	0·48	7,13,782	12·9	46	0·46
Ernakulam ..	5,27,908	9·66	67	0·30	5,22,052	9·4	67	0·29
Trichur ..	4,62,538	8·47	64	0·30	4,63,726	8·4	64	0·29
Palghat ..	7,38,731	13·52	59	0·43	7,79,109	14·0	62	0·44
Kozhikode ..	8,36,448	15·31	51	0·37	8,24,109	14·9	50	0·36
Cannanore ..	6,21,191	11·37	44	0·41	6,39,551	11·6	45	0·42
State ..	54,63,188	100·00	57	0·36	55,36,713	100·0	58	0·36

The total cropped area in the State was 57 per cent of the area according to village papers in 1957-58 and this increased to 58 per cent in the next year. In Alleppey district it was 105 in 1957-58 and 110 in 1958-59. It was followed by Trivandrum 90 per cent. Cannanore district stood last in this regard. The total cropped area in 1957-58 was only 44 per cent in this district while in 1958-59 it was 45 per cent.

The per capita cropped area in the State was 36 cents for both the years. Among the districts, Kottayam led others with 48 cents of cropped area per head, in 1957-58 and 46 cents in the next year. It was followed by Palghat, Cannanore, Kozhikode and Quilon in that order. The per capita cropped area

was least in Alleppey district, viz., 28 cents in 1957-58. In the next year this increased to 29 cents.

7. Irrigation

The area irrigated from various sources and the area under crops irrigated are given in Tables B₁ and B₂ (Summary tables). In 1957-58 an area of 8,50,608 acres was under irrigation. In the next year it increased by 28,220 acres. The net area irrigated was 18·7 per cent of the net area sown in 1957-58 and in 1958-59, it was 19·2 per cent. The distribution of the net area irrigated among the districts is given below. The percentage of net area irrigated to the net sown area is also given alongside.

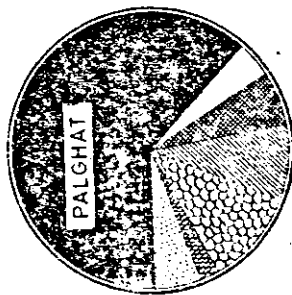
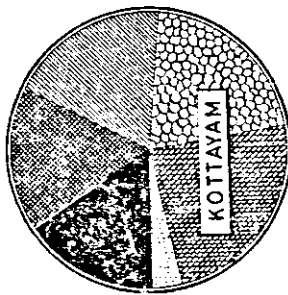
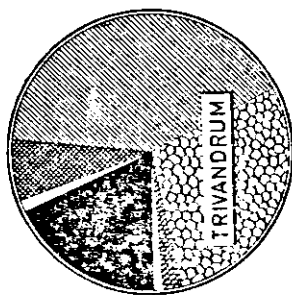
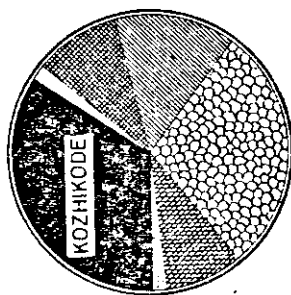
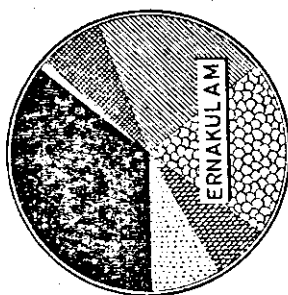
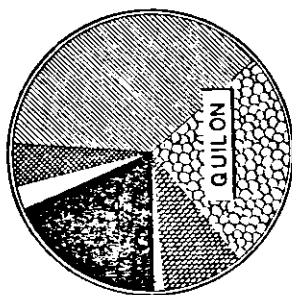
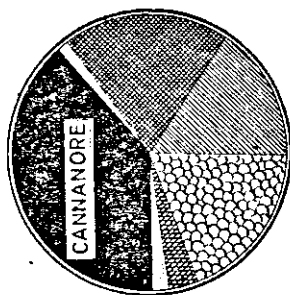
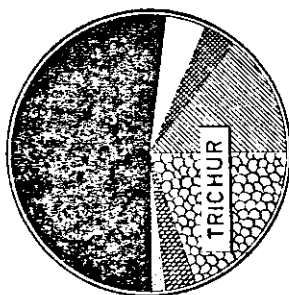
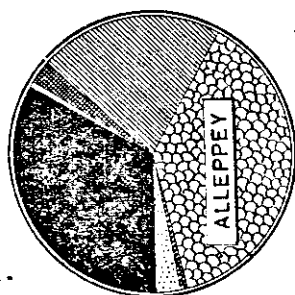
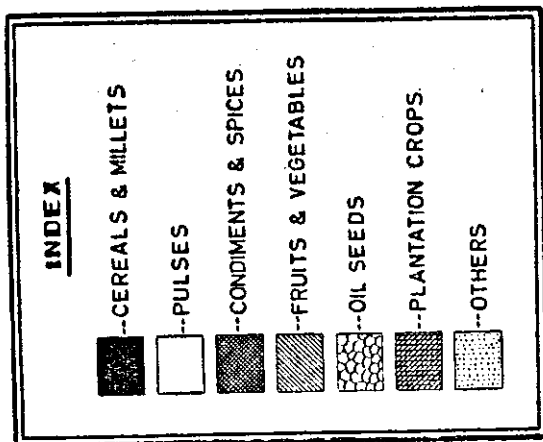
(Area in acres)

District	1957-58			1958-59		
	Net area irrigated	Percentage	Percentage of net area sown	Net area irrigated	Percentage	Percentage of net area sown
1	2	3	4	5	6	7
Trivandrum ..	1,44,217	16·95	39·6	1,44,423	16·43	39·8
Quilon ..	1,20,471	14·16	23·7	1,20,471	13·71	23·6
Alleppey ..	99,061	11·65	25·4	99,061	11·27	25·5
Kottayam ..	96,427	11·34	14·2	96,777	11·01	14·4
Ernakulam ..	1,66,813	19·61	36·0	1,67,584	19·07	36·1
Trichur ..	1,39,038	16·35	43·6	1,53,528	17·47	49·8
Palghat ..	74,064	8·71	13·5	80,394	9·15	13·7
Kozhikode ..	9,214	1·08	1·2	14,147	1·61	1·9
Cannanore ..	1,303	0·15	0·2	2,443	0·28	0·4
State ..	8,50,608	100·00	18·7	8,78,828	100·00	19·2

The area irrigated was largest in Ernakulam district in both the years. the percentage to the total irrigated area in the State being about 20 and 19 respectively in the 2 years. It was followed by Trivandrum district in 1957-58 and by Trichur district in 1958-59. In the three districts in Malabar region the area irrigated was less when compared to the districts in T-C region. Among them Cannanore came last with only about 1 per cent of the total irrigated area in the State.

Only 19 per cent of the net area sown received irrigation in the State. The percentage is highest in Trichur district, where 44 per cent of the net area sown was irrigated in 1957-58. In the next year, the percentage further

AREA UNDER CROPS-'58-'59



increased to 50. In the Malabar region especially in Kozhikode and Cannanore the percentage was very low. In 1957-58, only 20 cents out of every 100 acres sown received irrigation in Cannanore District. In 1958-59 it was 40 cents to every 100 acres sown (net).

The gross area irrigated under all crops was 1,219,525 acres in 1957-58. This was 22 per cent of the total cropped area in that year. In 1958-59, there was a 4 per cent increase in the gross area irrigated as compared to the previous year the increase being 48,959 acres. Thus in this year, 23 per cent of the total cropped area was irrigated. Of the total area irrigated under all crops, rice alone accounted for 68 per cent in 1957-58 and 69 per cent in the next year. Non-food crops accounted for only 10 per cent of the irrigated area.

The table below gives the percentage of irrigated area to the total area cropped under each crop.—

Name of crop	1957-58	1958-59
Rice	43.7	46.0
Jowar	82.2	87.3
Ragi	16.3	16.1
Other cereals and millets	48.9	50.1
Pulses	31.3	35.7
Sugarcane	54.3	53.8
Other food crops	12.6	12.3
Total food crops	29.7	30.7
Total non-food crops	7.2	7.0
All crops	23.6	22.9

Thus in 1957-58, 43.7 per cent of the area under paddy was irrigated while in the next year 46 per cent of the area received irrigation. As for Jowar more than 80 per cent of the cropped area was irrigated. Another crop, important in this respect is sugar-cane. 54 per cent of the area under this crop received irrigation. In the case of food crops only 30 per cent of the cropped area received irrigation. 24 per cent of the cropped area in the State was irrigated in 1957-58 and 23 per cent in the next year.

At this stage, one word about the concept of 'irrigation' is required to avoid confusion among those who may use these figures. Usually irrigation statistics furnished by the Public Works Department authorities give the area irrigated from the various types of irrigation projects only, viz., Major, Minor, Medium, Special Minor and Lift Irrigation. But in addition to this, many acres of land are being irrigated by the cultivators from sources other than these irrigation projects. Irrigation is therefore defined as supply of water by artificial means for raising crops. The figures in this report are based on this definition and may therefore be different from the figures of the Public Works Department.

8. Area under crops

Details of area under the various crops are given in Table No. C (Summary tables).

Food crops

The total area under food crops was 3,674,691 acres in 1957-58 and in the next year this increased by 34,366 acres, i.e., by nearly 1 per cent. A similar increase was noticed in the earlier years also. Between 1952-53 and 1958-59 the area under food crops increased by 188,959 acres, i.e., a 5 per cent increase. Food crops formed 67 per cent of the total cropped area in both the years. The percentage distribution of the area under food crops among the districts did not show any marked variation between the years.

The figures for 1957-58 are given below :

State	Trivandrum	Quilon	Alleppey	Kottayam	Ernakulam	Trichur	Palghat	Kozhikode	Cannanore
100	9	10	8	10	9	10	17	14	13

The districts in the Malabar region alone contain among them about 44 per cent of the area under food crops. Palghat alone accounted for 17 per cent of the total area. Alleppey came last with only 8 per cent of the area under food crops.

(a) *Paddy*.—The most important crop in the State is paddy, as far as area is concerned. There are three seasons for its cultivation and the crops after them are known as autumn crop, winter crop and summer crop. The autumn crop is sown during April-June and is harvested from August to October. The second crop (winter) is sown during August-October and the harvesting period is December to February. A major part of the summer crop is sown during the months of November and December, and is harvested in February and March. In certain localities, however, this crop is sown during the period January-March. It in turn is harvested from April to May.

In 1957-58 paddy was cropped in 1,894,701 acres which was 35 per cent of the total cropped area in that year. In the next year the area increased by 4,103 acres but the percentage to the cropped area fell by about 1 per cent. Among the three paddy crops, autumn crop alone accounted for more than half of the total area under paddy. The percentage area covered by this crop during the 2 years were 51 and 52 respectively. About 39 per cent of the area under paddy was under winter crop in 1957-58. In the next year this was only 38 per cent. The summer crop of paddy accounted only for 10 per cent the total area in both the years.

The district-wise distribution of the area under paddy and the percentage area under paddy to the total cropped area in each district are given below :—

District	1957-58			1958-59		
	Area (Acres)	Percentage to total	Percentage to the total cropped area in the District	Area (Acres)	Percentage to total	Percentage to the total cropped area in the District
Trivandrum ..	92,125	4.9	19	89,026	4.7	18
Quilon ..	116,056	6.1	20	110,327	5.8	18
Alleppey ..	156,613	8.3	32	170,760	9.0	34
Kottayam ..	114,573	6.0	16	112,349	5.9	16
Ernakulam ..	183,860	9.7	35	185,282	9.8	35
Trichur ..	244,428	12.9	53	239,364	12.6	52
Palghat ..	465,804	24.6	63	467,544	24.6	60
Kozhikode ..	276,573	14.6	33	277,923	14.6	34
Cannanore ..	244,669	12.9	39	246,229	13.0	39
State ..	1,894,701	100.0	35	1,898,804	100.0	34

Palghat district contained nearly one-fourth of the total area under paddy in the State. It was followed by the Kozhikode, Cannanore and Trichur. Kottayam district came last in this regard. 60 per cent of the cropped area in Palghat district was under paddy. The corresponding figure for Trichur was 50. The order of precedence among the districts in this respect was as follows: Palghat, Trichur, Cannanore, Ernakulam, Kozhikode, Alleppey, Quilon, Trivandrum and Kottayam.

The Malabar region along with Trichur district were the predominantly paddy cultivating areas in the State. Nearly two-third of the total area under paddy fell in this region. The percentage of the area devoted for paddy cultivation to the total cropped area was comparatively less in the districts of Travancore except in Alleppey.

(b) *Other cereals and millets*.—This includes jowar, ragi, varagu, kambu, etc. The total area under them was 31,037 acres in 1957-58 and 30,584 acres in the next year. Palghat district accounted for a major part of the area followed by Kozhikode district.

(c) *Pulses*.—Gram, tur and other pulses like green-gram, black-gram, horse-gram, peas, and beans, etc., come under this group. In 1957-58, the total area under them was 111,444 acres. This decreased to 109,676 acres in the next year. The crop accounted for only 2 per cent of the total cropped area. About 30 per cent of the area under pulses was in Palghat

district and 20 per cent in Trichur district. The remaining districts together thus covered only half the area. Among them Quilon and Kozhikode were the more important districts.

(d) *Sugar crops*.—This includes only two crops, viz., sugarcane and palmyrah. Sugarcane was cultivated in 21,570 acres in 1957-58. It increased to 21,759 acres in the next year. The most important sugarcane growing district is Alleppey. It contained nearly 57 per cent of the total area under sugarcane in the State. The total area under sugar crops was less than 1 per cent of the total cropped area in the State.

(e) *Condiments and spices*.—The State is famous for its spices. The most important among them are black pepper, ginger, turmeric, cardamom and betelnuts (arecanut). The foreign exchange earned through the export of these spices is considerable.

About 5 lakhs of acres forming nearly 9 per cent of the total cropped area were under condiments and spices during the year under report. The leading districts in regard to the cultivation of these crops were Cannanore, Kottayam and Kozhikode. The area covered by these three districts together was about 64 per cent of the total area in the State under these crops.

Kerala's black pepper is famous and it has attracted foreigners to this land from very ancient times. This State produces more than 98 per cent of the total production of black pepper in India. The area under pepper in 1957-58 was 224,658 acres. This was 4 per cent of the total cropped area in the State. There was no large change in the area during the next year. Pepper was grown in all districts in the State, the more important districts being Cannanore, Kottayam and Kozhikode in that order. The percentage distribution of the area under pepper among the various districts is given in the sub-joined table.

District	1957-58	1958-59
Trivandrum	8.9	8.9
Quilon	6.0	5.8
Alleppey	2.0	1.9
Kottayam	14.4	14.4
Ernakulam	7.3	7.3
Trichur	0.6	0.6
Palghat	3.7	3.8
Kozhikode	13.9	14.1
Cannanore	43.2	43.2
State	100.0	100.0

Between 1952-53 and 1958-59, the area under pepper in the State increased by 29,183 acres. This is 15 per cent of the area in 1952-53.

Ginger is another important spices crop though the area under the crop is small. It does not even form 1 per cent of the total cropped area, the area under the crop being 22,907 acres in 1957-58 and 22,034 acres in 1958-59. The bulk of this area was in the districts of Kottayam, Kozhikode, Palghat and Ernakulam. The area under the crop in the remaining districts was negligibly small.

Another important spices crop is turmeric. Palghat, Kozhikode, Kottayam and Ernakulam were the leading districts in its cultivation. The

area under turmeric during 1957-58 was 15,093 acres and in the next year the area decreased to 10,597 acres.

Cardamom is cultivated in the High Ranges in Kottayam district. The area under the crop was 69,658 acres in 1957-58. In the next year it increased by 4,098 acres. Kottayam district covered nearly 90 per cent of the area under this crop.

Betelnut (arecanut) is grown in a sizable area in the State. The area under this crop in the years 1957-58 and 1958-59 was 122,827 acres and 123,833 acres respectively. This was more than 2 per cent of the total cropped area. Though this was cultivated in all the districts, more than 50 per cent of the area under the crop fell in the three districts of Palghat, Kozhikode and Cannanore. Among them Kozhikode district led the rest. The distribution of the area among the districts for 1957-58 and 1958-59 is given below :—

District	1957-58	1958-59
Trivandrum	6.4	5.7
Quilon	6.7	6.9
Alleppey	4.3	4.2
Kottayam	7.0	8.0
Ernakulam	7.8	8.1
Trichur	7.9	7.9
Palghat	15.1	14.0
Kozhikode	31.8	28.4
Cannanore	13.0	16.8
State	100.0	100.0

Chillies (Dry).—Were grown mainly in the Malabar region. The area under the crop was 8,340 acres in 1957-58 and 8,202 acres in 1958-59.

(f) *Fruits*.—The fruit trees and plantain were grown in 9 per cent of the total cropped area.

(i) *Fresh fruits*.—Mangoes and Bananas are the most important of the fresh fruits as far as area is concerned. Bananas include other plantains also. They are seen in almost all the orchards and are fairly well distributed in all the districts. Other fresh fruits include jack, tamarind, pappaya, pineapple, etc. Fresh fruits accounted for 7 per cent of the total cropped areas, the area during the two years under reference being 3,80,560 and 3,84,986 acres respectively.

(ii) *Dried fruits*.—Cashewnut is the most important crop under this group. In 1957-58 the area under cashewnut was 1,08,815 acres. It increased by 5,374 acres during the next year. This formed only 2 per cent of the total cropped area. The largest cashew growing district was Trichur, followed by Ernakulam, Quilon and Cannanore in that order. The cultivation of the crop, however, is distributed in all the districts of the State.

(g) *Vegetables*.—This includes tapioca, sweet potatoes, onions and other vegetables including tubers.

Tapioca is a tuber crop with a high starch content. It is second only to rice among the food crops of the State. It is used as a subsidiary food by a vast section of the people in this State. The duration of the crop is about 6 to 12 months and is raised in almost all types of land. In 1957-58 tapioca was cultivated in 5,28,708 acres and in 1958-59 it increased to 5,33,207

acres. This was nearly 10 per cent of the total cropped area. The subjoined table gives the percentage of the area under the crop to the total cropped area in each district and also the percentage distribution of the area among the districts.

District	1957-58			1958-59		
	Area (acres)	Percentage to the total area	Percentage of area to the total cropped area	Area (acres)	Percentage to total area	Percentage of area to the total cropped area
1	2	3	4	5	6	7
Trivandrum ..	137,669	26	29	144,553	26	30
Quilon ..	140,679	27	23	147,994	27	25
Alleppey ..	60,067	11	12	67,953	12	13
Kottayam ..	79,236	15	11	74,405	13	10
Ernakulam ..	40,814	7	8	38,481	7	7
Trichur ..	15,828	3	3	16,408	3	3
Palghat ..	8,260	2	2	8,455	2	1
Kozhikode ..	30,703	6	6	40,134	7	5
Cannanore ..	15,452	3	3	14,824	3	2
State ..	528,708	100	10	553,207	100	10

The intensity of cultivation was highest in both the years in Trivandrum and Quilon districts. More than half of the total area under tapioca was covered by those two districts. The intensity is seen to be decreasing from the south to north. Palghat district stood last in this regard. It is accounted for only two per cent of the area under tapioca.

Sweet potatoes was grown in 20,905 acres in 1957-58. In 1958-59, the area under the crop was 22,100 acres.

(h) *Oil seeds.*—The important oil seeds in the State are cocoanut, sesamum and groundnut. Among them cocoanut is the most important.

Kerala is a land of palms. The State owes its name to the cocoanut crop, the word Kerala meaning 'The land of Cocoanut Palms'. There was 11,44,766 acres under cocoanut during 1957-58. In 1958-59 the area was 11,75,425 acres. The large difference observed in the acreage for the two years was mainly due to the revision made in the figures for Palghat district in 1958-59 on the basis of diagnostic studies carried out.

Cocoanuts covered more than 20 per cent of the total cropped area in the State. It is grown in all the districts. The percentage of the area under the crop to the total cropped area in each district and the percentage distribution of the total area under the crop among the districts are given below. (Details are given for the year 1958-59 only).

District	Area (acres)	Percentage to the total area in the State	Percentage to the total cropped area
Trivandrum ..	139,720	12	29
Quilon ..	140,256	12	23
Alleppey ..	169,172	14	33
Kottayam ..	139,195	12	20
Ernakulam ..	100,393	9	19
Trichur ..	85,931	7	19
Palghat ..	45,449	4	6
Kozhikode ..	236,295	20	29
Cannanore ..	119,014	10	19
State ..	1,175,425	100	21

The intensity of cultivation was highest in Alleppey district where 33 per cent of the total cropped area of the district was under cocoanut. It was followed by the districts, of Kozhikode, Trivandrum and Quilon. The other districts, excepting Palghat, had about 20 per cent of the total cropped area under this crop. In Palghat district, however, coconut was grown only in 6 per cent of the total cropped area. The most important cocoanut growing district was Kozhikode, which accounted for one-fifth of the total area under the crop. Next in importance, based on the acreage under the crop were the districts of Alleppey, Trivandrum, Quilon, Kottayam and Cannanore. Ernakulam district covered 9 per cent of the area, while Trichur accounted for 7 per cent. Palghat district stood last with only 4 per cent of the total area under cocoanut.

Another important oil seed is sesamum, which was grown in 50,300 acres in 1957-58. The acreage decreased to 48,560 acres during the next year. The major portion of the cultivation, (about 75 per cent) was confined to Quilon and Alleppey districts alone.

Groundnut is yet another important oil seed. It was cultivated almost solely in Palghat district. The area under the crop in 1957-58 was 33,800 acres and 35,468 acres in 1958-59. This formed only less than 1 per cent of the total cropped area.

Cotton

The chief cotton growing district was Palghat. During 1957-58 the crop was raised on an area of 21,490 acres, of which 21,360 acres was in Palghat district. In 1958-59 the area under the crop decreased to 19,650 acres. The area under other fibre crops was very small.

Plantation crops

There are three major plantation crops in this State and they are (1) Rubber, (2) Tea and (3) Coffee.

(1) *Rubber*.—Kerala holds a monopoly for Rubber cultivation in India. Rubber was cultivated in 246,793 acres in 1957-58. In the next year it

increased to 270,626 acres, i.e., the area increased by more than 9 per cent. Rubber was thus cultivated in 5 per cent of the total cropped area. The distribution of the area under rubber among the districts is given below:—

District	1957-58		1958-59	
	Area (acres)	Percentage	Area (acres)	Percentage
Trivandrum ..	6,405	2.6	7,466	2.8
Quilon ..	45,458	18.4	49,087	18.1
Alleppey ..	3,462	1.4	3,738	1.4
Kottayam ..	96,644	39.2	100,469	37.1
Ernakulam ..	32,032	13.0	34,367	12.7
Trichur ..	11,518	4.7	15,576	5.8
Palghat ..	8,645	3.5	10,104	3.7
Kozhikode ..	30,462	12.3	35,600	13.2
Cannanore ..	12,167	4.9	14,219	5.2
State ..	246,793	100.0	270,626	100.0

During both the years under report the major rubber cultivating district was Kottayam. It covered 39 per cent of the area in 1957-58 and 37 per cent in 1958-59. Quilon with 18 per cent of the area came second followed by Ernakulam, Kozhikode, Trichur, Cannanore and Palghat. The area under rubber was least in Alleppey district, which accounted for 1.4 per cent of the total acreage.

(2) *Tea*.—Tea is mostly grown in the High Ranges. During 1957-58 the area under tea was 98,640 acres and in the next year it decreased to 92,988 acres. It is thus grown in only 2 per cent of the total cropped area. Among the districts Kottayam led others, with about 70,000 acres under tea, which was more than 60 per cent of the total area under tea.

(3) *Coffee*.—It was grown in 41,123 acres in 1957-58 and in 40,060 acres in the next year. 65 per cent of the area was in Kozhikode district. Compared to the total cropped area, the area under this crop was very small in both the years under review.

9. Weather and Crop Conditions

1957-58

Trivandrum district.—The south-west monsoon set in by the middle of May 1957 a little earlier this year. Towards the middle of June there was heavy downpour causing flood in certain places in Trivandrum taluk. But no serious damage was reported. The north-east monsoon was normal and was favourable to the standing crops. The sowing of Kanni crop of paddy was started in May 1957, in all taluks. The common pests to the paddy crop, like army worm, stem borer, grass hopper, etc., were prevalent in Trivandrum and Chirayinkil taluks. Since preventive measures were taken by the Agriculture Department in time and no serious damage was done to the crop. But plantains were seriously attacked by 'bunchy top' disease in Trivandrum. The affected plantain were destroyed to prevent the spreading of the disease.

This caused an estimated loss of 500 tons of plantains. The coconut palms were attacked by leaf and root diseases and no estimate of the loss is available.

Quilon district.—All over the district, the south-west monsoon started towards the middle of May, but in Pathanapuram taluk, the rains, started in February. The rainfall was heavy during June in all the taluks. Floods occurred in the taluks of Pathanamthitta, Pathanapuram and Kottarakkara. Seasonal crops like sugarcane, paddy and tapioca were badly affected by the flood, while the rain was favourable to perennial crops. The north-east monsoon, on the other hand was late during the year, but was favourable to the cultivators. In Pathanamthitta taluk the rain was not sufficient during November and drought was experienced in certain parts.

The kharif crops were adversely affected by the excessive south-west monsoon. In certain places the sowing operations were delayed due to the heavy rains. The loss is estimated at 200 tons of paddy. In Pathanamthitta the winter crop of paddy (1958) suffered from drought due to the late arrival of the north-east monsoon, causing a loss of about 280 tons of paddy. The attack of pests was not serious even though the common types of pests prevailed in many parts. Leaf and root diseases were common among coconut palms.

Alleppey district.—The south-west monsoon began by the beginning of June 1957 in this district with the exception of Karthigappally taluk, where the rains set in only towards the second week of July. Heavy rainfall occurred all over the district during July and August leading to floods especially in the Kuttanad region. On the whole the rainfall was not quite favourable to the agriculturists. The north-east monsoon set in towards the end of September. It was not heavy. In Tiruvalla taluk the weather was dry in January and drought conditions prevailed; but no serious damage was reported.

The sowing of autumn crop of paddy started towards the close of April. The onset of the monsoon when the crop was in earheads affected it adversely. It is estimated that about 2,500 tons of paddy were lost due to floods in the district. Attacks from pests were noticed in some parts in Mavelikara taluk. The winter crop of paddy was free from any serious damage in Karthigappally taluk. 400 acres of paddy fields were damaged by floods in Mavelikara. The coconut palms in the coastal area were very seriously affected by diseases.

Kottayam district.—The rainfall from the south-west monsoon was sufficient all over the district. However, slight flood was experienced in Kottayam taluk, but the damage was not serious. The north-east monsoon was also normal in this district. The autumn crop of paddy in Vaikom taluk had an attack from pests. In regard to rabi crop the conditions were not satisfactory. It is reported that about 3,400 tons of paddy was lost owing to the attack of pests. The cardamom plants in Munnar taluk were, to some extent, affected by 'root diseases'.

Ernakulam district.—The south-west monsoon brought heavy rain during the months of June and July 1957 causing floods. It lasted only for a few days. The rain lasted till the end of July. The north-east monsoon set in towards the beginning of October only. This was quite favourable to the paddy crop. There was only occasional drizzling in the months of December and January and in certain places drought conditions prevailed. In Parur taluk the rainfall was not sufficient throughout the season.

The excessive rain from the former monsoon damaged the autumn crop of paddy in Muvattupuzha and Parur taluks, the estimated loss being about 375 tons of paddy. In Cochin taluk, also the autumn crop was affected by flood, but only to a very small extent. Except for the drought in Parur taluk the conditions of winter crop was normal in the district. The bananas and plantains were attacked by 'bunchy top' disease and this caused very heavy damage. The estimated loss came to about 90,000 plants in the district.

Fungus disease caused damage to ginger crop in an area of 255 acres in the taluks of Kunnathunad and Alwaye. Leaf and root diseases were prevalent among the coconut trees in the coastal area of the district.

Trichur district.—The rains from south-west monsoon, were sufficient for the autumn crop of paddy. It started in May 1957. By the beginning of June there was a sudden outburst of heavy rain, causing floods in the low lying areas. The downpour continued intermittently till the end of August. It was only towards the middle of October that the north-east monsoon set in. October and November witnessed light and moderate showers. The conditions were favourable to the seasonal crops.

Since conditions were favourable the sowing of autumn crop of paddy was completed in time. But the onset of the heavy monsoon rain and the consequent floods caused terrible havoc to the crop. However the average yield was greater this year when compared to that of the autumn crop in the previous year. The crop condition was satisfactory for the winter crop. The ginger crop was greatly damaged due to the attack of pests, and due to inadequate rainfall in September.

Palghat district.—The rainfall during both kharif and rabi seasons was moderate and sufficient, throughout the district. In Ponnani taluk it was reported that floods washed away the autumn crop of paddy in about 2,000 acres of land. No damage due to flood was reported in any other taluk. The condition of the winter crop was also normal. In Perinthalmanna and Ottappalam, taluks, the winter crop of paddy was largely affected by pests, but no significant loss was reported, as necessary preventive measures were taken by the Agriculture Department in time. The conditions in this district were generally favourable to the cultivators.

Kozhikode district.—In general, there was adequate rainfall in both kharif and rabi seasons. No serious flood was reported in this district. Attacks by pests and diseases on the paddy crop and coconut trees were reported but the loss was not significant. In Tirur taluk, though Japanese method of cultivation of paddy was tried, the same was not successful, owing to lack of irrigation facilities.

Cannanore district.—The south-west monsoon set in by the middle of May (1957). It was moderate in this district. The months of June and July came with heavy rains, causing floods in Hosdurg and Kasargode taluks. In August there were only intermittent showers. The north-east monsoon commenced in October, lasting till the end of November. The rainfall, though not sufficient, was not unfavourable to the cultivators.

The sowing operations of kharif season were carried out in the proper time. The heavy rainfall in July damaged the paddy crop in Hosdurg and Kasargode. About 800 acres of land under paddy was damaged by flood. But replanting was done immediately in these fields and hence there was no

serious loss in yield. In Kasargode attacks from pests like stem-borer, paddy blast, etc., were noticed but were brought under control by the effective measures taken in consultation with the Agriculture Department. In this district usually three crops of paddy are cultivated; kharif, late kharif and rabi. The rabi crops were not wholly dependent on the rains. About 120 acres in Kasargode was affected by drought in the years. In Wynad taluk where only one crop is raised, a second crop was tried during the year, but it was not successful owing to lack of irrigation facilities.

1958-59

Trivandrum district.—The monsoons were timely. The rainfall was sufficient during both kharif and rabi seasons. The rainfall in August was heavier compared to the previous year. The condition of crop was generally good and no damage due to floods was reported. The yield of paddy was better in Nedumangad and Chirayinkil taluks chiefly due to the introduction of improved methods of cultivation. Though pest attacks and diseases prevailed among the paddy crop in Nedumangad and Chirayinkil taluks, the timely help rendered by the Agriculture Department saved the crop. Plantains in about 50 acres in Nedumangad had to be destroyed to prevent the spread of 'bunchy top' disease. During the latter half of the year tapioca and pepper suffered from drought in Neyyattinkara taluk. About 1,500 tons of tapioca and 2,500 tons of pepper were lost by drought. Leaf and root diseases, prevalent among the coconut palms did much harm.

Quilon district.—Heavy downpour from the south-west monsoon caused damage to the autumn crop of paddy in Quilon taluk. As a result, the harvesting was delayed. In Pathanamthitta taluk the fields had to be resown. Here also the average rainfall during August 1958 was more than twice the same in August 1957. The untimely rain combined with drought affected the crops mainly in Karunagappally taluk. Other crops damaged were coconut, arecanut, pepper, and tapioca. During the rabi season the conditions were more or less normal. However, in Karunagappally taluk paddy crop ready for harvest was to a small extent destroyed by floods. Nearly 400 tons of paddy and 70 tons of tapioca were lost during the year due to floods. The heavy rains and bunchy top disease destroyed about 500 banana plants.

Alleppey district.—In many parts of the district the south-west monsoon was excessive. There was heavy and continuous downpour during the month of May, June, July and August 1958. The average rainfall in the District during June 1958 was 909 mms. The rivers, Pampa and Achencoil, were in spate. But the north-east monsoon brought in very moderate showers.

The excessive rain adversely affected the crops of paddy and sugarcane, in the taluks of Karthigappally, Mavelikkara and Thiruvalla. But during rabi season, drought conditions prevailed in Karthigappally and Thiruvalla taluks. The condition of summer crop of paddy (punja) was favourable. Ginger crop in Karthigappally was affected by disease. About 1,500 acres under sugarcane was washed away by floods. Nearly 4,000 tons of paddy is estimated to have been lost in the district.

Kottayam district.—Heavy rainfall was experienced during kharif season in the Vaikom and Changanacherry taluks. The rain was sufficient and moderate in the rabi season in all the taluks.

The weather conditions were favourable to the cultivators. Floods and landslidings, however, damaged the autumn crop of paddy in Vaikom and Changanacherry, the estimated loss due to the same being about 3,000 tons of paddy. Though floods occurred in Meenachil taluk, during August, the damage to crops was not significant. Excepting the attack of virus diseases in the cardamom plantations in Munnar the conditions of other crops were satisfactory.

Ernakulam district.—Most of the taluks experienced heavy rain from the south-west monsoon. The rainfall was excessive in June 1957 in Muvattupuzha. The north-east monsoon brought in moderate rainfall in October. It decreased in the next month. It was poor in January, February and March 1958. In Parur taluk the rainfall was generally inadequate and the crops had to face drought.

The autumn paddy in the district was good. Floods washed away the crop in Muvattupuzha taluk, causing a loss of about 180 tons of paddy. Among the rabi crops, damage was done to sesamum, owing to lack of rains in the post-flowering season. Coconut trees were attacked intensively by diseases and about 70,000 nuts were lost during the year. The cardamom plants in about 50 acres in Thodupuzha taluk were also attacked by root diseases and loss in yield was about 2,000 lb.

Trichur district.—Sufficient rainfall from both the monsoons was reported in all the taluks. During June and July 1958, the rainfall was heavy in Trichur and Chowghat taluks. Except for the floods in Chowghat taluk the condition of crops was normal during both kharif and rabi seasons. The autumn crop of paddy was better during this year, when compared to the previous year. The damage due to floods is estimated at about 12,300 tons of paddy in this district.

Palghat district.—Both kharif and rabi crops got moderate rains. But in Ponnani taluk excessive rainfall was experienced from the south-west monsoon. But the rabi crop had to face drought in the taluks of Chittur, Ottappalam and Ponnani. The loss is estimated at about 6,000 tons of paddy. The conditions were satisfactory in the other taluks.

Kozhikode district.—Rainfall was normal during the kharif season in almost all taluks. It was not sufficient during the rabi season. In Tirur taluk, attack of budrot was noticed among the coconuts.

Cananore district.—The south-west monsoon brought plenty of rain all over the district. The kharif crop was good except in Tellicherry where floods caused some damage to the paddy crop. The rabi crop did not get adequate rain. The damage from drought was severe in Kasargode taluk. It is estimated that 9,560 tons of paddy was lost in this district due to these causes.

10. Production of Important Crops

The total production figures of important crops during the period from 1952-53 to 1958-59 are given in Table 'D' (summary tables). The district-wise production during the two years under report is given in Table 5-1 (detailed tables).

Rice.—The average yield of paddy estimated from the crop-cutting survey are used to calculate the production of paddy. The quantity of rice

produced from 1 lb. of paddy is nearly 0.657 lb. The total production of rice in 1957-58 was 910,900 tons. This increased to 939,400 tons in 1958-59 the increase being 3 per cent. The average yield of dry paddy in each district is given below :—

District	Average yield lb./acres		Percentage variation
	1957-58	1958-59	
Trivandrum ..	1,980	2,015	+ 1.8
Quilon ..	1,904	2,129	+ 11.8
Alleppey ..	1,583	1,852	+ 17.0
Kottayam ..	1,717	1,795	+ 4.5
Ernakulam ..	1,519	1,569	+ 3.3
Trichur ..	1,691	1,487	- 12.1
Palghat ..	1,921	2,002	+ 4.2
Kozhikode ..	1,281	1,290	+ 0.7
Cannanore ..	1,293	1,339	+ 3.6
State ..	1,639	1,687	+ 2.9

The yield rate was higher in 1958-59 than that in 1957-58 in all the districts excepting Trichur. The average yield of paddy was 1,687 lb. per acre for the State during 1958-59. It was 3 per cent higher than that during the previous year. In 1957-58, the highest yield was in Trivandrum district (1,980 lb.) while in the next year, Quilon district occupied the first place (2,129 lb.) per acre.

In the case of other crops conventional estimates of average yield collected through local enquiries, were used to calculate the production. The average yield during the years under report is given in Table E (summary tables).

11. Farm Prices

The farm prices of certain agricultural commodities are furnished in Table F (summary tables) and Table 6.1 (detailed tables). In general the price level was higher in 1958-59, when compared to the previous year. Poddy, ginger, turmeric, cashewnut, pepper, coconut, arecanut and tamarind are the crops for which the prices were increasing. The increase in the price of pepper was high, it increased from Rs. 58.24 in 1957-58 to Rs. 70.49 in 1958-59 per maund. The price of sugarcane and other plantains remained stationary, while the price of banana showed a slight decline.

The value of production of the commodities is also given in the table.

12. Agricultural Wages

Table 7.1 (detailed table) gives the agricultural wages in each district during 1958-59.

13. Livestock

Livestock plays an important role in the economy of the State, which is predominantly agricultural. Statistics of livestock are collected through the

Quinquennial Livestock Census conducted. The last Census was taken in 1956. The figures are not available for the present districts and the districts refer to those existed at the time of the Census. Under livestock the following were enumerated:—

- | | |
|--------------|----------------------|
| 1. Cattle | 5. Horses and Ponies |
| 2. Buffaloes | 6. Donkeys |
| 3. Sheep | 7. Pigs |
| 4. Goats | |

Fowls and ducks were enumerated under poultry.

The figures collected through the 1951 and 1956 Censuses are given in Table G (summary tables) and Table 8'1 (detailed tables).

According to the 1956 Census the total number of livestock in the State was 41·68 lakhs, this being nearly 117 per cent of the number in 1951. As regards the distribution of the livestock, cattle formed the largest number, being of the order of 25·10 lakhs. Goats numbering about 9·56 lakhs followed them and buffaloes ranked third in this respect (4·88 lakhs). The position of pigs was fourth and sheep fifth, their numbers being 1·14 lakhs and 0·98 lakhs respectively.

A. Bovine Stock

(i) *Cattle*.—The cattle population in the State was about 1·6 per cent of the cattle population in India according to the 1956 Census. The percentage of males over three years, females over three years and young stock in the total number of cattle was 240·3, 39·7 and 36·3 respectively. The distribution of the cattle among the districts (as existed in March 1956) is given below:

District	1951		1956	
	Number	Percentage	Number	Percentage
1	2	3	4	5
Trivandrum ..	100,878	4·7	116,174	4·6
Quilon ..	448,615	20·8	586,314	23·3
Kottayam ..	346,405	16·1	450,853	18·0
Trichur ..	285,920	13·3	357,943	14·3
Malabar (including .. Kasargod)	969,704	45·1	999,092	39·8
State ..	2,151,522	100·0	2,510,376	100·00

Of the bulls over 3 years in the State, 91·9 per cent were working bulls and only 1·8 per cent were breeding bulls. The percentage of bulls found in the rural areas was 94·3, while among cows the percentage in rural areas was 91·1.

(ii) *Buffaloes*.—There were about 4·88 lakhs of buffaloes in the State according to the 1956 Census. This was roughly 1·1 per cent of the All-India

population of buffaloes. He buffaloes formed 32·8 per cent of the total and she buffaloes 28·4 per cent. The remaining 18·8 per cent were young stock. In the case of buffaloes, the number of males was nearly twice that of females, while, among cattle the number of females was one and a half times the number of males. This is probably because male buffaloes are preferred as draught animals on account of their greater capacity for work. 92·6 per cent of the male buffaloes (over 3 years) was concentrated in the rural parts. The rural population of female buffaloes was 84·2 per cent. The number of buffaloes in each district is given below :

District	1951		1956	
	Number	Percentage	Number	Percentage
Trivandrum ..	38,771	8·7	45,033	9·2
Quilon ..	32,032	7·2	39,097	8·0
Kottayam ..	14,575	3·3	18,828	3·9
Trichur ..	73,171	16·5	91,433	18·8
Malabar (including ..	285,819	64·3	293,262	60·1
Kasargode)				
State ..	444,368	100·0	487,653	100·0

Thus more than 60 per cent of the buffaloes is in the Malabar area. During the quinquennium 1951-56, the buffalo population has increased by about 10 per cent.

B. Ovine stock

(i) *Sheep*.—The total sheep population of the State in 1956 was 97,820. Among the sheep of age more than one year, 18 per cent was males and 82 per cent females. 90·4 per cent of the sheep population was in the rural area. The number of sheep in each district is given below :

District	1951		1956	
	Number	Percentage	Number	Percentage
Trivandrum ..	59,128	16·3	20,560	21·0
Quilon ..	120,156	28·4	42,708	43·7
Kottayam ..	118,403	28·0	8,801	8·3
Trichur ..	113,706	26·8	16,264	16·6
Malabar ..	2,120	0·5	10,187	10·4
State ..	423,513	100·0	97,820	100·0

(ii) *Goats*.—The total number of goats was 9·56 lakhs; which was 1·7 per cent of the goat population of India. The male-female ratio among goats aged over one year was 10 :46. Apparently the reason for the predominance of females is that a large number of males are butchered for meat, while the

females are reared for milk. Eighty-nine out of every 100 goats came from the rural area. The district-war figures are given below :

District	1951		1956	
	Number	Percentage	Number	Percentage
Trivandrum ..	1,026	0.2	111,106	11.6
Quilon ..	2,755	0.7	169,645	17.8
Kottayam ..	7,734	1.8	138,903	14.5
Trichur ..	61,714	14.6	188,834	19.8
Malabar ..	350,116	82.7	347,082	36.3
State ..	423,345	100.0	955,570	100.0

It is clear from the above tables that in the Travancore-Cochin area, a good number of goats were wrongly enumerated as sheep or vice versa in the 1951 Census. Considering the goats and sheep together, the population has increased by 24.4 per cent during the period 1951-56.

C. Horses and Ponies

The number of horses and ponies in the State was 1,690 of which 1,291 (76 per cent) were from the rural parts. The percentage of males was 43. According to the 1951 Census, the number of horses and ponies was only 518.

D. Donkeys

There were 1,415 donkeys in 1956, of which 762 were males and 653 females. As per the 1951 Census the number of donkeys was 689.

E. Pigs

According to the 1956 Census, the pig population of the State was 113,711, about 98 per cent of them being in the rural parts. Compared to the 1951 Census the number of pigs showed a decrease in 1956, the number in 1951 being 117,932.

F. Poultry

The total number of poultry in 1956 was 67.95 lakhs, of which 64.63 lakhs (95 per cent nearly) were fowls. This comes to about 7 per cent of the all-India poultry population. The rural parts account for 98 per cent of the total. The district figures are given below :

District	Fowls		Ducks		Total			
	1951	1956	1951	1956	1951		1956	
					Number	Percentage	Number	Percentage
Trivandrum ..	309,969	620,825	4,092	4,731	314,061	7.6	625,556	9.2
Quilon ..	651,174	1,459,666	67,757	134,610	718,931	17.5	1,594,276	23.5
Kottayam ..	773,927	1,236,177	37,365	114,750	811,292	19.7	1,350,927	19.9
Trichur ..	546,876	1,224,509	148,672	69,268	695,548	16.9	12,93,777	19.0
Malabar ..	1,572,373	1,921,622	5,261	8,726	1,577,634	38.3	1,930,348	28.4
State ..	3,854,319	6,462,799	263,147	332,085	4,117,466	100.0	6,794,884	100.0

The poultry population showed a 65 per cent increase during the quinquennium 1951-1956.

G. Agricultural implements and machinery

There were about 5.7 lakhs of wooden ploughs and 10,225 iron ploughs in 1956. Compared to the figures in 1951, there was no appreciable increase in 1956, in the total number of ploughs. The number of sugarcane crushers worked by power remained almost the same during the period, while the number of crushers worked by bullocks has come down to half that in 1951. This seems to be indicative of the unpopularity of outmoded machines. The number of Oil engines (with pumps for irrigation purposes) was 1,158 in 1951 and this has more than doubled in 1956. Simultaneously a marked decrease was noticed in 1956 in the number of electric pumps, mainly owing to the decrease in Trichur district from 1516 to 367. The number of tractors rose from 59 to 187 in 1956.

Certain rates and ratios :—

Number of cattle available for 1,000 acres of cultivated area (excluding buffaloes)	..	547
Number of cattle available for 1,000 acres of cultivated area (including buffaloes)	..	654
Number of cows and buffaloes per 1,000	..	31
Number of working cattle and buffaloes together per 100 ploughs	..	141
Number of working cattle and buffaloes together per 1,000 acres of cultivated area	..	178
Number of ploughs available for 100 acres of cultivated area	..	13
Number of poultry per 1,000 persons	..	460

Livestock diseases.—Infectious diseases usually occur to livestock in the State, their power of resistance being very low.

Some common diseases are :

- (a) Anthrax.
- (b) Black Quarter.
- (c) Haemorrhagic septicaemia.
- (d) Proplasmiasis.
- (e) Trypanosomiasis.
- (f) Rinderpest.
- (g) Fowl cholera.
- (h) Johnes disease.
- (i) Variola.
- (j) Surra.

Veterinary Institutions.—At the end of 1958-59 there were 45 Veterinary Hospitals, 69 Dispensaries, 4 Stockman's Stations and 11 Inspector's Stations in the State.

PART II—SUMMARY TABLES

TABLE A

Classification of area—(Area in acres)

Head of classification	1952-53		1953-54		1954-55		1955-56	
	Area	Percentage of total area	Area	Percentage	Area	Percentage	Area	Percentage
1	2	3	4	5	6	7	8	
Total area by professional survey	9,411,892	100.00	9,411,892	100.00	9,411,892	100.00	9,411,892	100.00
Total area by village papers	2,340,707	24.87	2,341,213	24.87	2,397,052	25.47	2,489,891	25.47
Forests								
Land put to non-agricultural uses	506,592	5.38	509,159	5.41	508,300	5.40	506,494	5.40
Barren and un-culturable land	530,902	5.64	519,870	5.52	507,904	5.40	504,903	5.40
Permanent pastures and grazing lands	137,691	1.46	119,337	1.27	118,711	1.26	116,337	1.26
Land under miscellaneous tree crops	460,412	4.89	459,843	4.89	473,622	5.03	486,824	5.03
Culturable waste	448,690	4.77	429,976	4.57	430,639	4.57	374,617	4.57
Current fallow	108,752	1.16	102,874	1.09	99,734	1.06	139,744	1.06
Other fallows	487,436	5.18	463,695	4.93	365,080	3.88	268,168	3.88
Net area sown	4,390,710	46.65	4,465,925	47.45	4,510,850	47.93	4,524,914	47.93
Total cropped area	5,162,294	54.85	5,334,084	56.67	5,362,697	56.98	5,382,717	56.98
Area sown more than once	771,584	8.20	868,159	9.22	851,847	9.05	857,803	9.05

TABLE B-1

Sources of Water Supply and net area irrigated therefrom—(Area in acres)

Sources	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59
1	2	3	4	5	6	7	8
Government canals ..	295,933	297,183	322,361	327,671	342,955	358,885	376,848
Private Canals ..	68,094	68,094	68,113	68,113	70,849	71,823	73,043
Tanks ..	70,406	75,749	75,968	77,400	77,477	78,751	79,032
Wells ..	25,637	31,988	26,341	28,499	28,696	29,571	34,882
Other sources ..	334,507	338,602	312,959	309,380	309,481	311,578	315,023
Total ..	794,577	811,616	805,742	811,063	829,458	850,608	878,828
Percentage of net area irrigated to net area sown ..	18.1	18.2	17.9	17.9	18.6	18.7	19.2
Area irrigated more than once in an year ..	70,155	242,492	286,370	319,967	321,269	368,917	389,656
Total irrigated area ..	864,732	1,054,108	1,092,112	1,131,030	1,150,727	1,219,525	1,268,484
Percentage of total irrigated area to total cropped area ..	16.8	20.7	20.4	21.0	21.4	22.3	22.9

Net area irrigated by

TABLE B-2
Area under Crops Irrigated—(Area in acres)

Name of crop	1952-53		1953-54		1954-55		1955-56		1956-57		1957-58		1958-59	
	Area	Percent	Area	Percent	Area	Percent	Area	Percent	Area	Percent	Area	Percent	Area	Percent
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Rice ..	630,741	72.9	686,086	65.1	720,380	66.0	766,092	67.7	781,398	67.9	828,558	67.9	873,871	68.9
Jowar ..	534	0.1	534	0.1	534	*	534	*	534	*	3,302	0.3	3,302	0.3
Ragi ..	42	*	42	*	46	*	46	*	100	*	2,024	0.2	2,024	0.1
Other cereals & millets ..	147	*	147	*	165	*	35	*	702	0.1	7,146	0.6	7,146	0.6
Pulses ..	19,431	2.2	21,421	2.0	21,496	2.0	21,466	1.9	21,558	1.9	35,459	2.9	39,105	3.1
Sugarcane ..	12,885	1.5	10,491	1.0	10,464	0.9	9,423	0.8	10,302	0.9	11,703	1.0	11,703	0.9
Other food crops ..	157,994	18.3	207,983	19.7	211,543	19.4	205,950	18.2	203,625	17.7	202,841	16.6	202,841	16.0
Total food crops ..	821,774	95.0	926,624	87.9	964,628	88.3	1,003,546	88.7	1,018,219	88.5	1,091,033	89.5	1,139,992	89.9
Total non-food crops ..	42,958	5.0	127,484	12.1	127,484	11.7	127,484	11.3	132,508	11.5	128,492	10.5	128,492	10.1
ALL CROPS..	864,732	100.0	1,054,108	100.0	1,092,112	100.0	1,131,030	100.0	1,150,727	100.0	1,219,525	100.0	12,68,484	100.0

* Negligibly small.

TABLE C
Area under crops in Kerala for the years 1952-53 to 1958-59
(Area in acres)

Name of crop	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59
1	2	3	4	5	6	7	8
Paddy	1,833,916	1,880,095	1,885,920	1,876,400	1,883,000	1,894,701	1,898,804
Jowar	3,051	3,202	3,590	4,601	4,847	4,019	3,783
Ragi	11,345	11,783	11,392	11,618	12,300	12,418	12,539
Other cereals and millets	13,467	14,204	14,614	13,400	14,107	14,600	14,262
Total cereals and millets	1,861,779	1,909,284	1,915,516	1,906,019	1,914,254	1,925,738	1,929,388
Tur	11,220	29,471	31,116	30,790	28,058	21,620	21,793
Other pulses	74,683	76,413	79,207	79,793	90,691	89,824	87,883
Total pulses	85,903	105,884	110,323	110,583	118,749	111,444	109,676
Sugarcane	16,055	17,890	17,867	18,022	19,150	21,570	21,759
Palmyrah	9,730	13,526	13,127	13,483	10,789	12,406	12,380
Total sugar crops	25,785	31,416	30,994	31,505	29,939	33,976	34,139

Pepper	194,733	200,843	205,750	213,715	214,900	224,658	223,916
Chilies (dry)	10,227	10,539	11,165	9,999	7,412	8,340	8,202
Ginger	34,772	22,135	24,700	25,838	25,038	22,907	22,034
Turmeric	11,148	10,739	11,296	11,247	11,560	15,093	10,597
Cardamom	63,111	68,001	69,361	69,361	69,572	69,658	73,756
Arcaanut	148,253	130,182	144,517	143,563	121,409	122,827	123,833
Other condiments and spices	39,579	39,539	39,539	39,539	45,002	43,033	42,521
Total condiments and spices	501,823	481,978	506,328	513,262	494,893	506,516	504,859
Mangoes	125,984	125,984	128,462	141,113	138,773	140,645	145,357
Citrus fruits	8,185	6,315	5,713	5,713	5,713	1,593	4,603
Banana	76,637	98,922	106,501	116,305	24,212	25,641	24,641
Other plantains	86,685	90,975	111,425	125,876	75,257	74,604	73,695
Other fresh fruits	87,497	89,221	81,035	92,576	125,871	138,077	136,690
Cashewnut	40,504	36,904	26,951	14,951	92,395	108,815	114,189
Other dried fruits					6,991	965	60
Total fruits	425,502	448,321	460,087	496,534	469,412	490,340	499,235
Tapioca	505,880	599,104	557,673	548,900	515,233	528,708	553,207
Sweet potatoes	15,115	20,321	31,908	20,760	18,576	20,905	22,100
Other vegetables	98,311	98,311	98,311	98,311	98,897	57,064	56,453
Total vegetables	619,306	717,736	687,892	667,971	632,706	606,677	631,760
Total food crops	3,520,098	3,694,619	3,711,140	3,725,874	3,659,953	3,674,691	3,709,057

TABLE C--(cont.)

Name of crop	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59
	2	3	4	5	6	7	8
Groundnut	27,312	32,873	34,041	32,610	33,000	33,800	35,468
Castor	1,660	1,688	1,744	1,738	1,511	223	387
Sesamum	45,867	51,075	52,406	49,729	48,910	50,300	48,560
Coconut	1,063,544	1,086,330	1,098,440	1,106,895	1,136,284	1,144,766	1,175,425
Other oil seeds	26,690	26,390	27,690	27,690	29,101	21,825	21,813
Total oil seeds	1,165,073	1,198,356	1,214,321	1,218,662	1,248,806	1,250,914	1,281,653
Cotton	15,830	18,244	21,935	21,663	22,450	21,490	19,650
Other fibres	..	..	..	167	344	159	90
Total fibres	15,830	18,244	21,935	21,830	22,794	21,649	19,740
Tobacco	1,293	1,332	1,383	1,412	1,230	1,293	1,320
Tea	111,162	111,221	97,624	98,553	98,556	98,640	92,988
Coffee	31,132	34,542	36,388	35,324	36,902	41,123	40,060
Rubber	154,653	157,087	160,146	159,896	203,282	246,793	270,626

	5,041	5,041	5,041	248	4,071	3,899	3,475
Other drugs, plantation crops, etc. ..							
Total drugs, plantation crops, etc. ..	303,281	309,223	300,582	295,433	344,041	391,748	408,469
Fodder ..	1,495	1,495	1,495	1,495	504	1,702	1,128
Green manure crops ..	3,578	3,578	3,578	3,578	1,265	2,589	2,425
Lemongrass ..	N.A.	N.A.	N.A.	34,805	41,000	52,520	53,130
Other non-food crops ..	152,939	108,569	109,646	81,040	64,045	67,375	61,111
Total Non-food crops ..	1,642,196	1,639,465	1,651,557	1,656,843	1,722,455	1,788,497	1,827,656
Total area under all crops ..	5,162,294	5,334,084	5,362,697	5,382,717	5,382,408	5,463,188	5,536,713
Area sown more than once ..	771,584	868,159	851,847	857,803	914,593	918,129	949,799
Net area sown ..	4,390,710	4,465,925	4,510,850	4,524,914	4,467,815	4,545,059	4,585,914

TABLE D
Production of Important Crops in Kerala during 1952-53 to 1958-59

Serial number	Name of crop	Unit	Production						1958-59
			1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	
1	2	3	4	5	6	7	8	9	10
1	Paddy	'00Tons	1,082	1,124	1,226	1,324	1,329	1,386	1,430
2	Jowar	"	488	665	595	820	866	730	654
3	Ragi	"	5,460	6,094	6,043	6,115	6,700	7,107	7,225
4	Pulses	"	13,422	16,545	17,238	17,279	18,362	17,509	17,383
5	Sugarcane (Gur)	"	29,000	33,000	36,000	33,447	35,250	34,840	35,021
6	Pepper (Black)	"	22,271	23,311	25,955	27,236	26,800	26,020	25,030
7	Ginger (Dry)	"	10,015	9,497	10,409	10,936	10,700	9,198	7,662
8	Turmeric (Dry)	"	4,976	4,794	5,043	5,021	4,129	5,391	3,785
9	Cardamom	"	1,212	1,184	1,239	1,242	1,242	1,242	1,316
10	Areca nut	Million Nuts	4,448	5,207	5,781	6,460	6,617	6,754	6,795
11	Chillies (Dry)	Tons	NA	NA	NA	NA	1,986	2,235	2,198
12	Banana	"	205,448	265,190	285,508	311,790	62,692	66,392	63,803
13	Other plantain	"	NA	NA	NA	NA	228,460	226,476	224,161
14	Cashewnut	"	53,889	59,734	50,509	57,860	57,747	68,010	71,368
15	Tapioca (Raw)	'00Tons	14,905	17,975	15,685	15,690	14,260	14,871	15,273
16	Groundnut	"	13,718	16,693	18,576	14,240	15,650	10,930	15,647
17	Sesamum	"	5,384	6,619	6,779	6,358	6,348	6,419	5,720
18	Cocoa nut	Million Nuts	2,978	3,042	3,076	3,099	3,182	3,199	3,248
19	Tea	Tons	29,744	29,762	29,635	29,917	34,175	34,175	39,737
20	Coffee	"	5,030	5,585	5,884	6,155	6,610	7,101	6,961
21	Rubber	"	18,958	20,177	20,874	20,841	21,319	21,496	22,158
22	Cotton	Bales	7,019	8,089	9,726	9,560	10,000	9,630	7,860
23	Tobacco	Tons	NA	NA	NA*	689	689	689	700
24	Lemongrass oil	"	NA	NA	NA	1,000	1,000	1,050	1,321

N.A. Not Available.

TABLE E
Average yield per acre of certain crops

Serial number	Name of crop	Unit	Average yield	
			1957-58	1958-59
1	2	3	4	5
1	Paddy ..	Lb.	1,639	1,687
2	Jowar ..	"	407	387
3	Ragi ..	"	1,282	1,290
4	Sugarcane (Gur) ..	"	3,618	3,605
5	Papper (Black) ..	"	260	250
6	Ginger (Dry) ..	"	899	779
7	Turmeric (Dry) ..	"	800	800
8	Cardamom ..	"	40	40
9	Arecanut ..	Nuts	54,990	54,870
10	Banana ..	Lb.	5,800	5,800
11	Other plantains ..	"	6,800	6,800
12	Cashewnut ..	"	1,400	1,400
13	Tapioca ..	"	6,300	6,200
14	Groundnut ..	"	778	988
15	Sesamum ..	"	286	264
16	Coconut ..	Nuts	2,800	2,763
17	Cotton ..	Lb.	176	157
18	Tea ..	"	776	957
19	Coffee ..	"	387	389
20	Rubber ..	"	195	183

TABLE F
Average price and total value of production of important crops

Serial No.	Name of crops	Unit	Average price (Rs.)		Value of production (Rs. in lakhs)	
			1957-58	1958-59	1957-58	1958-59*
1	Paddy	..	351.71	371.59	4,875	5,313
2	Jowar	..	319.83	319.83	2	2
3	Ragi	..	645.00	645.00	46	47
4	Pepper (black)	..	1,585.84	1,918.89	413	480
5	Ginger (dry)	..	769.74	925.08	67	71
6	Turmeric (dry)	..	1,278.98	1,460.58	69	55
7	Cardamom	..	19,690.00	20,774.00	245	273
8	Sugarcane (cane)	..	39.20	39.20	137	137
9	Coconut (with husk)	..	181.90	194.20	5,819	6,307
10	Arecanut	..	24.70	24.05	1,668	1,634
11	Groundnut	..	426.41	617.40	58	97
12	Sesamum	..	1,029.54	939.71	66	54
13	Tapioca	..	86.00	66.05	1,279.	1,009
14	Banana	..	6.53	6.31	242	226
15	Other plantains	..	1.23	1.23	624	616
16	Cashewnut	..	472.27	561.18	321	401
17	Cotton	..	607.78	607.78	59	48
18	Lemongrass Oil	..	5.12	3.86	88	8.3
19	Tobacco	..	4,699.56	4,700.00	32	33
20	Tea	..	4,637.00	4,838.00	1,585	1,922
21	Coffee	..	4,525.00	4,525.00	321	315
22	Rubber	..	3,368.00	3,375.56	724	748

* Provisional

TABLE C
Number of livestock poultry and agricultural machinery

Serial No.		1951 Census	1956 Census
1	2	3	4
1	Cattle: Males over 3 years (a) Breeding (b) Working (c) Others Total Females over 3 years (a) Breeding (1) In Milk (2) Dry (3) Not calved (b) Working (c) Others Total Young stock Total Cattle	 7,793 551,750 36,599 596,142 313,253 424,030 141,889 3,936 13,485 896,653 658,727 2,151,522	 11,026 553,155 37,718 601,899 396,375 454,233 120,976 7,083 19,223 997,950 910,527 2,510,376
2	Buffaloes: Males over 3 years (a) Breeding (b) Working (c) Others Total Females over 3 years (a) Breeding (1) In Milk (2) Dry (3) Not calved	 3,154 234,636 11,228 249,018 51,794 45,203 13,870	 4,046 247,313 5,895 257,254 61,336 52,128 11,624

TABLE G—(cont.)

Serial No.		1951 Census	1956 Census
1	2	3	4
	Buffaloes—(cont.)		
	Females over 3 years—(cont.)		
	(b) Working	9,196	10,109
	(c) Others	3,382	3,288
	Total	123,445	138,485
	Young stock	71,905	91,914
	Total Buffaloes	444,368	487,653
3	Sheep :		
	(a) One year and above	109,891	39,143
	(b) Below one year	313,622	58,677
	Total	423,513	97,820
4	Goats:		
	(a) One year and above	93,352	363,135
	(b) Below one year	329,993	592,435
	Total	423,345	955,570
5	Horse and ponies :		
	(a) Three years and above	439	1,008
	(b) Below three years	79	682
	Total	518	1,690

TABLE G—(cont.)

Serial No.		1951 Census	1956 Census
1	2	3	4
6	Mules	14	2
7	Donkeys	689	1,415
8	Camels	..	..
9	Pigs	117,932	113,711
	Total Livestock	3,561,901	4,168,237
10	Poultry:		
	(a) Fowls	3,854,319	6,462,799
	(b) Ducks	263,147	332,085
	(c) Others	..	..
	Total	4,117,466	6,795,045
11	Ploughs:		
	(a) Wooden	510,908	570,327
	(b) Iron	13,126	10,225
		26,378	27,283
12	Carts:		
13	Sugarcane crushers:		
	(a) Power	269	230
	(b) Bullocks	2,023	1,155
14	Oil engines	1,158	2,504
15	Electric pumps	1,630	723
16	Tractors	59	187
17	Ghanis:		
	(a) More than five seers	N.A.	1,858
	(b) Less than 5 seers	N.A.	2,366

TABLE H
Sowing, Harvesting and Peak marketing seasons of principal
Crops in the Kerala State

Crop		Sowing	Harvesting	Peak marketing
1	2	3	4	5
1. Rice	Autumn Winter Summer	April-June Aug.-Oct. Nov.-Dec.	Aug.-Oct. Dec.-Feb. Feb.-March	Sept.-Oct. Jan.-Feb. March-April
2. Ragi	1st crop 2nd crop	Jan.-March April-July Sept.-Oct.	April-May Aug.-Oct. Dec.-Jan.	May-June Sept.-Oct. Dec.-Jan.
3. Small mil- lets (Samai)	Kharif Rabi	May September	August December	August December
4. Red gram	1st crop 2nd crop 3rd crop	May-June Aug.-Oct. Feb.	Aug.-Sep. Nov.-Jan. April	Sept.-Oct. January April
5. Horse gram	1st crop 2nd crop	Aug.-Oct. Feb.-March	Nov.-Jan. April-May	Jan.-Feb. May-June
6. Green gram	..	May-June	Aug.-Sept.	Sept.-Oct.
7. Black gram	1st crop 2nd crop	May-June Oct.-Nov.	Aug.-Oct. Jan.-Feb.	October February
8. Other Pulses	..	May-June October	Aug.-Sept. Dec.-Jan.	Aug.-Sept. January
9. Sugarcane	1st crop 2nd crop	Nov.-Feb. Jan.-March	Oct.-Dec. Dec.-Feb.	Nov.-Dec. February
10. Ginger (raw)	..	April-May	Nov.-Jan.	Dec.-Jan.
11. Pepper	..	..	Nov.-Jan.	Dec.-Feb.
12. Sesamum	1st crop 2nd crop 3rd crop	Feb.-March Aug.-Oct. Dec.-Jan.	June-July Dec.-Jan. March-April	July-Aug. Dec.-Jan. April-May
13. Cotton	..	Aug.-Sept.	Feb.-March	Feb.-March
14. Sweet Po- tatoes	1st crop 2nd crop 3rd crop	June-July Sept.-Oct. Nov.-Dec.	Sept.-Oct. Dec.-Jan. Feb. March	Sept.-Oct. Dec.-Jan. Feb.-March
15. Turmeric	..	April-May	Dec.-Jan.	Jan.-Feb.
16. Lemon- grass	..	..	June-Sept.	September
17. Tapioca	1st crop 2nd crop 3rd crop	Oct.-Nov. March-May July-Sept.	Aug.-Sept. Nov.-Jan. May-July	Aug.-Sept. Dec.-Jan. June-July

PART III—DETAILED TABLES
TABLE 1.1
Normal Rainfall (in millimetres)

Serial number	District	July	August	September	October	November	December
1	2	3	4	5	6	7	8
1	Trivandrum	217.1	129.4	123.9	286.0	205.1	59.3
2	Quilon	450.4	301.3	224.0	333.7	238.1	58.2
3	Alleppey	536.4	334.5	243.2	337.2	211.0	58.1
4	Kottayam	654.8	426.3	260.1	334.0	210.8	65.8
5	Ernakulam	789.0	513.7	286.9	380.7	210.0	45.0
6	Trichur	759.2	463.6	247.9	325.5	158.5	23.5
7	Kozhikode	980.1	519.1	225.5	281.3	143.7	27.7

TABLE I.1—(cont.)

Serial number	District	9	10	11	12	13	14	Total
1	Trivandrum	21.9	20.7	40.9	120.8	200.7	347.7	1,773.4
2	Quilon	24.9	36.6	79.3	168.5	260.7	538.7	2,714.4
3	Alleppey	29.6	27.1	54.3	130.5	284.4	648.4	2,894.7
4	Kottayam	29.4	26.1	60.3	137.8	233.0	604.6	3,043.0
5	Ernakulam	13.5	22.1	52.3	146.2	298.9	760.5	3,518.7
6	Trichur	7.4	9.0	27.3	82.8	266.8	789.4	3,160.9
7	Kozhikode	7.4	6.4	17.3	87.3	220.1	878.5	3,394.3

Normals for Palghat and Cannanore Districts are not available.

TABLE 1.2
Average Monthly Rainfall in Kerala during the years 1957-58 and 1958-59 (millimetres)

Serial No	District	July 1957	August 1957	September 1957	October 1957	November 1957	December 1957
1	2	3	4	5	6	7	8
1	Trivandrum	297.7	155.2	41.1	319.5	243.6	92.5
2	Quilon	480.8	213.6	42.2	262.1	172.0	62.7
3	Alleppey	664.7	316.2	74.7	362.7	187.7	52.6
4	Kottayam	721.9	347.2	53.3	333.5	241.1	43.2
5	Ernakulam	769.9	421.9	49.5	405.1	196.3	19.6
6	Trichur	836.7	412.0	28.5	318.6	197.6	15.5
7	Palghat	692.1	229.4	11.2	214.6	224.5	..
8	Kozhikode	1,146.8	420.1	26.4	283.2	159.8	2.8
9	Cannanore	1,316.7	579.6	56.4	178.3	134.6	27.4
	State	758.6	340.6	44.4	301.0	198.2	36.2

TABLE 1.2—(cont.)

Serial No.	District	January 1958	February 1958	March 1958	April 1958	May 1958	June 1958	Total 1957-58
		9	10	11	12	13	14	15
1	Trivandrum	16.9	31.6	89.0	154.7	333.0	711.2	2,486.0
2	Quilon	13.4	26.8	129.4	183.9	371.0	576.1	2,534.0
3	Alleppey	4.6	23.0	39.2	149.6	458.8	909.4	3,243.2
4	Kottayam	8.8	26.2	80.6	117.1	292.8	514.0	2,779.7
5	Ernakulam	1.7	50.5	74.3	220.5	479.3	696.1	3,384.7
6	Trichur	..	29.7	28.3	90.7	618.9	810.9	3,387.4
7	Palghat	0.4	9.2	57.3	151.9	361.5	497.8	2,449.9
8	Kozhikode	0.8	10.3	33.8	105.4	242.0	848.9	3,280.3
9	Cannanore	7.1	..	8.3	59.7	253.7	1,169.1	3,790.9
	State	6.4	23.5	64.9	141.0	363.1	718.3	..

TABLE 1.2—(cont.)

Serial No.	District	July 1958	August 1958	September 1958	October 1958	November 1958	December 1958
1	2	3	4	5	6	7	8
1	Trivandrum	232.2	486.5	55.8	289.3	235.9	13.9
2	Quilon	199.9	513.7	54.8	239.7	198.6	5.9
3	Alleppey	315.6	407.3	93.8	234.3	203.8	20.9
4	Kottayam	513.8	601.2	135.0	257.4	243.2	15.5
5	Ernakulam	525.2	640.6	75.1	247.5	230.0	18.9
6	Trichur	523.6	458.7	38.9	176.8	239.5	1.9
7	Palghat	658.7	385.1	96.6	156.4	203.1	0.8
8	Kozhikode	982.4	515.5	96.9	122.8	170.2	4.8
9	Cannanore	942.3	595.9	109.8	105.6	143.4	..
	State	535.6	522.8	90.5	210.1	208.9	10.3

TABLE 1.2—(cont.)

Serial No.	District	January 1959	February 1959	March 1959	April 1959	May 1959	June 1959	Total 1958-59
		9	10	11	12	13	14	15
1	Trivandrum	2.5	46.0	12.7	122.3	448.3	513.6	2,459.0
2	Quilon	2.2	59.7	21.6	216.9	414.2	689.9	2,617.1
3	Alleppey	1.7	57.5	28.0	171.0	523.6	893.4	2,950.0
4	Kottayam	11.7	42.7	2.9	178.2	345.2	792.4	3,139.2
5	Ernakulam	0.2	10.8	10.6	163.0	424.5	939.9	3,286.3
6	Trichur	..	..	..	94.1	330.6	947.1	2,811.2
7	Palghat	..	1.0	..	141.6	161.4	725.8	2,530.5
8	Kozhikode	..	0.9	..	127.4	382.1	1,123.1	3,526.1
9	Cannanore	..	..	..	86.8	319.7	967.6	3,271.1
	State	2.9	27.2	8.7	152.9	373.5	842.2	..

TABLE 2.1
Classification of area in each District of Kerala
(Area in acres)

Year	District	Geographical area by professional survey	Reporting area by village papers	Classification			
				Forests	Land put to non-agricultural uses	Barren and uncultivated land	Permanent pastures and other grazing lands
1	2	3	4	5	6	7	8
1957-58	Trivandrum	540115	533983	110352	31031	5614	7415
	Quilon	1163155	1159049	523321	28873	42247	2103
	Alleppey	452813	461568	1268	25502	11978	12676
	Kottayam	1582784	1547434	591643	31537	70236	11082
	Ernakulam	808026	784381	136556	36198	49390	6858
	Trichur	727699	727137	328483	29614	16456	15742
	Palghat	1261510	1261285	246328	151460	71383	8570
	Kozhikode	1638483	1634814	392172	64883	125482	54704
	Cannanore	1425306	1424960	185265	97816	98835	119150
	State	9599891	9534011	2515388	496914	491621	
	1958-59	Trivandrum	540147	533983	110241	30665	5614	4162
Quilon		1169421	1159049	520766	26797	42247	1180
Alleppey		453171	461568	1268	21893	11978	12676
Kottayam		1571546	1547434	591643	31537	70236	11082
Ernakulam		825210	784381	136551	37537	49390	3463
Trichur		727654	727137	328483	27956	16456	15742
Palghat		1266867	1261285	246275	151460	71383	8554
Kozhikode		1644883	1634814	468613	64883	49041	53903
Cannanore		1402400	1424960	185265	99600	98835	110762
State		9601299	9534611	2589105	492328	415180	

TABLE 2.1—(cont.)

Year	District	Classification							Total cropped area	Area sown more than once
		Land under miscellaneous tree crops and groves not included in area sown	Culturable wastes	Other fallow land	Current fallows	Net area sown				
		9	10	11	12	13	14	15		
1957-58	Trivandrum	1880	6983	7526	6704	363893	481951	118058		
	Quilon	14378	19041	9009	6210	508555	587671	79116		
	Alleppey	12337	10320	4059	3724	390279	486946	96667		
	Kottayam	54014	92981	4544	12318	677485	719804	42319		
	Ernakulam	26459	30972	8130	21765	463829	527908	64079		
	Trichur	4120	13488	3441	5690	318987	462538	143551		
	Palghat	107765	59877	36000	22386	550344	738731	188387		
	Kozhikode	117868	109728	31248	42458	742405	836448	94043		
	Cannanore	202026	127843	101814	27375	529282	621191	91909		
	State	540847	471233	205769	148630	4545059	5463188	918129		
	1958-59	Trivandrum	1880	6556	6567	9935	362525	487801	125276	
		Quilon	13903	19041	9820	11176	511137	598444	87307	
		Alleppey	8426	10320	3757	14666	388080	508139	120059	
		Kottayam	55065	89737	5788	17400	673352	713782	40430	
Ernakulam		28908	24012	10406	21765	464730	522052	57322		
Trichur		4120	22034	3132	13135	308358	463726	155368		
Palghat		72316	59877	36000	21773	586459	779109	192650		
Kozhikode		121927	109316	27605	39658	745217	824109	78892		
Cannanore		187050	127075	97542	28634	547056	639551	92495		
State		493595	467968	200617	178142	4586914	5536713	949799		

TABLE 2.2
 Classification of area—Percentage to the total area according to village papers (Area in acres)

Year	District	Area according to village papers	Classification						
			Forests	Land put to non-agricultural uses	Barren and unculturable land	Permanent pastures and other grazing lands	Land under miscellaneous crops and groves	Culturable waste	
1	2	3	4	5	6	7	8	9	
1957-58	Trivandrum	100.00	20.67	5.81	1.05			0.35	1.31
	Quilon	100.00	45.15	2.49	3.64		0.64	1.24	1.64
	Alleppey	100.00	0.27	5.53	2.59		0.45	2.67	2.24
	Kottayam	100.00	38.23	2.04	4.54		0.82	3.49	6.01
	Ernakulam	100.00	17.41	4.61	6.30		1.41	3.37	3.95
	Trichur	100.00	45.18	4.07	2.26		0.94	0.57	1.85
	Palghat	100.00	19.53	12.01	5.66		1.25	8.54	4.75
	Kozhikode	100.00	23.99	3.97	7.68		0.52	7.21	6.71
	Cannanore	100.00	13.00	6.86	6.94		3.84	14.18	8.97
	State	100.00	26.38	5.21	5.16		1.25	5.67	4.94
	Trivandrum	100.00	20.65	5.74	1.05			0.35	1.23
	Quilon	100.00	44.93	2.31	3.65		0.36	1.20	1.64
	Alleppey	100.00	0.27	4.74	2.60		0.26	1.82	2.24
	Kottayam	100.00	38.23	2.04	4.54		0.82	3.56	5.80
Ernakulam	100.00	17.41	4.79	6.29		1.41	3.69	3.06	
Trichur	100.00	45.17	3.84	2.26		0.48	0.57	3.03	
Palghat	100.00	19.53	12.01	5.66		1.25	5.73	4.75	
Kozhikode	100.00	28.66	3.97	3.00		0.52	7.46	6.69	
Cannanore	100.00	13.00	6.99	6.94		3.78	13.13	8.92	
State	100.00	27.15	5.16	4.35		1.16	5.18	4.91	
1958-59	Trivandrum	100.00	20.67	5.81	1.05			0.35	1.31
	Quilon	100.00	45.15	2.49	3.64		0.64	1.24	1.64
	Alleppey	100.00	0.27	5.53	2.59		0.45	2.67	2.24
	Kottayam	100.00	38.23	2.04	4.54		0.82	3.49	6.01
	Ernakulam	100.00	17.41	4.61	6.30		1.41	3.37	3.95
	Trichur	100.00	45.18	4.07	2.26		0.94	0.57	1.85
	Palghat	100.00	19.53	12.01	5.66		1.25	8.54	4.75
	Kozhikode	100.00	23.99	3.97	7.68		0.52	7.21	6.71
	Cannanore	100.00	13.00	6.86	6.94		3.84	14.18	8.97
	State	100.00	26.38	5.21	5.16		1.25	5.67	4.94
	Trivandrum	100.00	20.65	5.74	1.05			0.35	1.23
	Quilon	100.00	44.93	2.31	3.65		0.36	1.20	1.64
	Alleppey	100.00	0.27	4.74	2.60		0.26	1.82	2.24
	Kottayam	100.00	38.23	2.04	4.54		0.82	3.56	5.80
Ernakulam	100.00	17.41	4.79	6.29		1.41	3.69	3.06	
Trichur	100.00	45.17	3.84	2.26		0.48	0.57	3.03	
Palghat	100.00	19.53	12.01	5.66		1.25	5.73	4.75	
Kozhikode	100.00	28.66	3.97	3.00		0.52	7.46	6.69	
Cannanore	100.00	13.00	6.99	6.94		3.78	13.13	8.92	
State	100.00	27.15	5.16	4.35		1.16	5.18	4.91	

TABLE 2.2—(cont.)

Year	District	Classification			Net area sown	Total cropped area		Total	Area sown more than once
		Other fallow lands	Current fallow	Food crops		Non-food crops			
							10			11	13	14
1957-58	Trivandrum	1.41	1.25	68.15	61.34	28.92	90.26	22.11	
	Quilon	0.78	0.54	43.88	33.19	17.51	50.70	6.82	
	Alleppey	0.88	0.81	84.56	61.07	44.43	105.50	20.94	
	Kottayam	0.29	0.80	43.78	24.31	22.20	46.51	2.73	
	Ernakulam	1.04	2.78	59.13	43.30	24.00	67.30	8.17	
	Trichur	0.47	0.78	43.87	49.09	14.52	93.61	19.74	
	Palghat	2.85	1.78	43.63	50.57	18.00	58.57	14.94	
	Kozhikode	1.91	2.60	45.41	30.46	20.70	51.16	5.75	
	Cannanore	7.15	1.92	37.14	33.11	10.48	43.59	6.45	
	State	2.16	1.56	47.67	38.54	18.76	57.30	9.63	
	Trivandrum	1.23	1.86	67.89	62.04	29.31	91.35	23.46	
	Quilon	0.85	0.96	44.10	32.98	18.65	51.63	7.53	
	Alleppey	0.81	3.18	84.08	66.95	43.14	110.09	26.01	
Kottayam	0.37	1.12	43.52	23.97	22.16	46.13	2.61		
Ernakulam	1.33	2.77	59.25	43.14	23.42	66.56	7.31		
Trichur	0.43	1.81	42.41	48.02	15.76	63.78	21.37		
Palghat	2.85	1.72	46.50	51.03	10.74	61.77	15.27		
Kozhikode	1.69	2.43	45.58	30.63	19.78	50.41	4.83		
Cannanore	6.84	2.01	38.39	33.94	10.94	44.88	6.49		
State	2.10	1.87	48.11	38.90	19.17	58.07	9.96		

TABLE 3.1.
Net area irrigated from the different sources (Area in acres)

Year	District	Area irrigated from							Total
		Canals		Tanks	Wells	Other sources	Total		
		Government	Private						
1	2	3	4	5	6	7	8	9	
1957-58	Trivandrum	57,182	1,292	57,182	34,650	138	52,247	144,217	
	Quilon	17,436	7,545	18,728	2,890	160	98,693	120,471	
	Alleppey	12,665	15,078	20,210	3,610	135	75,106	99,061	
	Kottayam	49,644	28,171	64,722	769	1,180	29,756	96,427	
	Ernakulam	69,506	14,171	97,677	14,275	16,280	38,581	166,813	
	Trichur	92,103	3,440	106,274	13,172	8,434	11,158	139,038	
	Palghat	56,169	2,126	5,9609	7,372	1,444	5,639	74,064	
	Kozhikode	3,368	812	5,494	1,816	1,506	398	9,214	
	Cannanore	812	71,823	812	197	294	1,303	1,303	
	State	358,885	71,823	430,708	78,751	29,571	311,578	850,608	
	1958-59	Trivandrum	57,182	1,292	57,182	34,856	138	52,247	144,423
Quilon		17,436	7,545	18,728	2,890	160	98,693	120,471	
Alleppey		12,665	15,428	20,210	3,610	135	75,106	99,061	
Kottayam		49,644	28,171	65,072	769	1,180	29,756	96,777	
Ernakulam		70,170	14,171	98,341	14,350	16,307	38,586	167,584	
Trichur		103,153	3,440	117,324	13,172	8,434	14,598	153,328	
Palghat		62,499	2,131	65,939	7,372	1,444	5,639	80,394	
Kozhikode		3,368	2,131	5,499	1,816	6,434	398	14,147	
Cannanore		731	865	1,596	197	650	2,443	2,443	
State		376,848	73,043	449,891	79,032	34,882	315,023	878,828	

TABLE 3.2.
Cross area irrigated under various crops
(Area in acres)

Year	District	Crops irrigated										Total grains
		Food crops										
		Cereals and pulses										
		Rice			Jowar	Ragi	Other cereals and millets	Total cereals and millets	Total pulses	Total grains		
Autumn	Winter	Summer	Total									
1	2	3	4	5	6	7	8	9	10	11	12	
1957-58	Trivandrum	46080	37873	..	83953	..	..	..	83953	3719	87672
	Quilon	45206	49030	..	94236	..	..	..	94236	5335	99621
	Alleppey	19170	13068	32860	65098	..	..	..	65098	879	65977
	Kottayam	11386	38381	53994	103761	..	..	..	103761	470	104231
	Ernakulam	72598	75089	7988	155675	..	45	..	155757	2218	157975	
	Trichur	72072	122614	15032	209718	..	..	..	209718	8840	218558
	Palghat	11637	78530	7756	97923	3302	1923	6410	109558	13597	123155	
	Kozhikode	6617	5368	4157	16142	..	54	701	16897	351	17248	
	Cannanore	..	1442	610	2052	..	..	..	2052	..	2052
	State	284766	421395	122397	828558	3302	2022	7146	841030	35459	876489	
1958-59	Trivandrum	43236	37873	..	81109	..	..	..	81109	3925	85034
	Quilon	45206	49030	..	94236	..	..	..	94236	5385	99621
	Alleppey	19170	13068	32860	65098	..	..	..	65098	879	65977
	Kottayam	11386	38381	53994	103761	..	..	..	103761	470	104231
	Ernakulam	72598	75753	7988	156339	..	47	..	156421	2218	158639	
	Trichur	78522	127214	15032	220768	..	..	..	220768	12280	233048
	Palghat	17967	96497	7756	122220	3302	1923	6410	133855	13597	147452	
	Kozhikode	11550	10301	4157	26008	..	54	701	26763	351	27114	
	Cannanore	1140	2582	610	4332	..	..	..	4332	..	4332
	State	300775	450699	122397	873871	3302	2024	7146	886343	39105	925448	

TABLE No. 3.3
Percentage of area irrigated under each crop to the total area under the crop
(Area in acres)

Year	District	Paddy					Jowar	Ragi	Other cereals and millets	Pulses	Sugar-cane	Other food crops	Total food crops	Non-food crops	All crops
		Autumn	Winter	Summer	Total										
					4	5										6	7
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1957-58	Trivandrum	96.4	85.5	..	91.1	..	..	..	55.9	57.1	..	..	43.5	51.8	46.2
	Quilon	84.4	78.9	..	81.2	..	..	..	30.9	57.1	..	..	35.1	..	23.0
	Alleppey	43.2	41.0	40.8	41.6	..	..	..	31.3	44.8	..	..	35.9	..	20.8
	Kottayam	80.3	88.3	94.8	90.6	..	..	..	25.6	54.0	..	..	33.3	5.5	20.1
	Ernakulam	80.3	88.3	94.8	85.8	..	..	20.1	42.3	..	..	..	56.7	5.2	38.4
	Trichur	80.3	88.3	94.8	85.8	..	..	..	39.3	..	..	..	69.1	16.3	57.1
	Palghat	4.1	46.6	49.0	21.0	87.2	..	89.5	63.7	64.7	66.6	..	19.5	0.9	17.0
	Kozhikode	3.8	5.6	85.4	5.8	..	..	1.8	23.2	2.5	76.4	..	4.2	0.3	2.6
	Cannanore	..	2.2	8.6	0.8	..	..	..	..	..	..	..	0.4	..	0.3
	State	29.3	57.4	64.5	43.7	82.0	..	16.3	48.9	31.8	54.3	..	29.7	7.2	22.3
1958-59	Trivandrum	96.4	85.8	..	91.1	..	..	..	60.3	57.7	..	..	42.2	51.1	45.1
	Quilon	94.1	79.2	..	83.4	..	..	..	32.0	56.0	..	..	35.1	..	22.6
	Alleppey	32.6	41.2	41.0	38.1	..	..	..	32.0	45.2	..	..	32.8	..	19.9
	Kottayam	86.3	89.4	96.0	92.4	..	..	..	26.1	71.3	..	..	33.8	5.6	20.2
	Ernakulam	78.8	89.4	95.2	84.4	..	..	..	43.4	..	..	..	57.1	5.6	39.0
	Trichur	92.1	92.0	95.1	92.2	..	..	4.9	55.8	41.3	69.3	..	74.8	15.0	60.0
	Palghat	6.3	58.1	49.7	26.1	92.2	..	90.7	65.3	2.5	76.4	..	23.1	0.7	19.2
	Kozhikode	6.5	10.9	86.6	9.4	..	..	1.8	23.4	..	..	..	6.2	0.3	3.9
	Cannanore	0.6	4.1	8.7	1.8	..	..	..	..	..	..	..	..	..	0.7
	State	30.6	61.9	65.0	46.0	87.3	..	16.1	50.1	35.6	53.8	..	30.7	7.0	22.9

TABLE 4.1—Area under crops in each district of Kerala (Area in acres)

District	Food crops																
	Cereals								Pulses								
	Rice			Jowar			Total	Ragi	Other cereals	Total cereals and millets	Tur	Other pulses			Total pulses	Total food grains	
	Autumn	Winter	Summer	Khairif	Rabi	Total						Khairif	Rabi	Total			
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
1957-58																	
Trivandrum	47812	44313	..	92125	..	..	253	9	92397	40	3117	3498	6615	6655	99052
Quilon	53554	62131	371	116056	..	..	1495	4	117355	501	10795	6116	16911	17412	134967
Alleppey	44326	31837	80450	156613	..	..	148	4	156765	29	1349	1428	2777	2806	159571
Kottayam	14184	43445	56944	114573	..	..	3	19	114595	766	590	478	1068	1834	116429
Ernakulam	90440	84996	8424	183860	..	..	224	969	185053	190	1956	3095	5051	5241	190294
Trichur	89784	138791	15853	244428	..	..	2994	355	247777	2364	6444	13687	20131	22495	270272
Palghat	281500	168487	15817	465804	..	3787	2148	10070	481809	12010	8671	12327	20998	33008	514817		
Kozhikode	175900	93806	4867	276373	..	141	2922	3020	282656	5300	664	8127	8791	14091	296747		
Cannanore	172900	64625	7144	244669	..	91	2221	150	247131	420	4583	2899	7482	7902	255033		
State	970400	734431	189870	1894701	..	4019	12418	14600	1925738	21620	38169	51655	89824	111444	2037182		
1958-59																	
Trivandrum	44861	44165	..	89026	..	..	3	..	89029	40	2965	3500	6465	6505	95534
Quilon	48034	61923	370	110327	..	..	929	..	111256	501	10259	6086	16345	16846	128102
Alleppey	58848	31731	80181	170760	..	..	95	..	170855	29	1292	1422	2714	2743	173598
Kottayam	13195	42911	56243	112349	..	..	51	..	112400	766	562	475	1037	1803	114203
Ernakulam	92180	84707	8395	185282	..	..	960	976	182718	190	1843	3078	4921	5111	192329
Trichur	85230	138334	15800	239364	..	..	3014	349	242727	2364	6024	13617	19641	22005	264732
Palghat	285772	166172	15600	467544	..	3582	2121	9814	493061	12130	8507	12253	20760	32890	519591		
Kozhikode	178633	94490	4870	277923	..	110	3083	2996	284112	5341	641	7844	8485	13826	297938		
Cannanore	175446	63737	7046	246229	..	91	2283	127	248730	432	4380	3135	7515	7947	256677		
State	982199	728170	188435	1898804	..	3783	12539	14262	1929388	21793	36473	51410	36883	109676	2039064		

TABLE 4.1—(cont.)

District	Food crops—(cont.)										
	Sugar			Condiments and spices							Total
	Sugarcane	Others	Total	Pepper	Chillies	Ginger	Turmeric	Cardamom	Betelnuts	Others	
	18	19	20	21	22	23	24	25	26	27	28
1957-58											
Trivandrum	896	896	896	20040	64	85	1292	..	7860	7672	37013
Quilon	47	47	2042	13422	90	86	427	..	8188	7852	30045
Alleppey	4398	4398	12402	4398	135	41	186	..	5251	2457	12333
Kottayam	288	288	3928	32268	135	7340	4396	61500	8633	2745	117017
Ernakulam	333	333	1485	16329	..	3980	1733	2922	9586	5420	39970
Trichur	695	695	695	1347	..	170	230	..	9723	6882	18352
Palghat	8191	8191	9665	8367	2123	4630	3937	2555	18622	7267	47501
Kozhikode	1881	1881	1953	31353	1686	6360	2550	1781	39010	2401	85141
Cannanore	882	28	910	97134	4242	215	342	900	15954	357	119144
State	21570	12406	33976	224658	8340	22907	15093	69658	122827	43033	506516
1958-59											
Trivandrum	1290	1290	1290	19930	..	..	79	..	7110	7065	34184
Quilon	13	13	1988	13035	..	86	178	..	8519	7285	29103
Alleppey	11	11	12621	4225	..	39	74	..	5229	2833	12398
Kottayam	280	280	3884	32268	..	7649	1780	63620	9852	3071	118240
Ernakulam	264	264	1439	16411	..	3158	1483	2259	10048	5520	38879
Trichur	620	620	620	1347	..	170	98	..	9778	5885	17278
Palghat	8191	8191	9606	8449	1969	4332	4034	4284	17292	8248	48608
Kozhikode	72	1683	1755	31585	1892	6388	2393	2600	35236	2250	82344
Cannanore	908	28	936	96666	4341	212	478	993	20771	364	123825
State	21759	12380	34139	223916	8202	22034	10597	73756	123833	42521	504857

TABLE 4.1—(cont.)

Food crops—(cont.)

District	Fruits and Vegetables													Total fruits and vegetables	Total Food Crops	
	Fruits						Vegetables									
	Mangoes	Citrus fruits	Bananas	Others	Total	Cashew nuts (Dried)	Others (Dried)	Total (Dried)	Total fruits (Dried)	Tapioca	Sweet potatoe	Onions	Others			Total vegetables
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1957-58																
Trivandrum	14207	NA	6163	17200	37570	10569	NA	10662	48239	137669	1207	70	3400	142346	190585	327546
Quilon	23089	"	6434	20545	50068	16895	"	16895	66963	140679	621	839	8599	150738	217701	384755
Alleppey	11855	"	4152	10710	26717	5762	"	5762	32479	60067	129	29	4865	65110	97589	281895
Kottayam	19492	"	5384	24000	48876	4369	"	4369	53245	79236	490	111	5939	85676	138921	376295
Ernakulam	18860	"	5168	20233	44261	17749	"	17749	62010	40814	685	244	4147	45890	107900	339649
Trichur	10450	"	7299	8629	26378	22037	"	22037	48415	15828	345	98	12926	19221	67636	356955
Palghat	8065	30	21133	7973	37201	4724	"	4724	41925	8260	2619	4	9852	23903	65828	637811
Kozhikode	21406	1043	19904	14741	57094	14936	935	12609	69703	36703	3832	4	2973	44391	114094	497935
Cannanore	13221	520	24608	14046	52395	14936	30	14966	67361	15452	10977	1295	55769	29402	96763	471850
State	140645	1593	100245	138077	380560	108815	965	109780	490340	528708	20905	1295	55769	606677	1097017	13674691
1958-59																
Trivandrum	16019	NA	5382	15308	36709	13351	NA	13351	50060	144553	590	70	5024	150237	200297	331305
Quilon	24335	"	6466	20312	51113	16680	"	16680	67793	147994	3	839	6476	155312	223105	382298
Alleppey	13460	"	4756	12475	31042	6675	"	6675	37717	67953	260	29	4440	72682	110399	309016
Kottayam	20419	"	5074	22673	47848	5074	"	5074	52872	74405	51	11	7162	81629	134501	370828
Ernakulam	16591	"	5677	19666	41934	17144	"	17144	59078	38481	3619	244	4302	46646	105724	338371
Trichur	10954	"	6440	6340	23734	21572	"	21572	45306	16408	76	98	12926	21208	66514	349144
Palghat	9965	"	21101	8750	39816	5504	"	5504	45320	8455	2692	4	6891	24171	69491	643656
Kozhikode	19702	"	18710	17020	55432	12375	30	12405	67837	40134	10933	4	3213	50904	118741	300778
Cannanore	13912	4603	24697	14146	57388	15864	60	15894	73252	14824	3973	4	55158	28971	102223	483661
State	145357	4603	98336	136690	384986	114189	60	114249	499235	553207	22100	1295	55158	631760	1130995	3709057

TABLE 4.1—(cont.)

Non-food crops

District	Oil seeds							Fibres					
	Ground nut	Castor	Sesamum	Rape and mustard	Linseed	Coconut	Others	Total	Cotton	Jute	Sunn-hemp	Others	Total
1957-58													
Trivandrum	..	7	650	..	..	138193	2096	140946	..	..	..	..	..
Quilon	..	9	6487	..	..	138921	348	145765	..	..	..	..	..
Alleppey	..	5	30813	..	..	168626	389	199833	..	..	..	..	..
Kottayam	..	15	110	..	..	141600	9749	151474	..	..	..	..	..
Ernakulam	..	16	2866	..	..	100730	6272	109884	..	..	..	..	..
Trichur	..	4	1634	..	..	81771	1887	85296	..	..	25	..	25
Palghat	33800	131	2720	..	..	11556	881	49088	21360	29	..	..	21389
Kozhikode	..	36	3823	..	..	250884	31	254738	40	20	..	..	60
Cannanore	1197	..	..	112485	172	113890	90	..	..	..	175
State	33800	223	50300	..	..	1144766	21852	1250914	21490	49	25	..	21649
1958-59													
Trivandrum	..	7	13	..	..	139720	2420	142160	..	..	..	..	..
Quilon	..	6	13423	..	..	140256	341	154026	..	..	..	..	..
Alleppey	..	10	23307	..	..	169172	525	193014	..	..	..	..	..
Kottayam	..	13	27	..	..	139195	10884	150119	..	..	..	..	..
Ernakulam	..	17	2186	..	..	100393	4689	107285	..	..	..	..	..
Trichur	..	6	2874	..	..	85931	1848	90559	..	..	..	..	..
Palghat	35468	227	3948	51	..	45449	881	86024	19300	..	..	..	19300
Kozhikode	1699	..	..	236295	..	237994	350	..	..	..	350
Cannanore	..	101	1083	20	..	119014	68	120372	..	..	..	..	90
State	35468	387	48560	71	86	1175425	21656	1281653	19650	..	..	..	19740

TABLE 4.1—(cont.)

Non-food crops—(cont.)

District	Drugs, narcotics and plantation crops						Fodder crops	Green manure crops	Other non-food crops	Total non-food crops	Total area sown (under all crops)	Area sown more than once	Net area sown
	Tobacco	Tea	Coffee	Rubber	Others	Total							
1957-58													
Trivandrum ..	..	2904	..	6405	..	9309	9	4141	154405	481951	118058	363893
Quilon ..	..	8290	..	46458	..	54323	17	2811	202916	587671	79116	508555
Alleppey ..	..	..	..	3452	..	3462	..	1756	205051	486946	96667	390279
Kottayam ..	..	67797	..	96644	..	170350	1352	20333	343509	719804	42319	677485
Ernakulam ..	..	350	..	32032	..	32542	282	45551	188259	527908	64079	463829
Trichur ..	..	1041	..	11518	..	12559	17	7686	105583	462538	143551	318987
Palghat ..	..	3207	..	8645	919	19906	..	10537	100920	738731	188382	550344
Kozhikode ..	67	9351	..	30462	2781	69101	..	13974	338513	836448	94043	742405	
Cannanore ..	1226	3700	..	12167	199	20196	..	13106	149341	621191	91909	529282	
State ..	1293	98640	..	246793	3749	391748	1702	119895	1788497	5463188	918129	4545059	
1958-59													
Trivandrum..	..	2791	..	7466	..	10257	21	4058	136496	487801	125276	362525	
Quilon ..	..	7472	..	49087	..	57134	11	4975	216146	598444	87307	511137
Alleppey ..	..	..	..	3738	..	3738	7	2364	199123	508139	120059	388080
Kottayam ..	..	66456	..	100469	..	1171378	909	20548	342954	713782	40430	673352
Ernakulam ..	..	333	..	34367	..	34870	145	41381	183681	522052	57322	464730
Trichur ..	..	991	..	15576	..	16567	16	7340	114582	463726	155368	308358
Palghat ..	..	1459	..	10104	919	17391	..	12738	135453	779109	192650	586459
Kozhikode ..	90	9801	..	35600	2556	74834	..	9820	323331	824109	78892	745217	
Cannanore ..	1230	3685	..	14219	3475	22300	..	11017	155890	639551	92495	547056	
State ..	1320	92988	..	270676	3475	408469	1128	114241	1827656	5536713	949799	4586914	

TABLE 4.2
Percentage of area under crops to total cropped area in each district of Kerala

District	2	3	4	5	6	7	8	Food crops			10	11		
								Cereals and Millets		Total			Total pulses	Total food grains
								Rice	Others						Total
1														
1957-58														
Trivandrum	100.00	67.96	32.04	75.50	24.50	19.12	0.05	19.17	1.38	20.55				
Quilon	100.00	65.47	34.53	86.54	13.46	19.75	0.25	20.00	2.97	22.97				
Alleppey	100.00	57.89	42.11	80.15	19.85	32.16	0.03	32.19	0.58	32.77				
Kottayam	100.00	52.28	47.72	94.12	5.88	15.92	0.22	15.92	0.26	16.18				
Ernakulam	100.00	64.34	55.66	87.86	12.14	34.83	0.73	35.05	1.00	36.05				
Trichur	100.00	77.17	22.83	68.96	31.04	52.84	0.73	53.57	4.86	58.43				
Palghat	100.00	86.34	13.66	74.50	25.50	63.05	2.17	65.22	4.47	69.69				
Kozhikode	100.00	59.53	40.47	88.76	11.24	33.06	0.73	33.79	1.69	35.48				
Cannanore	100.00	75.96	24.04	85.20	14.80	39.39	0.39	39.78	1.28	41.06				
State	100.00	67.26	32.74	83.19	16.81	34.68	0.57	35.25	2.04	37.29				
1958-59														
Trivandrum	100.00	67.92	32.08	74.32	25.68	18.25	0.15	18.25	1.33	19.58				
Quilon	100.00	63.88	36.12	85.41	14.59	18.44	0.15	18.59	2.82	21.41				
Alleppey	100.00	60.81	39.19	76.37	23.63	33.60	0.02	33.62	0.54	34.16				
Kottayam	100.00	51.95	48.05	94.34	5.66	15.74	0.01	15.75	0.25	16.00				
Ernakulam	100.00	64.82	35.18	89.02	10.98	35.49	0.37	35.86	0.98	36.84				
Trichur	100.00	75.29	24.71	66.50	33.50	51.62	0.72	52.34	4.75	57.09				
Palghat	100.00	82.61	17.39	75.27	24.73	60.01	1.99	62.00	4.22	66.22				
Kozhikode	100.00	60.77	39.24	90.43	9.57	33.73	0.76	34.49	1.67	36.16				
Cannanore	100.00	75.63	24.37	85.54	14.46	38.50	0.39	38.89	1.24	40.13				
State	100.00	66.99	33.01	82.85	17.15	34.29	0.56	34.85	1.98	36.83				

TABLE 4.2-(cont.)

Food crops

District	Food crops										Total fruits	
	Condiments and spices					Fresh fruits						Dry fruits (Cashew nuts)
	Sugar	Pepper	Carda- mom	Betelnuts	Others	Total	Mangoes	Bananas	Others	Total		
	12	13	14	15	16	17	18	19	20	21	22	23
1957-58												
Trivandrum	0.19	4.16	..	1.63	1.89	7.68	2.95	1.28	3.57	7.80	2.20	10.00
Quilon	0.35	2.28	..	1.39	1.44	5.11	3.93	1.09	3.50	8.52	2.87	11.39
Alleppey	2.55	0.90	..	1.08	0.55	2.53	2.43	0.85	2.21	5.49	1.18	6.67
Kottayam	0.55	4.48	8.54	1.20	2.03	16.25	2.71	0.75	3.33	6.79	0.61	7.40
Ernakulam	0.28	3.09	0.55	1.82	2.11	7.57	3.57	0.98	3.84	8.39	3.36	11.75
Trichur	0.15	0.29	..	2.10	1.43	3.97	2.26	1.58	1.86	5.70	4.76	10.46
Palghat	1.31	1.13	0.35	2.52	2.43	6.43	1.09	2.86	1.09	5.04	0.64	5.68
Kozhikode	0.23	3.75	0.21	4.66	1.56	10.18	2.55	2.38	1.90	6.83	1.50	8.33
Cannanore	0.15	15.64	0.14	2.57	0.83	19.18	2.13	3.96	2.34	8.43	2.41	10.84
State	0.62	4.11	1.28	2.25	1.63	9.27	2.57	1.83	2.57	6.97	2.01	8.98
1958-59												
Trivandrum	0.26	4.09	..	1.46	1.46	7.01	3.28	1.10	3.15	7.53	2.74	10.27
Quilon	0.33	2.18	..	1.42	1.26	4.86	4.07	1.08	3.39	8.54	2.29	11.33
Alleppey	2.48	0.83	..	1.04	0.57	2.44	2.65	1.01	2.45	6.11	1.31	7.42
Kottayam	0.54	4.52	8.91	1.38	1.76	16.57	2.86	0.67	3.17	6.70	0.70	7.40
Ernakulam	0.28	3.14	0.43	1.92	1.96	7.45	3.18	1.09	3.76	8.03	3.28	11.31
Trichur	0.13	0.29	..	2.11	1.33	3.73	2.36	1.39	1.37	5.12	4.65	9.77
Palghat	1.23	1.08	0.55	2.22	2.39	6.24	1.28	2.71	1.12	5.11	0.71	5.82
Kozhikode	0.21	3.83	0.32	4.28	1.56	9.99	2.39	2.27	2.07	6.73	1.50	8.23
Cannanore	0.15	15.12	0.16	3.25	0.84	19.37	3.08	3.86	2.03	8.97	2.48	11.45
State	0.62	4.04	1.33	2.23	1.51	9.11	2.62	1.78	2.55	6.95	2.06	9.02

TABLE 4-2—(cont.)

District	Food crops						Non-food crops					
	Vegetables			Total food crops			Oil-seeds			Others		
	Tapioca	Others	Total	Total fruits and vegetable	Total food crops	Total	Sesamum	Coconut	Groundnut	Others	Total	
	24	25	26	27	28	29	30	31	32	33		
1957-58												
Trivandrum	28.56	0.98	29.54	39.54	67.96	0.13	28.67	..	0.41	29.24		
Quilon	23.94	1.71	25.65	37.04	65.47	1.10	23.64	..	0.06	24.80		
Alleppey	12.34	1.03	13.37	20.04	57.89	6.33	34.63	..	0.08	41.04		
Kottayam	11.01	0.89	11.90	19.30	52.28	0.02	19.67	..	1.35	21.04		
Ernakulam	7.73	0.96	8.69	20.44	64.34	0.54	19.08	..	1.19	20.81		
Trichur	3.42	0.74	4.16	14.62	77.17	0.35	17.68	..	0.41	18.44		
Palghat	1.12	2.11	3.23	8.91	86.34	0.37	1.56	4.56	0.15	6.64		
Kozhikode	3.67	1.64	5.31	13.64	59.53	0.45	30.00	..	0.03	30.46		
Cannanore	2.49	2.24	4.73	15.57	75.96	0.19	18.11	..	0.03	18.33		
State	9.68	1.42	11.10	20.08	67.26	0.92	20.95	0.62	0.41	22.90		
1958-59												
Trivandrum	29.63	1.17	30.80	41.07	67.92	Neg.	28.64	..	0.50	29.14		
Quilon	24.73	1.22	25.95	37.28	63.88	2.24	23.44	..	0.06	25.74		
Alleppey	13.38	0.93	14.31	21.73	60.81	4.59	33.29	..	0.11	37.99		
Kottayam	10.42	1.02	11.44	18.84	51.95	Neg.	19.50	..	1.53	21.03		
Ernakulam	7.37	1.57	8.94	20.25	64.82	0.42	19.23	..	0.90	20.55		
Trichur	3.54	1.03	4.57	14.34	75.29	0.62	18.53	..	0.40	19.55		
Palghat	1.08	2.02	3.10	8.92	82.61	0.51	5.83	4.55	0.15	11.04		
Kozhikode	4.87	1.31	6.18	14.41	60.77	0.21	28.67	..	..	28.88
Cannanore	2.32	2.21	4.53	15.98	75.63	0.17	18.61	..	0.04	18.82		
State	9.99	1.42	11.41	20.43	66.99	0.88	21.23	0.64	0.40	23.15		

TABLE 4.2.—(cont.)

District	Non-food crops											
	Fibres			Drugs, narcotics and plantation crops							Other non-food crops	Total non-food crops
	Cotton	Others	Total	Tea	Coffee	Rubber	Others	Total				
	34	35	36	37	38	39	40	41	42	43		
1957-58												
Trivandrum	..	..	..	0.60	0.10	1.33	..	1.93	0.87	32.04
Quilon	..	..	..	1.41	..	7.73	..	9.24	0.49	34.53
Alleppey	..	..	..	0.70	0.54	0.71	..	0.71	0.36	42.11
Kottayam	..	..	..	0.07	0.03	13.43	..	23.67	3.01	47.72
Ernakulam	..	..	..	0.23	0.03	6.06	..	6.16	8.69	35.66
Trichur	..	..	Neg.	0.42	0.96	2.49	..	2.72	1.67	22.83
Palghat	2.89	0.01	2.90	1.17	0.13	1.17	0.13	2.69	1.43	13.66		
Kozhikode	0.01	0.01	0.01	1.12	3.16	3.64	0.26	8.26	1.74	40.47		
Cannanore	0.02	0.01	0.03	0.59	0.47	1.95	0.24	3.25	2.43	24.04		
State	0.39	0.01	0.40	1.81	0.75	4.52	0.19	7.17	2.27	32.74		
1958-59												
Trivandrum	..	..	..	0.57	0.10	1.53	..	2.10	0.84	32.08
Quilon	..	..	..	1.25	..	8.20	..	9.55	0.83	36.12
Alleppey	..	..	..	9.31	0.62	0.74	..	0.74	0.46	39.19
Kottayam	..	..	..	0.06	0.03	14.08	..	24.01	3.01	48.05
Ernakulam	..	..	..	0.21	0.03	6.59	..	6.68	7.95	35.18
Trichur	..	..	..	0.19	0.63	1.30	0.11	3.57	1.59	24.71
Palghat	2.48	..	2.48	1.19	3.25	4.32	0.32	2.23	1.23	17.39		
Kozhikode	0.04	..	0.04	0.58	0.34	2.22	0.35	9.08	1.23	39.23		
Cannanore	..	0.01	0.01	1.68	0.72	4.89	0.09	3.49	2.05	24.37		
State	0.36	Neg.	0.36	1.68	0.72	4.89	0.09	7.38	2.12	33.01		

TABLE 5.1
Total out-turn of important commodities in each District

Year	District	Rice (Tons)	Jowar (Tons)	Ragi (Tons)	Other cereals and millets (Tons)	Pulses (Tons)	Sugarcane (Tons)	Pepper (Tons)	Ginger dry (Tons)	Turmeric dry (Tons)	Cardamom (Tons)	Arcaut (Million nuts)	Banana (Tons)
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1957-58	Trivandrum	53,500	..	105	2	1,046	..	3,400	44	461	..	457	3,014
	Quilon	64,800	..	599	1	2,736	3,323	2,410	44	153	..	512	6,375
	Alleppey	72,700	..	59	1	441	20,577	790	21	66	..	328	4,112
	Kottayam	57,700	..	1	5	288	5,045	5,400	3,210	1,570	1,096	374	6,963
	Ernakulam	81,900	..	90	194	823	1,660	2,780	1,760	620	52	349	5,746
	Trichur	121,200	..	1,363	71	3,534	..	230	88	82	..	524	7,486
	Palghat	262,400	680	1,330	1,995	5,186	2,396	670	1,650	1,406	46	1,015	9,715
	Kozhikode	103,900	30	2,020	600	2,214	139	2,520	2,270	911	32	2,126	12,678
	Cannanore	92,800	20	1,540	26	1,241	1,700	7,820	111	122	16	869	10,403
	State	910,900	730	7,107	2,895	17,509	34,840	26,020	9,198	5,391	1,242	6,754	66,392
	1958-59	Trivandrum	52,615	..	1	3,400	..	28	..	413	2,996
Quilon		68,886	..	378	..	..	3,323	2,291	51	64	..	533	8,040
Alleppey		92,752	..	38	..	..	20,569	715	20	26	..	326	5,339
Kottayam		59,161	..	20	..	..	5,273	5,276	2,274	636	1,136	427	5,275
Ernakulam		85,247	..	387	193	..	1,666	2,746	1,299	530	40	575	5,966
Trichur		104,427	..	1,375	69	..	..	232	102	35	..	527	6,512
Palghat		274,479	618	1,313	1,949	..	2,393	680	1,549	1,441	76	943	9,700
Kozhikode		105,119	20	2,136	595	..	139	2,496	2,293	855	46	1,920	9,317
Cannanore		96,734	16	1,577	24	..	1,658	7,194	74	170	18	1,131	10,658
State		939,420	654	7,225	2,830	..	35,021	25,030	7,662	3,785	1,316	6,795	63,803

TABLE 6.1—(cont.)

Serial number	Name of crop	Unit	1958-59								State
			Alleppey	Kottayam	Ernakulam	Trichur	Palghat	Kozhikode	Cannanore		
1	Paddy	Mauud	14.86	13.32	13.71	13.02	11.92	14.51	15.06	13.65	19
2	Tapioca	"	2.58	2.57	2.48	2.47	2.35	2.58	2.54	2.43	
3	Ginger	"	26.77	33.79	35.44	35.44	33.70	33.70	33.70	33.98	
4	Turmeric	"	1.44	NQ	NQ	NQ	NQ	NQ	NQ	1.44	
5	Sugarcane	"	17.86	19.93	2.12	21.23	20.10	19.60	22.02	20.61	
6	Cashewnut	"	60.23	64.16	71.01	71.01	109.90	69.79	78.23	70.49	
7	Pepper	"	210.75	207.00	209.96	206.14	88.40	177.71	193.49	194.20	
8	Coconut (with husk)	1,000	26.61	22.46	22.92	26.13	28.01	19.63	25.63	24.05	
9	Areca nut	"	7.14	6.46	5.78	6.53	6.58	6.19	5.31	6.31	
10	Banana	100	1.39	1.38	1.34	1.42	1.47	1.12	0.94	1.23	
11	Other plantains	100	1.39	1.38	1.34	1.42	1.47	1.12	0.94	1.23	
12	Tamarind	Mauud	15.83	15.04	NQ	NQ	10.40	10.07	22.02	..	

TABLE 7. 1.—The average daily wages for different districts of Kerala

(Wages in rupees)

Districts	July 1958	August 1958	Sept. 1958	October 1958	Nov. 1958	Dec. 1958	January 1959	February 1959	March 1959	April 1959	May 1959	June 1959	Average 1958-59
Carpenter													
Trivandrum	2.28	2.28	2.28	2.28	2.28	2.28	2.40	2.64	2.48	2.49	2.22	2.22	2.34
Quilon	2.79	2.67	2.30	3.03	3.03	3.03	2.96	2.96	2.88	2.86	2.86	2.86	2.85
Alleppey	2.70	2.70	2.73	2.73	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.56
Kottayam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ernakulam	2.28	2.28	2.28	2.28	2.28	2.28	2.32	2.32	2.38	2.55	2.30	2.30	2.32
Trichur	2.00	2.50	3.00	3.00	3.00	3.00	..	2.56	2.48	2.46	2.41	2.41	2.62
Palghat	NA	NA	NA	NA	NA	NA	..	3.06	3.06	3.12	3.12	3.12	3.10
Kozhikode	..	..	..	..	..	..	..	3.20	3.20	3.23	3.23	3.14	3.20
Cannanore	..	..	..	..	..	..	..	..	..	..	..	..	..
Mason													
Trivandrum	2.11	2.11	2.11	2.41	2.41	2.41	2.40	NA	2.64	2.22	2.77	2.86	2.34
Quilon	3.15	2.79	2.79	3.15	3.15	3.15	2.88	2.88	2.96	2.77	2.89	2.89	2.94
Alleppey	NA	NA	NA	NA	NA	NA	NA	3.12	3.12	3.11	2.48	2.48	3.03
Kottayam	2.35	2.35	2.66	2.66	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.49
Ernakulam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichur	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.25	2.25	2.25	2.24
Palghat	..	..	..	..	..	..	..	2.32	2.40	2.33	2.26	2.26	2.31
Kozhikode	NA	NA	NA	NA	NA	NA	..	3.37	3.37	3.29	3.29	3.25	3.32
Cannanore	..	..	..	..	..	..	..	3.28	3.28	3.33	3.33	3.25	3.29
Field Labour													
Trivandrum	1.11	1.53	1.41	1.22	1.22	1.54	2.00	1.60	1.52	1.33	1.54	1.56	1.46
Quilon	1.48	1.49	1.49	1.54	1.54	1.54	1.68	1.68	1.68	1.69	1.69	1.66	1.60
Alleppey	1.75	NA	NA	NA	NA	NA	NA	1.75	1.75	1.88	1.48	1.48	1.68
Kottayam	1.31	1.37	1.45	1.49	1.48	1.54	1.44	1.52	1.52	1.48	1.49	1.51	1.47
Ernakulam	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichur	1.41	1.41	1.52	1.52	1.66	1.86	1.44	1.44	1.44	1.53	1.53	1.54	1.53
Palghat	1.00	1.25	1.60	1.43	1.42	1.25	NA	1.20	1.20	1.17	1.23	1.19	1.27
Kozhikode	..	..	..	..	..	..	..	1.86	1.85	1.79	1.95	1.82	1.85
Cannanore	..	..	..	..	..	..	..	1.84	1.92	2.02	2.11	2.16	2.01

NA : Not Available

TABLE 8.1.
Number of Livestock, Poultry and Agricultural Machinery and Implements in Kerala
(1956 census)

Districts	Cattle							
	Males over three years				Females over three years (Breeding)			
	Breeding	Working	Others	Total	In milk	Dry	Not calved	
1	2	3	4	5	6	7	8	
State	11,026	553,155	37,718	601,899	396,375	454,293	120,976	
Trivandrum	864	19,002	1,001	20,867	21,883	19,711	4,765	
Quilon	3,082	73,339	3,616	80,037	91,482	123,507	26,709	
Kottayam	2,166	82,656	2,966	87,788	73,532	85,442	14,902	
Trichur	1,099	120,317	2,140	123,556	51,276	50,093	9,892	
Malabar and Kasargod	3,815	257,841	27,995	289,651	158,202	175,540	64,707	

TABLE 8.1.—(cont.)

Districts	Cattle						Buffaloes			
	Females over three years			Young stock	Total	Males over three years				
	Working	Others	Total			Breeding	Working	Others	Total	
				9	10					11	12	13	14	15	16	17
State	7,083	19,223	997,950	910,527	2,510,376	4,046	247,313	5,895	257,254	
Trivandrum	185	1,079	47,623	7,684	116,174	507	21,185	350	22,042	
Quilon	903	6,664	249,265	257,012	586,314	620	16,293	410	17,323	
Kottayam	1,196	4,464	179,536	183,529	450,853	311	7,086	245	7,642	
Trichur	1,216	2,035	114,513	119,874	357,943	838	46,096	729	47,663	
Malabar and Kasargod	3,583	4,981	407,013	302,428	999,092	1,770	156,653	4,161	162,584	

TABLE 8. 1—(cont.)

Districts	Buffaloes										Total	
	Female over three years											Young stock
	Breeding			Working			Others			Total		
	In milk	Dry	Not calved									
18	19	20	21	22	23	24	25					
State	61,336	52,128	11,624	10,109	3,288	138,485	91,914	487,653				
Trivandrum	7,294	5,119	1,179	913	327	14,832	8,159	45,033				
Quilon	5,685	5,167	1,008	409	344	12,613	9,161	39,097				
Kottayam	3,203	2,614	358	317	116	6,608	4,578	18,828				
Trichur	12,157	13,176	861	1,396	370	27,960	15,810	91,433				
Malabar and Kasargod	32,997	26,052	8,218	7,074	2,131	76,472	54,206	293,262				

TABLE 8.1—(cont.)

Districts	Sheep			Goats			Horses and Ponies		
	One year and above	Below one year	Total	One year and above	Below one year	Total	3 years and above	Below 3 years	Total
	26	27	28	29	30	31	32	33	34
State	58,677	39,143	97,820	592,435	363,135	955,570	1,008	682	1,690
Trivandrum	11,682	8,878	20,560	65,382	45,724	111,106	283	165	448
Quilon	24,838	17,870	42,708	100,431	69,214	169,645	159	148	307
Kottayam	4,697	3,404	8,101	85,437	53,466	138,903	160	77	237
Trichur	10,828	5,436	16,264	110,213	78,621	188,834	269	142	411
Malabar and Kasargod	6,632	3,555	10,187	230,972	116,110	347,082	137	150	287

TABLE 8. 1—(cont.)

Districts	Total livestock						Poultry				Total
	Mules	Donkeys	Camels	Pigs	Total livestock	Fowls	Ducks	Others			
	35	36	37	38	39	40	41	42	43		
State	2	1,415	..	113,711	4,168,237	6,462,799	332,085	161	6,795,045		
Trivandrum	..	36	..	5,567	298,924	620,825	4,731	..	625,556		
Quilon	..	88	..	1,882	840,041	1,459,666	134,610	..	1,594,276		
Kottayam	..	225	..	93,358	710,505	1,236,177	114,750	..	1,350,927		
Trichur	..	198	10,472	665,555	665,555	1,224,509	69,268	..	1,293,777		
Malabar and Kasargod	2	868	..	2,432	1,653,212	1,921,622	8,726	161	1,930,509		

TABLE 8. I—(cont.)

Districts	Ploughs		Carts	Sugarcane crushers		Oil engines	Electric pumps	Tractors	Ghanis		Persian wheels
	Wooden	Iron		Power	Bullocks				More than 5 seers	Less than 5 seers	
State	570,327	10,225	27,283	230	1,155	2,504	723	187	1,858	2,366	..
Trivandrum	25,408	288	2,360	3	86	34	2	1	105	525	..
Quilon	71,960	4,738	4,803	69	399	622	175	42	847	866	..
Kottayam	69,567	477	2,391	27	189	381	139	73	249	297	..
Trichur	98,318	3,379	6,562	79	232	763	367	3	548	404	..
Malabar and Kasargod	305,074	1,343	11,167	52	249	704	40	68	109	274	..

PART IV—APPENDICES

This part deals with the other important items of information like indices relating to agricultural economy, notes on certain crops, common pests attacking paddy and their remedies, etc. A glossary giving the English, Botanical and Vernacular names of some crops is also appended.

1. Index of agricultural production

The index numbers of agricultural production for the State, from 1952-53 to 1958-59 are given in Table I.

Coverage.—This series of index numbers covers twenty important crops, namely:—

(a) Food grains—

(i) Cereals—(1) Paddy, (2) Ragi, (3) Jowar.

(ii) Pulses.

(b) Non-food grains—

(i) Oil seeds—(1) Coconut, (2) Groundnut, (3) Sesamum.

(ii) Fibres—(1) Cotton.

(iii) Plantation Crops—(1) Tea, (2) Rubber, (3) Coffee.

(iv) Miscellaneous Crops—(1) Pepper, (2) Tapioca, (3) Arecanut

(4) Banana, (5) Cashewnut, (6) Cardamom, (7) Ginger, (8) Sugarcane, (9) Turmeric.

These crops account for about 93 per cent of the total value of agricultural production of the State. Hence the coverage may be considered to be adequate for all practical purposes.

Base year.—The year 1952-53 is chosen as the base year for this series. Reliable figures of productions are available from that year onwards.

Method of calculation.—This series has been compiled by the chain base method adopted for the series constructed by the Government of India. The production for each crop during an year is expressed as the percentage of the production in the previous year. These production relatives are then linked to the production in the base year through the intervening chain relatives to give the production index of the crop. The weighted arithmetic mean of the production indices of the crop under each group (or sub-group) is taken as the production index of that group (or sub-group).

Weights.—Weights have been assigned to various crops in proportion to the total value of productions of the crop during the base year (1952-53). The average harvest price during the harvest season of each crop in the base year is used to calculate the value of production. In the case of cotton the harvest price was not available so the export price is used. The weights assigned to each crop/sub-group/group are given in column (2) of the table.

Concept of production.—The concept of production adopted in the compilation of this series is that of gross production. No allowances are made for seed or wastage.

Variation in production.—The production indices of food grains, non-food grains and all crops are given in the sub-joined table. The overall agricultural production has registered a steady increase over the period. The production in 1958-59 was 19.7 per cent

more than that in 1952-53. This increasing trend in production is noticed for both food grains and non-food grains. The production of food grains increased by 32.1 per cent during the period between 1952-53 and 1958-59. The increase in the production of non-food grains was only 16.4 per cent. The production of paddy in 1953-59 was 132.2 per cent of the production in 1952-53. Among other crops, the highest increase was noticed in the production of arecanut and bananas (including other plantains). Production of arecanut increased by about 53 per cent and that of bananas by 40 per cent in the period. In the case of cotton the production increased steadily till 1956-57. The index for this year was 142.5, but it decreased to 137.2 in 1957-58 and again fell down to 112.0 in the next year. In the case of ginger also a decreasing trend is noted from 1956-57. Though the index went up to 109.2 in 1955-56, it came down to 76.5 in 1958-59, which was even less than the index in 1953-54. Coming to tapioca there was a sudden decline in the production of tapioca during 1954-55; this was chiefly due to the decrease in the area under the crop. There was a marked decline in the area under the crop ever since 1953-54. The price of tapioca soared high during 1952-53 and it was reflected in the abnormal increase in the area under the crop during the next year. With the decline in the price level, the area and consequently the production of tapioca also decreased. The production of coconuts showed a gradual increase over the years, the production in 1958-59 being 9.1 per cent more than that in the base period. Among the plantain crops, the highest increase in production was registered by coffee; there being an increase of 38.4 per cent over the period of 7 years.

Year/Crop	Food grains	Non-food grains	All crops
1952-53	100.0	100.0	100.0
1953-54	104.4	107.2	106.6
1954-55	113.6	108.9	109.9
1955-56	122.5	112.1	114.3
1956-57	123.2	113.3	115.3
1957-58	128.1	114.0	117.0
1958-59	132.1	116.4	119.7

Per capita variation in production.—It will be interesting at this stage to compare the increase in production of food grains with the increase in the population of the State during the same period. The estimated population of the State in 1958-59 was about 10.6 per cent more than that in 1952-53. Thus the addition of 32.1 per cent in the production of food grains has brought in only an increase of 19.5 per cent in the per capita availability of foodgrains. (Imports are excluded here).

TABLE I
 Index numbers of Agricultural Production in Kerala

Commodities	Indices of production							
	Weight	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	
1	2	3	4	5	6	7	8	
All Crops	100.00	106.6	109.9	114.3	115.3	117.0	119.7	
(a) Food grains	20.95	104.4	113.6	122.5	123.2	128.1	132.1	
(i) Cereals	20.52	104.0	113.3	122.4	122.9	128.0	132.2	
1. Paddy	20.37	103.9	113.3	122.4	122.9	128.0	132.2	
2. Jowar	0.01	136.3	121.9	168.0	177.5	149.6	134.0	
3. Ragi	0.14	111.6	110.7	112.0	122.7	130.0	132.3	
(ii) Pulses	0.43	123.7	128.4	128.8	138.8	132.3	129.5	
b) Non-food grains	79.05	107.2	108.9	112.1	113.3	114.0	116.4	
(i) Oil seeds	30.99	102.6	104.0	104.1	107.0	107.1	109.1	
1. Coconut	30.12	102.1	103.3	104.1	106.9	107.5	109.1	
2. Sesamum	0.34	113.5	116.2	109.0	108.8	110.0	98.0	
3. Groundnut	0.53	121.7	135.4	103.8	114.1	80.1	114.1	
(ii) Fibres—Cotton	0.07	115.2	138.6	136.2	142.5	137.2	112.0	
(iii) Plantation Crops	13.45	103.1	104.4	105.6	116.2	117.6	129.7	
1. Tea	8.32	100.2	99.6	100.6	114.9	114.9	133.6	
2. Coffee	1.57	111.0	117.0	122.4	131.4	141.2	138.4	
3. Rubber	3.56	106.4	110.1	109.9	112.4	113.4	116.9	
(iv) Miscellaneous Crops	34.54	112.9	115.1	121.7	117.7	117.8	117.8	
1. Sugarcane	0.06	113.8	124.1	113.8	120.7	120.7	120.7	
2. Pepper	13.18	104.7	116.5	122.3	120.3	116.8	112.4	
3. Cardamom	1.17	97.7	99.7	102.2	102.5	102.5	108.6	
4. Ginger	0.87	94.8	103.9	109.2	106.8	91.8	76.5	
5. Turmeric	0.06	96.3	101.3	100.9	83.0	108.4	76.1	
6. Arecanut	4.17	117.1	130.0	145.3	148.8	151.9	152.8	
7. Bananas	3.66	129.1	139.0	151.8	141.7	142.5	140.2	
8. Tapioca	9.12	120.6	105.2	105.3	95.7	99.8	102.5	
9. Cashewnut	2.25	110.9	93.7	107.4	107.2	126.2	132.4	

Base 1952-53 = 100.

2. Cost of Living Index Numbers

Monthly cost of living index numbers for selected centres in the State for the years 1957-58 and 1958-59 are given in Table II. These centres are:—

- | | |
|--------------------|----------------|
| (1) Trivandrum | (7) Alwaye |
| (2) Quilon | (8) Ernakulam |
| (3) Punalur | (9) Trichur |
| (4) Alleppey | (10) Chalakudy |
| (5) Changanacherry | (11) Munnar |
| (6) Kottayam | (12) Kozhikode |

The base period for the centres in Travancore-Cochin area is August 1939, while for Kozhikode the average for July 1935 to June 1936 is taken as the base. The cost of living index numbers showed a decreasing trend during the year 1957-58, while it rose rapidly in the next year in all centres the steepest rise being at Alwaye where the index number increased by 94 points during the 2 year period from July 1957 to June 1959. The average index numbers for each year and the percentage increase during 1958-59 in each centre are given below:—

TABLE II
Cost of Living Index Number for selected centres

Serial number	Centre	Average		Percentage increase
		1957-58	1958-59	
1	Trivandrum ..	403	417	3.5
2	Quilon ..	405	437	7.9
3	Punalur ..	424	442	4.2
4	Alleppey ..	405	419	3.5
5	Changanacherry ..	408	425	4.2
6	Kottayam ..	400	423	5.8
7	Alwaye ..	397	444	11.8
8	Ernakulam ..	409	439	7.3
9	Trichur ..	408	446	9.3
10	Chalakudy ..	417	452	8.4
11	Munnar ..	385	424	10.1
12	Kozhikode ..	425	457	7.5

TABLE II—Working class Cost of Living Index Numbers for selected centres—(cont.)

Year/Month	Trivandrum	Quilon	Punalur	Alleppey	Changanacherry	Kottayam	Alwaye	Eranakulam	Trichur	Chalakyd	Munnar	Kozhikode
1957												
July	413	412	427	410	424	398	409	414	412	426	385	444
August	408	407	421	408	418	405	401	411	406	420	389	424
September	396	396	427	400	410	395	393	406	406	408	390	423
October	404	390	417	395	401	386	383	409	397	408	387	418
November	400	396	423	400	407	393	391	405	400	407	384	421
December	404	401	428	406	409	401	394	411	407	414	381	429
1958												
January	409	407	432	412	412	403	400	413	411	421	381	429
February	406	404	427	409	407	401	398	409	410	420	381	423
March	399	403	425	404	403	400	395	405	407	419	381	417
April	397	408	421	404	400	404	398	407	411	420	382	418
May	399	414	417	406	402	405	401	410	414	423	387	421
June	396	416	420	404	399	407	403	412	418	422	392	426
July	400	423	424	408	403	411	409	420	423	425	399	432
August	409	429	427	410	407	414	414	424	430	427	404	435
September	412	432	429	414	410	418	420	429	438	434	411	442
October	418	438	433	419	414	422	428	436	445	441	416	451
November	420	444	438	424	421	429	436	441	452	447	422	460
December	423	447	443	432	427	434	446	447	457	455	429	468
1959												
January	420	439	441	425	425	424	446	439	446	454	428	456
February	418	431	434	418	420	418	443	435	441	452	425	451
March	406	424	433	407	420	418	444	440	440	455	419	446
April	416	443	449	418	438	426	462	446	447	469	429	460
May	424	438	462	420	447	428	475	454	453	472	450	480
June	432	456	487	432	462	439	503	457	481	488	450	505

Note.—Base for Kozhikode—Average price from July 1935 to June 1936=100.
Base for other centres—August 1939=100.

3. Index of parity between prices received and prices paid by farmers

The Index measures the variation in the economic prosperity of the farmer in relation to changing farm prices, farm cultivation cost and domestic expenditure as compared to the position in the base period. This is defined as the ratio of the index of prices received and the index of prices paid by farmers, expressed as a percentage.

Index number of prices received by farmer.—This index measures the relative changes in receipts of the farmer from the important agricultural products as a result of the changes in the farm prices. The changes are measured based on the prices prevailing in base year which is taken as the Agricultural year 1952-53. The weighted average of the price relatives of the current farm prices to those in the base year (1952-53) is defined as the index of prices received. For the construction of this index, the following important crops are considered.

- | | |
|---------------|---------------|
| (1) Paddy | (6) Ginger |
| (2) Coconut | (7) Pepper |
| (3) Arecanut | (8) Bananas |
| (4) Cashewnut | (9) Sugarcane |
| (5) Tapioca | |

The index numbers of prices paid.—The index of prices paid by farmer is a measure of the relative changes in the expenditure incurred by the farmer for farm cultivation and domestic expenditure, as a result of the changes in wage, rates, cost of implements; cost of manure, cost of maintenance of live-stock and the prices of consumer goods as compared to the situation in the base year. This is calculated as the geometric mean of two indices, *viz.*, the index of farm cultivation cost and the index of domestic expenditure.

Here the index of farm cultivation cost is again a weighted geometric mean of the relatives of wages paid, cost of implements, cost of manure and cost of maintenance of a pair of bullocks. The average cost of living index for the different centres with the base year changed to 1952-53, is taken as a measure of the index of domestic expenditure.

The indices of prices received, the indices of cultivation cost and the indices of parity, for the years 1957-58 and 1958-59 are given in the table attached. All the three indices showed an increasing trend during the period under report. The trend in the index of parity was more or less similar to that of the index of prices received, though the rice in the latter index was more rapid. Through the years 1957-58 and 1958-59 the indices of prices received showed an increase of 12 points, from 81 in July 1957 to 93 in June 1959 while the index of parity which was 80 in July 1957, increased to 85 in June 1959. The index of farm cultivation cost stood at 97 in July 1957 and and at the end of 1958-59, it reached 103.

TABLE III

Index numbers of parity between prices received and prices paid by farmers

(Base 1952-53=100)

Year and month		Index of prices received	Index of farm cultivation cost	Index of parity
1		2	3	4
1957	July	81	97	80
	August	81	96	81
	September	80	100	80
	October	80	99	80
	November	82	98	82
	December	85	97	86
1958	January	82	99	81
	February	81	99	80
	March	84	98	84
	April	85	99	84
	May	85	100	83
	June	84	101	82
	July	86	101	83
	August	82	99	80
	September	83	99	81
	October	84	99	81
	November	86	98	83
	December	87	97	83
1959	January	87	103	81
	February	91	104	85
	March	90	102	85
	April	90	101	84
	May	93	103	85
	June	93	103	85

4. Quarterly Retail Prices of Certain Commodities in each District

The quarterly prices for the following commodities are given in Table IV.

- | | |
|---------------------------|------------------------|
| 1. Coconut (without husk) | 7. Sugar |
| 2. Coconut oil | 8. Chillies |
| 3. Rice | 9. Coffee seeds |
| 4. Blackgram | 10. Tea |
| 5. Gingelly oil | 11. Tobacco (Jaffna) |
| 6. Tapioca | 12. Tobacco (Ordinary) |

The prices in the three districts in Malabar area are not available for the year 1957-58.

Coconut.—The prices in the first three quarters in 1958-59 were generally higher when compared to 1957-58. (The prices in the last quarter for the two years were nearly the same). The price varied from 16.02 to 24.25 during the year 1958-59; the average price during the year being Rs. 21.31 for hundred nuts. The prices during the 2nd quarter (October-December) were uniformly higher, in all the districts, with the only exception of Kozhikode.

Coconut oil.—The rising trend in prices of coconuts is reflected in the case of coconut oil also in the first two quarters for 1957-58 and 1958-59. But variation in prices between the two quarters for 1957-58 and 1958-59 is not so marked. The minimum price in 1958-59 was Rs. 2.84 per Edangazhi in Trichur District during the fourth quarter, while the price was a maximum (Rs. 3.43 per Edangazhi) during the second quarter in Trivandrum District. The minimum price in 1957-58 was Rs. 2.35 in Trichur in the first quarter and the maximum price was Rs. 3.11 in Alleppey in the third quarter.

Rice.—During 1958-59 the price of rice per Edangazhi rose from 58 naye paise in the previous years to 77 naye paise. The prices were higher in the Travancore-Cochin area when compared to the Malabar region. However, in all the districts the price level in the last quarter was higher than that in the beginning of the year 1958-59.

The average price of rice in each district is given below:—

<i>District</i>	<i>Price in 1958-59</i>
	<i>Rs.</i>
Trivandrum	0.70
Quilon	0.73
Alleppey	0.71
Kottayam	0.68
Ernakulam	0.70
Trichur	0.64
Palghat	0.61
Kozhikode	0.65
Cannanore	0.63

Thus Quilon District recorded the highest price of Re. 0.73 per Edangazhi, while in Palghat the average price was only Re. 0.61.

Blackgram.—The price level was more or less steady in the two years. There was also no wide difference in price levels among the districts.

Gingelly oil.—The price of gingelly oil in Trichur and Ernakulam varied from the other districts. The average price in each district for 1958-59 is given below:—

<i>District</i>	<i>Price in 1958-59</i>
	<i>Rs.</i>
Trivandrum	3.30
Quilon	3.29

District	Price in 1958-59
	Rs.
Alleppey	3.73
Kottayam	3.43
Ernakulam	3.14
Trichur	2.90
Palghat	3.19
Kozhikode	3.55
Cannanore	3.20

Thus when the price was Rs. 3.73 per Edangazhi in Alleppey District the same cost only Rs. 2.90 in Trichur District.

The difference was not so marked in 1957-58.

Tapioca.—In Alleppey, Kottayam and Palghat districts the price of tapioca, remained stationary in all the quarters during 1958-59, the price in the first two districts being 5 nP. per lb., while in Palghat the price was 6 nP. Cannanore district showed a decrease from 7 nP. during the first quarter to 5 nP. in the last quarter. In Kozhikode it decreased from 6 nP. to 5 nP. The other districts showed an increase in the price level towards the last quarters generally the price level was higher in 1957-58 compared to 1958-59. Between individual district also the variation is noticed.

Sugar.—During the year 1958-58, the price of sugar rose in all the districts. The lowest price registered was 52 nP. in Cannanore district during the second quarter while Trichur district showed the highest price of 59 nP. in the last quarter.

Chillies.—There was a sharp rise in the price of chillies during the year 1958-59. The price in the 3rd quarter (January—March 1959) was the highest; reaching Rs. 1.38 per pound in Quilon district. But in the first quarter the price was only 86 nP. in that district and was 83 nP. in Trivandrum this being lowest price during the year.

Coffee seeds.—The price of coffee seeds showed only slight variation between the years. The price per lb. varied from Rs. 2.27 in Kozhikode in the first quarter to Rs. 3.17 in the same quarter in Trivandrum during the year 1958-59.

Tea.—Generally the price was lower in 1958-59 compared to 1957-58. In 1957-58 the price in the first two quarters were generally higher than in the other two quarters, but in 1958-59 this trend is reversed in the case of almost all districts.

Tobacco (Jaffna).—The prices are not quoted for the districts of Trichur, Palghat, Kozhikode and Cannanore. Among the other districts the price in Quilon district was invariably less. Generally the prices were higher in 1957-58 than in 1958-59. There is uniform variation in price levels between the years in individual districts also.

Tobacco (Ordinary).—This costs only less than half the price of Jaffna tobacco, varying from Rs. 1.38 to Rs. 1.97 per pound.

TABLE IV
Quarterly Retail Prices of certain commodities in each district
1957-58

Serial number	Item	Unit	Quarter of the year				1957-58				
			4	5	6	7	8	9	10		
1	Coconut (without husk)	100 Nos.	I 14 II 17 III 17 IV 16	I 50 II 31 III 00 IV 75	I 26 II 40 III 78 IV 90	I 17 II 19 III 21 IV 21	I 02 II 99 III 89 IV 17	I 20 II 22 III 22 IV 23	I 35 II 48 III 66 IV 35	I 15 II 18 III 20 IV 21	I 54 II 32 III 85 IV 79
2	Coconut oil	Edangazhi	I 2 II 2 III 3 IV 3	I 54 II 85 III 03 IV 10	I 2 II 2 III 2 IV 3	I 47 II 79 III 94 IV 06	I 2 II 3 III 3 IV 0	I 60 II 92 III 11 IV 09	I 43 II 74 III 05 IV 06	I 2 II 2 III 2 IV 0	I 35 II 45 III 77 IV 80
3	Rice	"	I 0 II 0 III 0 IV 0	I 63 II 64 III 63 IV 30	I 0 II 0 III 0 IV 0	I 66 II 64 III 64 IV 32	I 0 II 0 III 0 IV 0	I 63 II 65 III 63 IV 31	I 0 II 0 III 0 IV 32	I 0 II 0 III 0 IV 31	I 56 II 57 III 57 IV 35
4	Blackgram	"	I 0 II 0 III 0 IV 0	I 28 II 30 III 30 IV 29	I 31 II 31 III 31 IV 30	I 0 II 0 III 0 IV 0	I 31 II 31 III 31 IV 30	I 0 II 0 III 0 IV 32	I 31 II 32 III 32 IV 31	I 0 II 0 III 0 IV 31	I 33 II 34 III 34 IV 32

TABLE IV—(cont.)

Serial number	Item	Unit	Quarter of the year	1958-59									
				Trivandrum	Quilon	Alleppey	Kottayam	Ernakulam	Trichur	Palghat	Kozhikode	Cannanore	
				Rs. nP	Rs. nP	Rs. nP	Rs. nP	Rs. nP	Rs. nP	Rs. nP	Rs. nP	Rs. nP	Rs. nP
				11	12	13	14	15	16	17	18	19	
1	Coconut (without husk)	100 Nos.	I	17	6319	2521	0023	1223	8021	9820	1319	2121	89
			II	19	4720	2021	9224	0924	2523	4922	0121	3522	93
			III	17	8219	7421	5824	2523	7321	9920	2221	4721	87
			IV	16	0219	1320	9823	7223	1021	0720	0021	7821	48
2	Coconut oil	Edangazhi	I	3	21	3	22	3	2	2	3	28	3
			II	3	43	3	27	3	3	00	3	12	3
			III	3	24	3	09	3	2	94	2	89	3
			IV	3	01	3	10	2	97	2	91	2	91
3	Rice	"	I	0	67	0	68	0	65	0	62	0	60
			II	0	73	0	75	0	74	0	65	0	63
			III	0	68	0	67	0	66	0	61	0	60
			IV	0	72	0	73	0	71	0	58	0	68
4	Blackgram	"	I	0	31	0	30	0	34	0	31	0	29
			II	0	31	0	31	0	35	0	31	0	30
			III	0	31	0	30	0	32	0	32	0	29
			IV	0	31	0	30	0	32	0	32	0	30

TABLE IV—(cont.)

Serial number	Item	Unit	Quarter of the year	1957-58									
				Trivandrum	Quilon	Alleppey	Kottayam	Ernakulam	Trichur				
1	2	3	4	Rs. nP	Rs. nP	Rs. nP	Rs. P	Rs. nP	Rs. nP	Rs. nP	Rs. nP		
5	Gingelly oil	Edangazhi	I	3 18	3 79	3 66	3 44	3 45	3 09				
			II	3 25	3 48	3 93	3 46	3 37	3 07				
			III	3 49	3 36	3 87	3 52	3 40	3 10				
			IV	3 30	3 37	3 75	3 58	3 40	3 01				
6	Tapioca	lb.	I	0 06	0 05	0 06	0 07	0 07	0 07				
			II	0 06	0 05	0 06	0 06	0 06	0 06				
			III	0 05	0 04	0 05	0 05	0 05	0 05				
			IV	0 04	0 04	0 05	0 05	0 06	0 06				
7	Sugar	lb.	I	0 53	0 53	0 50	0 54	0 54	0 56				
			II	0 51	0 52	0 50	0 52	0 52	0 54				
			III	0 52	0 52	0 53	0 53	0 54	0 56				
			IV	0 52	0 53	0 53	0 53	0 53	0 56				
8	Chillies	lb.	I	0 86	0 94	0 93	1 01	1 00	1 03				
			II	0 94	1 00	1 00	1 03	1 09	1 14				
			III	0 91	0 95	0 97	0 87	1 07	1 12				
			IV	0 73	0 77	0 81	0 86	0 86	0 90				

TABLE IV—(cont.)

Serial number	Item	Unit	Quarter of the year	1958-59																	
				Trivandrum	Quilon	Alleppey	Kottayam	Ernakulam	Trichur	Palghat	Kozhikode	Cannanore									
				Rs. nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.						
				11	12	13	14	15	16	17	18	19									
5	Gingelly oil	Edangazhi	I	3	26	3	28	3	77	3	59	3	16	2	89	3	20	3	70	3	20
			II	3	43	3	19	3	89	3	41	3	9	3	86	3	24	3	46	3	18
			III	3	42	3	24	3	64	3	40	3	8	2	89	3	19	3	44	3	21
			IV	3	08	3	45	3	60	3	32	3	21	2	96	3	11	3	58	3	19
6	Tapioca	lb.	I	0	03	0	03	0	05	0	05	0	05	0	04	0	06	0	06	0	07
			II	0	03	0	04	0	05	0	05	0	05	0	04	0	06	0	05	0	06
			III	0	04	0	04	0	05	0	05	0	05	0	05	0	06	0	05	0	06
			IV	0	05	0	04	0	05	0	05	0	06	0	06	0	06	0	05	0	06
7	Sugar	lb.	I	0	52	0	53	0	52	0	53	0	54	0	54	0	54	0	54	0	53
			II	0	52	0	52	0	53	0	53	0	54	0	54	0	54	0	54	0	52
			III	0	55	0	55	0	54	0	55	0	56	0	57	0	57	0	56	0	54
			IV	0	55	0	56	0	55	0	56	0	57	0	59	0	57	0	58	0	57
8	Chillies	lb.	I	0	83	0	86	0	87	0	88	0	98	0	94	0	93	0	95	0	87
			II	0	96	1	01	1	02	1	04	1	10	1	09	1	05	1	06	0	92
			III	1	14	1	38	1	19	1	21	1	26	1	25	1	20	1	23	1	22
			IV	1	01	1	10	1	17	1	14	1	20	1	18	1	16	1	18	1	13

TABLE IV—(cont.)

Serial number	Item	Unit	Quarter of the year	1957-58									
				Trivandrum	Quilon	Alleppey	Kottayam	Ernakulam	Trichur				
1	2	3	4	Rs. nP	Rs. nP	Rs. nP	Rs. nP	Rs. nP	Rs. nP	Rs. nP	Rs. nP		
9	Coffee seeds	lb.	I	14	79	68	31	35	63				
			II	99	82	79	36	42	67				
			III	20	84	88	43	40	68				
			IV	93	81	89	41	38	68				
10	Tea	lb.	I	79	25	24	28	41	77				
			II	79	24	38	31	39	76				
			III	58	13	35	27	33	65				
			IV	53	09	18	22	27	66				
			I	19	81	26	90	11					
			II	04	79	13	67	01					
			III	10	77	09	61	12					
			IV	22	75	05	53	06					
			I	53	45	49	90	26					
			II	61	40	46	79	19					
			III	60	39	54	67	05					
			IV	69	37	49	59	00					
11	Tobacco (Jaffna)	lb.	I	19	81	26	90	11					
			II	04	79	13	67	01					
			III	10	77	09	61	12					
			IV	22	75	05	53	06					
			I	53	45	49	90	26					
			II	61	40	46	79	19					
			III	60	39	54	67	05					
			IV	69	37	49	59	00					
12	Tobacco (ordinary)	lb.	I	19	81	26	90	11					
			II	04	79	13	67	01					
			III	10	77	09	61	12					
			IV	22	75	05	53	06					
			I	53	45	49	90	26					
			II	61	40	46	79	19					
			III	60	39	54	67	05					
			IV	69	37	49	59	00					

TABLE IV—(cont.)

Serial number	Item	Unit	Quarter of the year	1958-59												
				Trivandrum	Quilon	Alleppey	Kottayam	Ernakulam	Trichur	Palghat	Kozhikode	Cannanore				
				Rs. nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	nPRs.	
				11	12	13	14	15	16	17	18	19				
9	Coffee seeds	lb.	I	17	2	81	2	43	2	51	2	27	2	56		
			II	3	2	85	2	45	2	69	2	2	2	2	56	
			III	3	2	90	2	45	2	59	2	2	2	2	2	49
			IV	3	2	76	3	00	2	44	2	62	2	2	2	45
10	Tea	lb.	I	2	2	08	2	25	2	25	2	2	2	2	09	
			II	2	2	12	2	36	2	24	2	2	2	2	14	
			III	2	2	17	2	29	2	25	2	2	2	2	2	21
			IV	2	2	26	2	23	2	37	2	2	2	2	2	28
11	Tobacco (Jafna)	lb.	I	4	3	58	4	56	4	63	..	..	..	..
			II	4	3	50	4	31	4	33	..	..	..	..
			III	3	3	46	4	18	4	67	..	..	..	..
			IV	3	3	60	4	23	4	67	..	..	..	..
12	Tobacco (ordinary)	lb.	I	56	1	40	1	80	1	61	1	65	1	62		
			II	1	1	46	1	72	1	81	1	64	1	70	66	
			III	1	1	43	1	83	1	88	1	69	1	74	66	
			IV	1	1	47	1	67	1	87	1	67	1	79	67	

5. Statistics of Export of Important Agricultural Commodities through the Ports of Kerala

Table V gives the quantity exported, total value and average export prices of some of the important commodities imported through the ports of Kerala.

Betelnuts.—There was an increase of 35 per cent in the quantity exported in 1958-59, over the previous year. The average export price also increased from Rs 189.73 to Rs. 226.08 per cwt. The total value of export in 1958-59 was Rs. 213.5 lakhs. In the previous year it was only Rs. 132.8 lakhs.

Cardamom.—During the year 1958-59 there was a decline in the quantity exported while the average export price was higher than that of the previous year. The total value was Rs. 59.9 lakhs in 1958-59, this being less by Rs. 1.5 lakhs than that in the year 1957-58.

Cashew Kernels.—The average export price of cwt. of cashew kernels was Rs. 235.21 in 1957-58 and this came down to Rs. 203.36 in 1958-59. However, the quantity exported increased from 33,338 cwts. to 34,312 cwts. During 1957-58, the export of Cashew Kernels fetched nearly Rs. 1,568 lakhs and about Rs. 1,395.5 lakhs in 1958-59.

Coconuts.—The export price of coconuts showed an increase of Rs. 46.62 per thousand nuts, in 1958-59 over the previous year the percentage increase being about 23. Though there was a decline (12 per cent) in the quantity exported, the total value of export was greater of owing to this increase in price. The total value of export was Rs. 261.7 lakhs in 1957-58 and in the next year it was Rs. 281.9 lakhs, an 8 per cent increase.

Coconut oil.—Both the quantity exported and the average export price of coconut oil increased in 1958-59 over the previous year. In 1957-58 14.8 lakhs of gallons of oil were exported. In 1958-59 it was 21.4 lakhs of gallons, the percentage increase being about 45 per cent over the previous year. The average price also increased from Rs. 7.72 to Rs. 10.25 per gallon. The total value of export in 1958-59 was Rs. 219.1 lakhs. It was 192 per cent of that in 1957-58.

Copra.—In the case of copra also, the quantity exported as well as the value of export showed an increase in 1958-59. The quantities exported during the two years 1957-58 and 1958-59 were 11,690 tons and 21,773 tons respectively. The value for the corresponding years were Rs. 197.0 lakhs and 393.5 lakhs. Thus an increase of about 86 per cent in the quantity exported nearly doubled the value of export. The percentage increase in the average price was about 7 per cent.

Coffee.—In 1958-59 the quantity of coffee exported was 102,461 cwts. about 165 per cent of the quantity exported in the previous year. Though the value also increased from Rs. 151.5 lakhs to 243.7 lakhs in 1958-59 the average price received in 1958-59 was less than that in the preceding year.

Ginger.—The export of ginger earned Rs 82.0 lakhs in 1957-58 and in the next year it decreased to Rs. 74.0 lakhs, though the quantity exported in 1958-59 showed an increase of 8 per cent over the last year. The average price of one cwt. of ginger came down to Rs. 43.93 from Rs. 52.56 in 1957-58.

Lemongrass oil.—The average quantity exported and the average price were less in 1958-59 than those in 1957-58. In 1957-58 320,854 gallons of

oil were exported. In 1958-59 only 292,883 gallons were exported; this being 91 per cent of the export in the earlier year. The value of export in 1958-59 was only Rs. 95.2 lakhs as compared to Rs. 138.4 lakhs in 1957-58, i.e., 31 per cent decrease. The average price per gallon fell from Rs. 43.14 in 1957-58 to Rs. 32.51 in the next year.

Pepper.—During the year 1957-58 395,686 cwts., of pepper valued at Rs. 415.8 lakhs were exported. The next year the quantity decreased by about 19 per cent but the decrease in total value was only about 13 per cent, due to a spurt in the price in 1958-59.

Rubber.—The quantity exported and the value of export in 1958-59 were less when compared to the previous year. Though the quantity decreased by 3 per cent, the total value did not show a corresponding decrease.

Tea.—During 1958-59, the total quantity of tea exported was only 91 per cent of that exported in 1957-58. But a corresponding decrease in the value exported is not noticed. This is because the average price increased from Rs. 2.42 to Rs. 2.59 per lb, in 1958-59.

TABLE V—Statistics of Export of Important Agricultural Commodities through the Ports of Kerala

Serial No.	Name of Commodity	Unit	Quantity exported		Total value			Average export price	
			1957-58	1958-59	1957-58	1958-59	1957-58	1958-59	Rs.	Rs.
1	2	3	4	5	6	7	8	9	
1	Betelnuts	Cwt.	69,976	94,446	1,32,76,487	2,13,52,397	189.73	226.08	
2	Cardamom	..	5,821	5,384	61,34,263	59,86,036	1,053.82	1,111.82	
3	Cashew Kernels	..	33,338	34,312	15,68,30,797	13,95,53,693	235.21	203.36	
4	Cocoanuts	..	129,023,203	113,062,598	2,61,67,419	2,81,88,232	202.81*	249.43*	
5	Cocanut oil	Gals.	1,477,260	2,137,236	1,13,97,455	2,19,08,483	7.72	10.25	
6	Copra	Tons	11,690	21,773	1,96,99,806	3,93,48,621	1,685.18	1,807.22	
7	Coffee	Cwt.	61,938	102,461	1,51,54,837	2,43,69,134	244.68	237.84	
8	Ginger	..	155,980	168,445	81,97,873	74,00,035	52.56	43.93	
9	Lemongrass oil	Gals.	320,854	292,883	1,38,40,709	95,22,589	43.14	32.51	
10	Pepper	Cwt.	395,686	320,947	4,15,75,220	3,62,15,529	105.07	112.84	
11	Rubber (Raw)	Tons	21,145	20,530	6,89,50,064	6,88,76,629	163.04	167.75	
12	Tea	Lb.	100,598,926	91,634,008	24,34,88,434	23,73,93,483	2.42	2.59	

* Per thousand nuts.

6. Notes on certain crops in Kerala

1. Tea

Today India is the largest producer of tea in the world. Tea is one of the principal foreign exchange earners. Tea industry also substantially contributes to the national exchequer and also provides employment to a large number of people. India accounts for about 46 per cent of the world production of tea.

Climate.—The best climate for the tea plantation is a hot moist climate the temperature varying from 55°F to 95°F and an annual rainfall ranging between 100 to 130 inches. These conditions are satisfied by the high ranges of Kerala State. Tea is usually cultivated at altitudes ranging from 3,000 feet to 5,000 feet above mean sea level.

Soil.—The best soil suitable for the successful cultivation of tea is a light friable soil of good depth through which water percolates freely.

Planting.—After removing the forest growth and after providing for roads, drains and building sites the planting is done. The actual spacing of the plants will depend upon the layout of the land, used for cultivation. They are usually planted in square, rectangular or triangular patterns suitably spaced so that when mature they cover the ground almost completely without overcrowding and providing for a coverage of about 3,000 plants per acre. 'Hedge planting', i.e., planting in rows five feet apart with a spacing of 2 feet between the bushes in a row, is also done in new estates. Before planting is done, pits of 9 inches square and 18 inches deep are taken and the pits filled with the soil best suited for the cultivation of tea.

Planting will begin in June or July depending mainly upon the south-west monsoon. Water is essentially needed for the young plants for the first two or three months after planting. Young plants taken from the nursery are preferred to the seeds. Usually these plants are removed from the nursery after 6 to 18 months with great care, so that the tap root of the plant is not damaged and planted in the places fixed for the purpose.

Pruning.—When the plants are about two years old and five to six feet high, they are pruned to stimulate lateral growth and to develop them into a bush.

Plucking.—Plucking is usually done by women and children. The young and freshly sprouted leaves with "two leaves and a bud" are plucked. Plucking is done throughout the year in several rounds. The period of one round varies according to the altitude of the land. In the high ranges the plucking rounds cover a period up to fourteen days whereas in the plains the period is only seven or eight days.

Manure.—The important manures used are mixtures of nitrogen phosphorous and potash. In some estates ammonium sulphate is also widely used.

Yield.—The average yield of a good estate is about thousand pounds of prepared tea per acre.

Diseases.—There are many kinds of diseases and attacks on the tea-bush. Tea mosquito, the red spider and thrips are some of the important pests attacking the crops.

Life of the Plant.—The average life of a tea plant varies from sixty to eighty years. But it will depend upon various factors such as soil erosion due to heavy rains, climatic conditions, etc.

From the Garden to the Market.—The leaves plucked from the tea garden has to undergo a series of processes before it appears in the market for sale.

In the tea factory, the leaves are spread on a wire mesh or hessian cloth racks for a period of eighteen hours for eliminating moisture so that it can be rolled easily. The next stage is called rolling. A rolling machine specially made for this purpose with pressure adjustments is used to twist the leaves for breaking the leaf cells so that the leaf juices ooze out. Then the rolled leaves are taken from the roll breakers and put in the fermentation room. Fermentation is a process of oxidation where the leaves undergo a chemical change. The green colour of tea leaves changes into reddish hue of copper. The next process is known as drying. Hot air (200° to 230°) from the drier furnace is forced into the chamber where the leaves are dried.

The last two processes are grading and packing. There are two important classification of grades. They are leaf grades and broken grades. The former group are mainly divided into Orange Pekoe and Pekoe Souchong, Broken Orange Pekoe, Broken Pekoe, Broken Souchong. Fannings and Dust are important broken grades. They are then packed category-wise and sent to the market for sale.

Besides the black tea, the manufacture of which has been described above, green tea is also manufactured in India in a small quantity. In this process the fresh leaf is subject to heat treatment by steaming or roasting. The green leaf after the heat treatment is rolled and dried, the process being repeated till the desired degree of dryness is reached.

2. Coffee

Coffee was first discovered in Africa although the earliest cultivation was begun in southern Arabia. Coffee, an important plantation crop, was first introduced in India from Arabia. The production of coffee in India is only 1 per cent of the world production. There are two important species of coffee grown in India, namely, Arabica and Robusta. Robusta flourishes at lower levels and has more powers of resistance against extremes of climate and pests and diseases. It is easily distinguishable from Arabica by the size of its leaves and appearance of the berries.

Climate.—Coffee is a tropical plant. It is successfully cultivated in places where the altitude ranges from 1,500 to 6,000 feet above mean sea level. The most suitable altitude is between 2,500 feet to 4,500 feet. It needs a well distributed rainfall of about 60 to 80 inches per annum and a distinct rainy and dry season with a minimum average temperature of 70°F. A good dry spell from about December to March with a few intermittent showers in March and April and heavy rainfall in July and August constitute ideal condition for the growth of the coffee plant ('Report of the Pantation Enquiry Commission on Coffee, 1956, Government of India').

Soil.—Coffee requires sandy soils or clay loam soils with a good sub-soil drainage system.

Planting.—Coffee is grown from seed usually. It is also propagated from cuttings from mature trees or shoots. Propagation from seeds is usually done in January or February in well prepared nursery beds. It is essential that the nursery beds must have shades to protect the tender shoots. These plants are to be transplanted after four to six months in the nursery. When the plants are twenty inches in height they are finally transplanted. The spacing

between each plot is ordinarily eight to nine feet. The plots are manured well and watered frequently.

In the second method of propagation—lower branches of the trees are bent down under the earth for at least four months so as to enable new roots to sprout up from these branches.

Shade trees are provided in coffee plantation for protection of the trees from the full intensity of the sun and for soil conservation.

Pruning. Usually the coffee plants are pruned at a height of fifteen feet to enable easy plucking of the berries.

Plucking.—Coffee plants begin to bear fruit within 5 to 7 years of planting. The colour of the berries is green at first. The colour slowly changes to golden and then to bright red. These red cherries are plucked up by hand. Several pluckings are necessary before a crop is completely harvested.

Manure.—The important manures used for the coffee plants are super-phosphate, ammonium sulphate, copper sulphate and urea.

Yield.—Under good climatic conditions a coffee plant yields $\frac{1}{2}$ to 2 lb. of green coffee in a season. Good yields may be obtained from a plant for a period of 20 to 30 years. Excessive rains or want of rains in the blossoming season will adversely affect the yield.

Diseases.—The following diseases are prevalent in the coffee estates. They are (1) coffee stem borer, (2) shot hole borer, (3) leaf disease, (4) root-rot, (5) die-back, (6) chlorosis, and (7) green bug.

From Garden to the Market.—There are two processes by which raw coffee is cured. They are known as 'dry' and 'wash' methods.

By the first method the coffee cherries are washed and spread out on the cement floors in the open air for drying. When they are completely dried they are allowed to run through fanning and hulling machines.

The second process known as wash process is entirely different. The cherries are put in the pulping machine which breaks them. The pulpy skin of the cherries are automatically removed. Then these cherries are put into big tanks for about twenty-four hours. A jelly like substance known as 'Honey' will be formed by these cherries due to fermentation. This honey is removed by thorough washing (canals). Then these cherries are spread out to dry for two or three weeks. When these cherries are completely dried they are put through hulling and polishing machines. The coffee prepared by the wet method is called parchment. For preparing parchment coffee only ripe berries can be utilised.

Berries at different stages of maturity have to be converted into cherries.

They are then graded and packed. The important grades are arabica cherry, arabica parchment, robusta cherry and robusta parchment.

3. Rubber

In India attempts were first made to plant rubber in Belgaum and Ratnagiri in the Bombay State. Now in the Kerala State 97 per cent of India's rubber is cultivated. India's place in the world acreage under rubber is comparatively very low. India's production comes to less than 2 per cent of the total world out-put of rubber. Upto 1938 the raw rubber was exported

to foreign countries. In that year a tyre factory was established in India. Consumption of the rubber in India has been rising steadily and now the production has begun to lag behind the demand.

Climate.—Rubber usually grows in the tropical belt lying within 15°N. and 10°S. of the Equator and usually at an altitude of 1,000 feet above sea level. For the cultivation of rubber a warm and humid climate is necessary. The annual rainfall should be between 80—120 inches and should be well distributed.

Soil.—A stiff alluvial soil which is neither too steep nor too swampy is suited for cultivating rubber.

Planting.—Young plants or seeds are planted in pits of about 18" × 18". The planting season is from May to September. Usually 150 to 200 plants are planted in an acre.

Tapping.—Tapping of rubber will begin after seven or eight years after planting. The period of tapping is from September to January.

Diseases.—There are two serious leaf diseases of rubber now prevailing in India. They are 'Oidium hevea' and 'Phytophthora meadii' which cause secondary leaf fall. These diseases affect the growth of the tree and the yield of the tree.

Another disease known as 'Brown Bast' is prevalent in the trees which are used for frequent tapping. The symptom of the disease is the cessation of latex production by the trees in the affected portions of the bark.

From the Estate to the Market.—The latex brought by the tappers is first of all freed from sand, bark and other impurities by straining at the coagulating shed constructed specially for the purpose. In the case of crepe rubber, coagulation is done by using acetic acid. For changing latex into sheet rubber the latex after being bulked and diluted is put into shallow pans. For removing water and for getting a definite shape the coagulum is pressed by hand. Then the sheets are allowed to pass two or three times between smooth rollers. The sheets are usually again passed through a machine for printing the trade mark of the estate. These sheets are washed. Then these sheets are placed in specially constructed houses, known as smoke houses, and hot air with a temperature of 115° to 120°F is allowed to circulate in the room. This is done for fifteen days. The colour of the sheet will change into black from white. There are three important types of rubber, smoked sheet, latex crepe and scrap rubber. Of these the most important one is smoked sheet.

4. Cardamom

The important cardamom producing countries are India, Ceylon and Indo-China. India is the largest producer of cardamom in the world. Cardamom is taken from the plant *Ellettaria cardamom*. This is better than the plants growing in other parts of the world. Cardamom possess an aromatic odour and it is commonly used for flavouring and medicines.

Climate.—The best climate suitable for the Cardamom cultivation is a warm and humid atmosphere with a temperature ranging between 50°—95°F. It is cultivated in the shades of huge forest trees. Cardamom plants require a fairly well-distributed annual rainfall of sixty to eighty inches. The best altitude for cardamom planting is between 2,500 to 5,000 feet.

Soil.—Cardamom is cultivated usually in high ranges which has a fairly deep rich loam soil and a place sheltered from strong winds and too much sunlight.

Planting.—During February-March the forest land chosen for planting the cardamom is cleared. But care is taken that big trees providing shades are not cut down. Small pits of two feet square and one foot deep are dug, the distance between one pit and the next varying from 8 to 10 feet, thus providing for about 700 pits in one acre of land. During the month of May or June when the South-West monsoon sets in the seeds are sown. Cardamom plants are usually prepared in specialised nurseries. The plants raised from seeds are usually free from any kind of diseases. When these plants attain one year of growth they are transplanted. Usually two plants are planted in one pit. In August-September the stagnant water is allowed to drain off.

Plucking.—The crop begins to yield from the third year onwards and annually thereafter. The harvest will begin in the month of August of the third year of growth and lasts for nine months. The fruits are gathered at intervals of 30 to 40 days.

Yield.—The first yield is low. The yield attains a normal stage by the fifth year.

Life of the Plant.—Nine years is the average life of the plant.

Manure.—The important manures used are well-rotten cattle manure, sheep and fish manure, and leaves of *phyllanthus emblica*. A mixture of castorcake, bone meal and potassium chlorate is also considered to be a good manure.

Diseases.—The main disease is mosaic or marble disease or katte disease. The symptom of the disease is the mottling or curling of the leaves and degeneration of the clumps. The remedy lies in the roguing of affected plants. Another menace is that caused by Thrips, an insect pest. Dusting the plants with gammaxene is the remedy.

From the Estate to the Market.—The capsules of the cardamom are dried in the sun or in specially built dry houses by using artificial heat. Usually three to four days are taken for drying the cardamom in the sun-light but at the same time forty-eight hours is only needed for artificial drying. The sun dried produce retains the mucilaginous coating on the seeds and possesses a characteristic sweet aroma. The dried capsules are then cleaned. The final product of green cardamom is 20 to 28 per cent of the green harvested produce.

Sometimes bleaching is done by exposure to sulphur fumes. This changes the colour of the skin of the capsule to white and it helps to preserve it for longer periods.

Then they are graded. There are three important grades—(1) green cardamom, (2) white or bleached cardamom, and (3) seeds. The quality of cardamom varies according to place and variety of the seed.

Indian cardamom is mainly exported to Sweden and to Saudi Arabia.

5. Pepper

Kerala is famous for her pepper from time immemorial and is the chief producer of pepper in India. Black pepper which is one of the important

spices is produced mainly by India and Indonesia. During the post-war period India stands as the largest producer of pepper in the world.

Climate.—Pepper being a rain-fed crop, grows best in tropical regions where there is an average rainfall of about 80 inches. The lower and upper limits of temperature in which the crop can flourish are 50°F and 140°F. It grows in places with altitude less than 3,000 feet.

Soil.—The suitable soils for pepper cultivation are clay loam, red loam or sandy loam soils, the first being the most suitable.

Planting.—The crop is propagated vegetatively by means of cuttings. It is a wood climber and requires some support for growing. Jack and Mango trees are commonly used as supports for the vines. Elavu and Murukku trees are also used. On a plantation basis they are planted at a distance of ten feet apart. The vine is rarely allowed to grow beyond a height of twenty feet lest the picking of the pepper berries becomes difficult.

Picking.—The vines begin to bear after three years of planting. Flowering period is from June to July. The harvesting period is from December to March. When ripe the colour of the berries is orange. The berries are allowed to dry in the sun in mats for a week till the colour becomes black. Sometimes the skin of the ripe berries is removed before drying. This kind of pepper is known as white pepper and is produced only in limited quantities.

Yield.—The yield mainly depends upon the fertility of the soil and the locality. The yield at the first harvest is generally poor. Full yield can be expected from the seventh year. Usually in an acre there will be 300 to 400 standards where pepper is cultivated on a plantation scale. The average yield per standard varies between $\frac{1}{4}$ lb. to 2 lb. of dried produce.

Life of the plant.—The life of the plant ranges between 25 to 30 years. But it is to be pointed out that some of the vines have been found to live up to sixty years.

Manure.—The best manures to be used for the pepper gardens are powdered bean-cake, fish guano and dried prawn.

Diseases.—One of the major diseases that affects pepper is 'Pollu' by which the pepper berries are rendered hollow.

From garden to the market.—The dried black pepper is graded and packed. The pepper is generally packed in double gunny bags. Pepper is mainly exported to United States of America and United Kingdom.

6. Ginger (Dry)

The three important ginger growing regions are India, Jamaica and Sierra Leona. Of these ginger producing regions the best variety is seen in Jamaica and Sierra Leona. Indian Ginger contains more fibre-content.

Climate.—Ginger requires heavy rainfall. It needs a warm humid climate and considerable shade.

Soil.—The soils suitable for ginger cultivation are well-drained sandy clay loam, red loam or laterite soils.

Planting.—Planting usually begins by the end of May or beginning of June before the commencement of the heavy rains. Ginger rhizomes (under-ground stem) are planted. Before planting, the ground is ploughed and manured. The seeds are planted in these beds in small pits at a distance of

6-10 inches. After planting the beds are covered with leaves with a view to protect the young shoots from the onslaught of the rain and to serve as manure also. The crop takes nine to ten months to attain maturity. In July-August weeding and manuring is done.

Harvesting.—The Harvesting is done by digging out the rhizomes.

Manure.—Usually cattle manure is used.

Yield.—The yield is generally eight to ten times of the seed rate. Here in Kerala the average yield of ginger is about 1,000 lb. per acre.

Pests and Diseases.—Ginger crop is usually affected by a disease known as 'Soft-rot'. The colour of the green plants are changed into pale yellow and the production goes down. Use of mercuric chloride (5 per cent) for treating the rhizomes stored as seeds is advocated as a preventive measure. Another important disease is known as 'Varmicularia'. The leaves become covered with yellowish and brownish spots and gradually dry up. Spraying of Bordeaux mixture is suggested in such cases.

From Garden to the Market.—Dry ginger, as a market produce is prepared as follows: First the outer skin of the green rhizomes are removed. Then they are soaked in water and kept over-night. In the morning they are cleaned well. Then these rhizomes are allowed to dry for a week in the hot sun. They are again cleaned. This Ginger is known as the 'rough' or 'bleached ginger' of commerce.

There is another variety of ginger known as 'lime ginger' or 'bleached ginger'. The process is a bit different from the above. The green ginger is put in shallow cisterns and they are cleaned by water repeatedly. When they are finally cleaned they are put in a solution containing milk of lime for some time after which they are dried in the sun. This process of dipping in lime and drying will be continued a number of times until the rhizomes get a uniform coating of lime.

Then they are graded. There are three important export grades—B.C. and D.B. quality ginger will have three fingers. The other two grades (C and D) have two fingers and one finger respectively.

The B. and C. grades of ginger are exported to foreign markets. The D. grade being small pieces of ginger are mostly consumed internally in India.

Indian ginger is mainly exported to Aden, Arabia and United Kingdom.

7. Lemongrass Oil

Lemongrass oil which is an important raw material for the perfumery soap and cosmetic industries is extracted by distilling the leaves of the grass 'cymbopogon flexuosus, stapf'. The important lemongrass growing areas are Ceylon, Java, West-Indies, Malaya, Guatemala and India. The last two countries are holding almost a monopoly in the world market. In India Kerala is the most important producer of this crop. The major lemongrass growing areas are Kuruppampadi, Odakkali, Thodupuzha, Muvattupuzha, Wynad, Taliparamba, etc. At Odakkali, there is a lemongrass oil research station.

Climate.—It grows on the fertile hill slopes. The grass grows when the monsoon begins.

Soil.—It flourishes in hard laterite soils.

Cultivation.—Fertile hill slopes with hard laterite soils are selected for the cultivation. During February-March the site selected is first cleared of all undergrowth of vegetation by burning them. In April-May the land is ploughed and is prepared into long narrow beds for cultivation of lemongrass. Usually in one acre 15 to 20 lb. of seeds are sown. The seeds are sown broad-cast. The crop is also grown by transplanting of seedlings raised in separate nurseries. The cost of cultivation of this crop is very low. Much care is not needed during the period of growth of the plant. There are two varieties of lemongrass, red stem and white stem. The former variety gives better quality of oil containing greater quantity of citral.

Harvesting.—Generally the harvesting will begin five months after sowing. The harvesting has to be done before the flowering season of the crop. Five cuttings are annually taken. After the first cutting, subsequent cutting are done at intervals of 30 to 45 days. Usually the harvesting season ends by the month of December.

Life of the Plant.—The Life of the lemongrass plant is five to eight years.

Yield.—The yield of the crop under different years are given below:—

1st year	—1½	dozen bottles of 22 oz. each
2nd	—2½	" "
3rd	—2	" "
4th	—2	" "
5th	—2	" "

From the Garden to the Market.—Now in Kerala we are using an old country method for distilling the lemongrass oil. The old apparatus consists of copper boiler, condenser (coil) receiver and wooden tub.

The raw grass and water are put in the boiler specially made for this purpose. The shape of boiler is like a retort apparatus. Then the boiler is heated with firewood. After some time a mixture of water vapour and essential oil escapes through the copper spiral connected to the retort. This copper spiral is allowed to cool down by immersing it in a wooden bucket full of water. The wooden bucket has an opening near the bottom to let off the water as it becomes hot during the distillation time. The essential oil and water will be collected in the receiver tub. The specific gravity of the essential oil is lower than water. At 30°C specific gravity is 0.878. So naturally the lemongrass oil floats at the top of the receiver tub. Then it is separated from water.

Lemongrass oil is packed in steel drums which has a capacity of 40 to 45 gallons. Lemongrass oil is mainly exported to United States of America and United Kingdom.

7. Classification of soils in Kerala

District	Type of soil	Details of distribution
Trivandrum	1. Fairly rich brown loam of laterite origin	Middle part of the District
	2. Sandy loam	Western coastal region
	3. Richest dark brown loam of granite origin	Eastern hilly part of the District.

District	Type of soil	Details of distribution
Quilon	1 Sandy loam	Karunagapally and part of Quilon Taluk.
	2 Laterite soil	Kottarakara, Kunnathoor and part of Quilon, Pathanapuram and Pathanamthitta Taluks.
	3 Hill and forest soil	Part of Pathanapuram and Pathanamthitta Taluks.
Alleppey	1 Sandy loam	Karthigapally and Mavelikara Taluks.
	2 Sandy soil	Shertallai and Ambalapuzha Taluk.
	3 Clay loam with much of acidity	Kuttanad
	4 Laterite soil	Chengannur and part of Mavelikara.
Kottayam	1 Laterite soil	Peermade and part of Meenachil' Changanacherry and Kottayam Taluks.
	2 Alluvial soil	Vaikom, parts of Changanacherry and Kottayam, Devicolam and Udumbanchola.
Ernakulam	1 Laterite	Thodupuzha and Muvattupuzha and part of Kunnathunad
	2 Sandy loam	Parur, Cochin, Kanayannur
	3 Alluvial	Part of Alwaye and Kunnathunad.
Trichur	1 Sandy loam	Part of Mukundapuram, Trichur and Chowghat Taluks
	2 Laterite	Eastern area of Trichur and Western portion of Talapilly.
	3 Granite	Northern part of Talappilly
	4 Clayey	Backwater area in Chowghat and part of Mukundapuram
	5 Alluvial soil	Portion of Chowghat and Kunnathunad Taluks.
Palghat	1 Laterite	Interior regions of the District
	2 Sandy	Along coastal and riverside areas
	3 Black soil	North-Eastern portion of Chittur Taluk
Kozhikode	1 Laterite	Major part on the District barring coastal area
	2 Sandy	Coastal strip
Cannanore	1 Laterite	Major part barring coastal area
	2 Sandy	Coastal area.

8. Conversion ratios between the raw materials and the processed product

Rice—

Rice (cleaned) Production = $\frac{2}{3}$ paddy production

Cotton—	
Cotton lint production	= 1/3 kapas production
Cotton seed production	= 2/3 of kapas production
	= 2 times of cotton lint production
Groundnut—	
Kernel to nuts in shell	= 70 per cent
Oils to nuts in shell	= 28 per cent
Oils to kernels crushed	= 40 per cent
Cake to kernels crushed	= 60 per cent
Sesamum—	
Oil to seeds crushed	= 40 per cent
Cake to seeds crushed	= 60 per cent
Castor Seed—	
Oil to seeds crushed	= 37 per cent
Cake to seeds crushed	= 63 per cent
Coconuts—	
Copra to nuts one ton copra	= 6773 nuts
Oil to copra crushed	= 62 per cent
Cake to copra crushed	= 38 per cent
Neem Seed—	
Oil to kernals crushed	= 45 to 50 per cent
Cake to kernals crushed	= 50 to 55 per cent
Sugar—	
Gur from cane crushed	= 10 per cent
Crystal sugar from gur refined	= 62.4 per cent
Do. from cane crushed	= 9.97 per cent
Khandassari sugar from gur refined	= 37.5 per cent
Molasses from cane crushed	= 3.5 per cent
Cashewnuts—	
Cashew kernels	= 25 per cent of cashewnuts
Butter and Ghee—	
Butter from mixed milk	= 6.3 percent
Ghee from mixed milk	= 5.3 percent

9. Average Analysis of Important Fertilisers

Serial number	Name of Fertiliser	Percentage		
		Nitrogen (N)	Phosphoric (P2O5)	Potash (K2O)
1	2	3	4	5
1	Nitrate of Potash 70 per cent ..	8—10	..	30—33
2	Ammonium Phosphate 60 per cent ..	17—18	20—21	..
3	Urea ..	46	..	..
4	Nitrate of Soda ..	15—16	..	..
5	Sulphate of Ammonia ..	20—6	..	..
6	Ammonium Sulphate Nitrate ..	26	..	..
7	Ammonium Nitrate ..	32—33	..	..
8	Calcium Cyanamide ..	18—20	..	..
9	Nitroline ..	20—21	..	..
10	Super Phosphate (single) ..	..	16—20	..
11	Do. (double) ..	..	45—50	..
12	Hyper Phosphate ..	..	26	..
13	Basic Slag ..	..	14—18	..
14	Mineral Phosphate (various grades) ..	..	25—36	..
15	Muriate Potash ..	..	..	60
16	Sulphate of Potash ..	..	..	48—52
<i>Organic Manures</i>				
17	Castor cake ..	4.3	1.8	1.3
18	Cotton Seed cake (undecorticated) ..	3.9	1.8	1.6
19	Neem cake ..	5.2	1.0	1.4
20	Safflower cake (undecorticated) ..	4.9	1.4	1.2
21	Do. (decorticated) ..	7.9	2.2	1.9
22	Coconut cake ..	3.0	1.9	1.8
23	Groundnut cake ..	7.3	1.5	1.3
24	Jambo cake ..	4.9	1.6	1.9
25	Linseed cake ..	5.5	1.4	1.3
26	Rape seed cake ..	5.2	1.8	1.2
27	Sesamum cake ..	6.2	2.0	1.2
<i>Manures of Animal Origin</i>				
28	Dried blood ..	10.0	1.5	1.0
29	Fish manures ..	4.0—10.0	3.0—3.0	0.3—1.5

9. Average Analysis of Important Fertilisers—(cont.)

Serial number	Name of Fertiliser	Percentage		
		Nitrogen (N)	Phosphoric (P2O5)	Potash (K2O)
1	2	3	4	5
	<i>Manures of Animal Origin—(cont.)</i>			
30	Bone meal (Raw) ..	3.0—4.0	20.0—25.0	..
31	Do. (Steamed) ..	1.0—2.0	25.0—30.0	..
	<i>Bulky Organic Manures</i>			
32	Farm-yard manure ..	0.5—1.5	0.4—0.8	0.5—1.0
33	Compost (Urban) ..	1.0—2.0	1.0	1.5
34	Do. (Rural) ..	0.4—0.8	0.3—0.6	0.7—1.0
35	Green manure (various averages) ..	0.5—0.7	0.1—0.2	0.8—1.6

Source—Indian Council of Agricultural Research Bulletin.

10. Insect pest affecting paddy crops, their distribution and some practical methods of control

Crop	Pest (Scientific name)	Distribution	Control
1	2	3	4
Paddy	<p>Paddy army worm or the swarming caterpillar (<i>Spodoptera manirita</i> boisd)</p> <p>Paddy stem borer (<i>Schoenobius incortellus</i> W)</p>	<p>This is a sporadic pest. Attacks mostly Viruppu (Autumn) crop of paddy throughout the State</p> <p>This pest is usually found in Mundakan (Winter) crop and often causes heavy damage. This also is commonly seen in all the districts of the State</p>	<p>i. Apply 10 per cent B.H.C. dust at 15 to 20 lb. per acre.</p> <p>ii. Spray D.D.T. suspension prepared at the rate of 1 lb. of 50 per cent wettable powder in 25 gallons of water (3 to 35 gallons required for an acre).</p> <p>iii. Apply D.D.T. 50 per cent dust at 15 lb. per acre. In hardly affected fields give a top dressing of Ammonium Sulphate at 28 lb. per acre to promote rapid recuperation.</p> <p>i. Spray Foliodol E 605 thrice as follows:— First spraying in the nursery when the plants are about 15 days old, second spraying about three weeks after transplanting and third spraying at the short blade stage. The rate is 2 CC per gallon of water (1 oz. in 14 gallons of water) 30 to 35 gallons are required per acre. The sprayings are to be done when a good number of moths or eggs are found in the field.</p>

10. Insect pest affecting paddy crops, their distribution and some practical methods of control—(cont.)

Crop	Pest (Scientific name)	Distribution	Control
1	2	3	4
Paddy—(cont.)	Rice bug (<i>Lip to corisa actu</i>) T)	This is found throughout the State	<ul style="list-style-type: none"> ii. Spray D.D.T. at the rate of 1 lb. of 50 per cent wettable powder in 25 gallons of water as follows:—One spraying in the nursery, dip the seedlings in the suspension of the same strength, one spraying 2 to 3 weeks after transblade stage (in the short blade stage 40 to 45 gallons of the spray liquid are required per acre in both cases). iii. At the time of transplanting eliminate and destroy the dead heads if any. iv. In hardly affected fields give a top dressing of Ammonium sulphate. v. After harvest destroy the stumps by burning i. In the early stage of attack collect the bugs by a hand net. ii. Apply B.H.C. 10 per cent dust at the rate of 20 to 25 lb. per acre.

Rice Hispa (*Hispa Arinigera*
01) (*Nilaparvata* Sp.)

Paddy gall fly (*Pachydidiplosis*
oryal W)

Rice grass hopper (*Hemiphaea*
glyphids)

Leaf roller (*Cephalocrocis*
medinalis G)

Very common in Karunagappally,
Haripad, Mavelikara, Kottarakara
and Karthigappally of Quilon
district and all parts of Alleppey
and Trichur districts.

Commonly found in viruppu crops
in the districts of Quilon and
Trichur

Commonly found in the various
parts of Palghat and Tellicherry
districts though the damage done
is of a minor form

Commonly found in Viruppur crop
in the districts of Quilon and
Trichur

i. Apply 10 per cent B.H.C. dust at 15 to
20 lb. per acre.

ii. Spray D.D.T. at the rate of 1 lb. of 50
per cent wettable powder in 25 gallons
of water (30 to 35 gallons of spray liquid
required per acre).

i. During seedling stage of the crops, if
adults are found in the fields set up
light traps.

ii. Spray the seedlings with D.D.T. at the
rate of 1 lb. of 50 per cent wettable
powder in 25 gallons of water when
adults are observed in the field (30 to
35 gallons of spray liquid required for
an acre).

iii. Give a top dressing of ammonium sulphate
in the affected fields.

Apply 10 per cent B.H.C. dust on field
bands soon after the nymphs appear and
before they actually invade the crops.
If the crop is already attacked apply
B.H.C. 10 per cent dust at 20 to 25 lb.
per acre or drive the hopper to a con-
venient field corner and give a heavy
dusting with B.H.C. 10 per cent.

Spray D.D.T. suspension at the rate of
1 lb. of 50 per cent wettable powder in
25 gallons of water (30 to 35 gallons
required per acre).

10. Insect pest affecting paddy crops, their distribution and some practical methods of control—(cont.)

Crop	Pest (Scientific name)	Distribution	Control
Paddy—(cont.)	<p>1</p> <p>2</p> <p>Paddy cockchaferbottle (Phyllognathus dronysins F)</p> <p>The paddy jassid. (The green jassid Nephrotettix sp. and the white jassid Tettigoniella spectra Dt.)</p>	<p>3</p> <p>Found in Kottayam District</p> <p>Found in Kottayam District</p>	<p>4</p> <p>Prior to sowing plough into the soil 28 lb. of 5 per cent Aldrin dust or 56 lb. of 10 per cent B.H.C. dust per acre.</p> <p>i. Collect the bugs by a hand net on the early stages of attack.</p> <p>ii. Spray D.D.T. at the rate of 1 lb. of 50 per cent wettable powder in 25 gallons of water. 30 to 35 gallons of suspension required per acre;</p> <p>iii. Dust D.D.T. 5 per cent at the rate of 15 to 20 lb. per acre.</p> <p>i. Apply 10 per cent B.H.C. dust at 15 to 20 lb. per acre of spray D.D.T. at the rate of 1 lb. 50 per cent wettable powder. 30 to 35 gallons of the suspension required per acre.</p>
	<p>Paddy blue bottle (Leptisan Pygmaeae)</p>	<p>Commonly noticed in Ottappalam and nearly places of the Palghat district, resulting in heavy damage to paddy crops.</p>	

12. List of centres selected for Recording Meteorological Information—1957

Trivandrum District

- | | |
|------------------|---------------|
| 1. Attingal | 5. Ponnudi |
| 2. Nedumangad | 6. Trivandrum |
| 3. Neyyattinkara | 7. Varkala |
| 4. Parassala | |

Quilon District

- | | |
|-------------------|--------------------|
| 1. Adoor | 11. Kottarakkara |
| 2. Alleppey | 12. Mavelikkara |
| 3. Ambalapuzha | 13. Nilamel |
| 4. Arukutty | 14. Paravur |
| 5. Aryankavu | 15. Pathanamthitta |
| 6. Chengannur | 16. Punalur |
| 7. Haripad | 17. Quilon |
| 8. Karunagappally | 18. Sherthalai |
| 9. Kayamkulam | 19. Thiruvalla |
| 10. Konni | |

Kottayam District

- | | |
|-------------------|------------------------|
| 1. Alwaye | 12. Munnar |
| 2. Changanacherry | 13. Muvattupuzha |
| 3. Chinnar | 14. Neriambangalam |
| 4. Devicolam | 15. Palai |
| 5. Ettumannur | 16. Parur |
| 6. Kanjirappally | 17. Peermade Residency |
| 7. Karikode | 18. Peermade Taluk |
| 8. Kottayam | 19. Perumbavoor |
| 9. Kumali | 20. Vaikom |
| 10. Malayattur | 21. Vandanmettu |
| 11. Marayur | 22. Velloor |

Trichur District

- | | |
|----------------|-----------------|
| 1. Cochin | 5. Mukundapuram |
| 2. Cochin Port | 6. Thalapally |
| 3. Cranganore | 7. Trichur |
| 4. Ernakulam | |

Palghat District

- | | |
|------------------|-------------------|
| 1. Alathur | 6. Palghat |
| 2. Cherplasserri | 7. Parli |
| 3. Chittur | 8. Perinthalmanna |
| 4. Mannarghat | 9. Ponnani |
| 5. Ottappalam | |

Kozhikode District

- | | |
|--------------|----------------|
| 1. Badagara | 5. Nilambur |
| 2. Kozhikode | 6. Quilandi |
| 3. Kuttiyadi | 7. Tirurangadi |
| 4. Manjeri | 8. Vythiri |

Cannanore District

- | | |
|--------------|----------------|
| 1. Cannanore | 5. Manantoddy |
| 2. Hosdurg | 6. Pyyannur |
| 3. Irikkur | 7. Taliparamba |
| 4. Kasargode | 8. Tellicherry |

12. Glossary of English, Botanical and Malayalam names of crops

Sl. No.	English	Botanical	Malayalam
1	Alexandrian lamed	Calophyllum inophyllum	Punna
2	Amarethus	..	Keera or Cheera
3	Arrow root	Curcuma angustifolia	Kuva
4	Ash gourd	Baniansa certifera	Kumbalanga
5	Bajra	Panniretam typhoideum	Kambu
6	Bambliamas	Citrus madima	Bamblimas
7	Barley	Hordeum Volgana	Barley
8	Bangalgram	Cicer arietenum	Kadala
9	Betel leaves	Piper betel	Vettila
10	Betel nut	Areca catecha	Adakka or Pakku
11	Bitter gourd	Mamordica charntia	Pavakka or Kaipakka
12	Blackgram	Phasedur radiatus	Uzhunnu
13	Breadfruit	Artocarpus commuris	Simachakka or Kadachakka
14	Brinjal	Solanum malongena	Vazhuthananga
15	Bottle gourd	Lagenaria Vulgaris	Churakkai
16	Cabbage	Brassica olavacca	Mottakkose
17	Cardamom	Elettaria cardamum	Elakka
18	Carrot	Danceos carota	Mullanki
19	Cashewnut	Anacardium occidentale	Kasuandi or Parangi-andi
20	Castor	Ricinus communis	Avanakku
21	Chillies (dry)	Capsicum annum	Vattal mulaku or Kappal mulaku
22	Chillies (green)	do.	Pacha mulaku
23	Cinnamon	Cinnamomam zaylanicum	Karava or Vazhana
24	Cloves	Enginia ceryophyllatte	Grampu
25	Cluster beans	Cyamopsis psoralioides	Kothavara
26	Coconut	Cocos nucipera	Nalikeram or Thenga
27	Colocasia	Colocasia Antiquoram	Chempu
28	Corriander	Corriandrum sativum	Kothamally

Sl. No.	English	Botanical	Malayalam
29	Cotton	<i>Gossypium herbaceum</i>	Paruthi
30	Cowgram	<i>Vigna catianga</i>	Karameni or Kottapayaru
31	Cucumbar	<i>Cucumis sativas</i>	Vellarikka
32	Cummur	<i>Cuminum Yminum</i>	Jeerakam
33	Drumstick	<i>Moringa Oleifera</i>	Muringakka
34	Elephant foot yam	<i>Amorphaphallur Com-panalathur</i>	Chena
35	Field beans	<i>Dolichos Hablal</i>	Mochakkota
36	Garlic	<i>Allium Sativum</i>	Veluthully
37	Ginger	<i>Zingiber Officinalis</i>	Inchi or Chucku
38	Grapes	<i>Vitis vinifar</i>	Munthiringa
39	Gre ngrm	<i>Phaseelus mango</i>	Cherupayaru
40	Groundnut	<i>Arachis hypogea</i>	Nilakadala
41	Guava	<i>Psidium guajava</i>	Perakka
42	Horsegram	<i>Dolichers Biflorous</i>	Muthira or Kanam
43	Italian millet	<i>Sataria italica</i>	Thina
44	Jack fruit	<i>Artocarpus intigrifoli</i>	Chakka
45	Jowar	<i>Sorghum Volgara</i>	Cholam
46	Jute	<i>Corchorous Capsularis</i>	Chanam
47	Kari leaf	<i>Murraya Kocnigari</i>	Karivapila
48	Ladies finger	<i>Hibiscus esculentus</i>	Vendakka
49	Lemongrass	<i>Cymbopogon species</i>	Ezhumpulla or Thailappullu
50	Lime fruits	<i>Citrus aurantifolia</i>	Cherunaranga
51	Do.	<i>Citrus medica</i>	Vadakappuli Naranga
52	Do.	<i>Citrus senensis</i>	Madhuranaranga
53	Long pepper	<i>Piper longum</i>	Tippali
54	Maiz	<i>Fea mayas</i>	Mokka cholam
55	Mango	<i>Magnifera indica</i>	Mambazham
56	Neem	<i>Azhdirachta Indica</i>	Veppu
57	Nut-mag	<i>Myrstica for grus</i>	Jathikka
58	Onion	<i>Allium Cepa</i>	Chevannully
59	Opium	<i>Papayar Somniferum</i>	Karuppu
60	Paddy	<i>Dryza Sativa</i>	Nellu
61	Palmyrah	<i>Borassus flabellifar</i>	Karimpanae
62	Pappaya	<i>Cariota papaya</i>	Omakka or Kappalanga
63	Pepper (Black)	<i>Piper nigrum</i>	Kurumulaku or Nallamulaku
64	Pine apple	<i>Ananus comesus</i>	Kaithachakka or Prithichakka
65	Plantain	<i>Musa sepientun</i>	Vazha
66	Pomegranate	<i>Punicagranelum</i>	Mathalam
67	Pumpkin	<i>Cucurbitamaxima</i>	Mathanga
68	Ragi	<i>Eleusive Coracana</i>	Panjappullu or Koovaraku

Sl. No.	English	Botanical	Malayalam
69	Red gram	<i>Cajanus indicus</i>	Thuvera
70	Rose apple	<i>Engenia jambos</i>	Jampa
71	Samai	<i>Panicum miliare</i>	Chama
72	Sesamum	<i>Sesamum indicum</i>	Ellu
73	Snake gourd	<i>Trichosanthes anguim</i>	Padavalanga
74	Sugarcane	<i>Saccharum officinarum</i>	Karimbu
75	Sweet potato	<i>Ipomoea batatas</i>	Sarkaravalli or Madhura Kizhangu
76	Sword beams	<i>Canavalia ensiformis</i>	Valaringa
77	Tamarind	<i>Tamarindus indica</i>	Valampuli
78	Tapioca	<i>Manihot utilisima</i>	Marachini or Kappa
79	Tobacco	<i>Nicotiana tabacum</i>	Pukayila
80	Tomato	<i>Lycopersicon</i>	Thakkali
81	Turmeric	<i>Curcuma longa</i>	Manjal
82	Water melon	<i>Citrullus vulgaris</i>	Thannimathan
83	Wheat	<i>Triticum vulgare</i>	Gothambu
84	Winged beans	<i>Psophocarpus burtonianus</i>	Chathurapayaru
85	Yam	<i>Dioscorea bulbifera</i>	Kachil
86	..	<i>Engenia cumim</i>	Njarapazham
87	..	<i>Dioscorea alata</i>	Cheruvallikizhangu
88	..	<i>Colocasia esculenta</i>	Kborka or Cheevakizhangu
89	..	<i>Luffa acutangula</i>	Pichanka
90	..	<i>Garcinia cambogia</i>	Kodampuli or Pevaru

AGRICULTURAL^{AND} NON-AGRICULTURAL POPULATION 1951

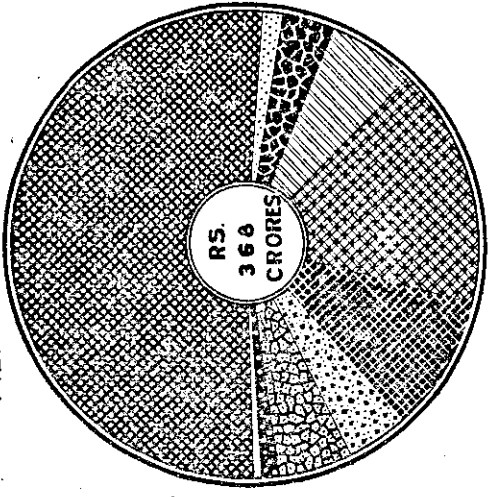


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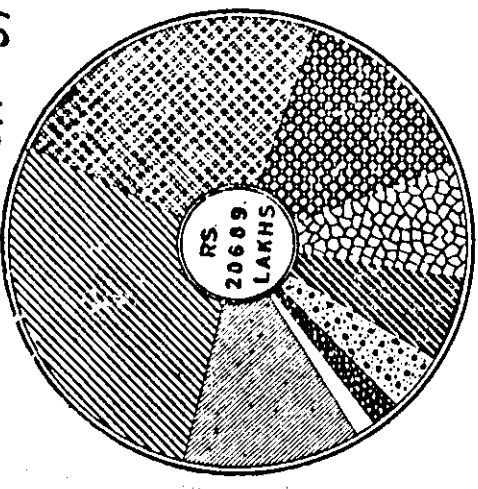


REGIONAL INCOME OF KERALA '57-58



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 - FISHERIES
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GROSS INCOME FROM AGRICULTURAL SECTOR - '57-58



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- COCOANUT
 - PADDY
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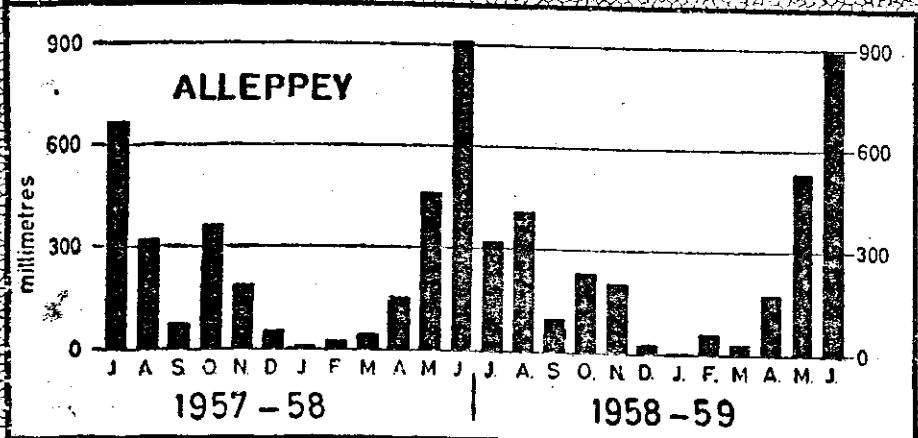
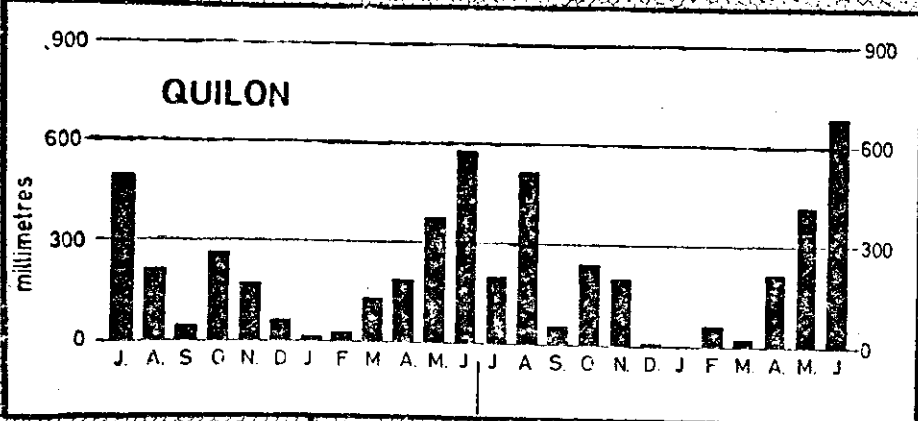
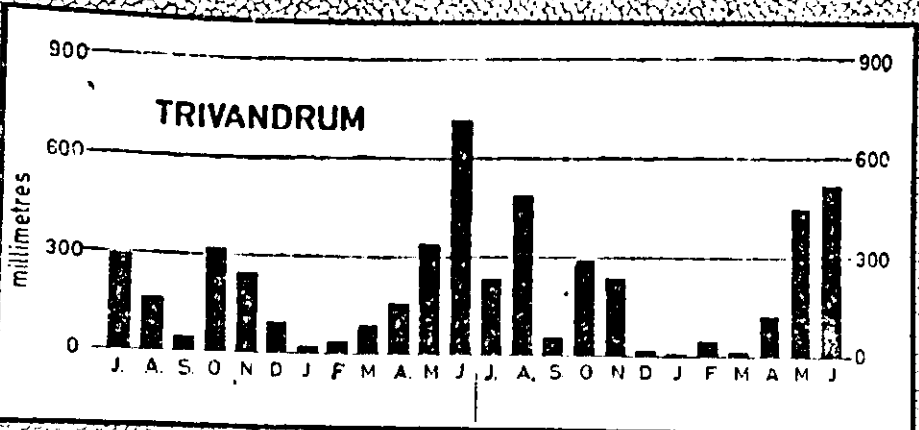
The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author details the various methods used to collect and analyze the data. This includes both manual and automated processes. The goal is to ensure that the information gathered is both reliable and comprehensive.

The third section provides a detailed breakdown of the results. It shows that there has been a significant increase in sales over the period covered. This is attributed to several factors, including improved marketing strategies and better customer service.

Finally, the document concludes with a series of recommendations for future actions. It suggests that the company should continue to invest in research and development to stay ahead of the competition. Additionally, it recommends regular audits to ensure ongoing compliance with all relevant regulations.

AVERAGE MONTHLY RAINFALL



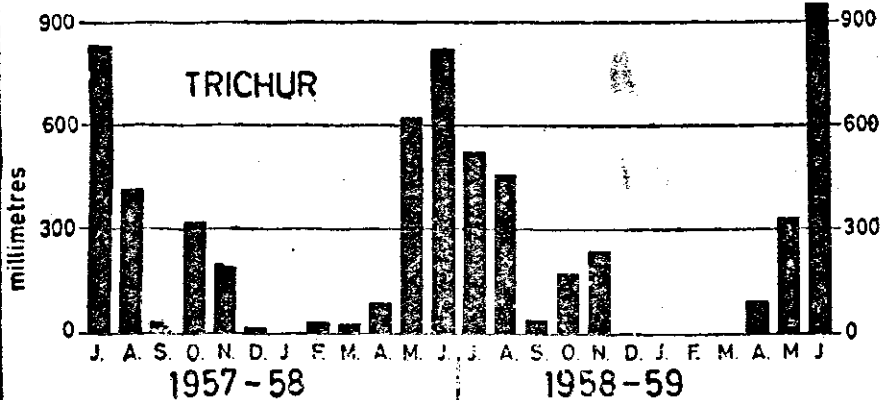
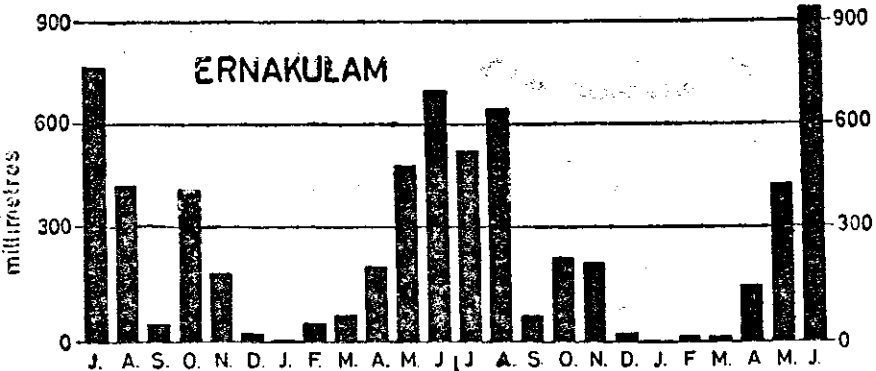
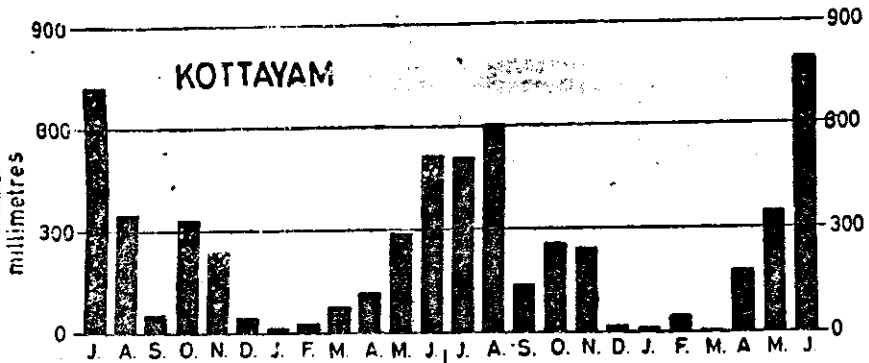
The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income.

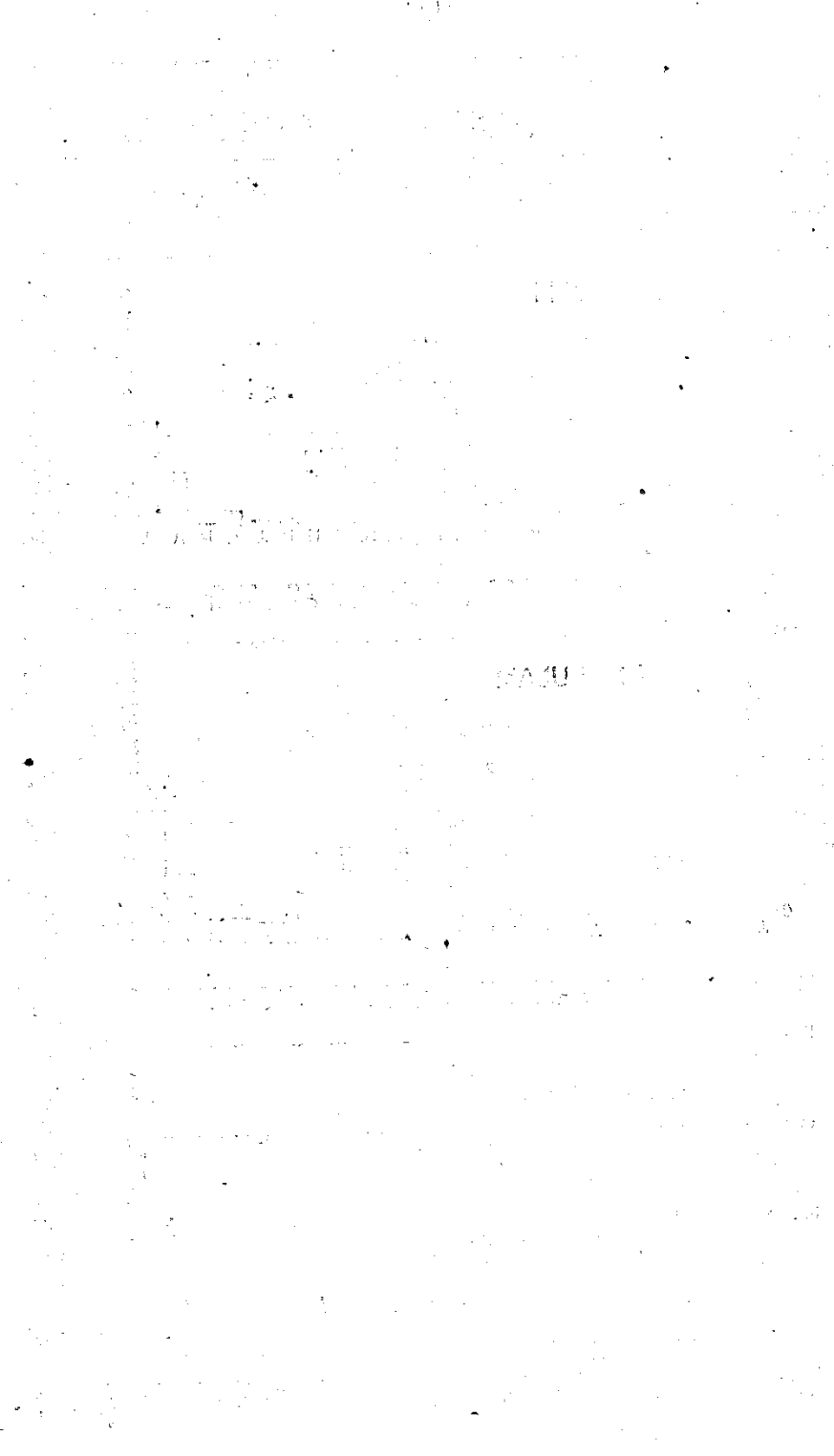
The second section details the various methods used to collect and analyze data. It describes how different types of information are gathered from various sources and how they are then processed to identify trends and patterns. This involves a combination of manual and automated techniques.

The third part of the document focuses on the application of the collected data. It explains how the information is used to make informed decisions and to develop strategies that can improve performance. This section also discusses the challenges associated with data analysis and how they can be overcome.

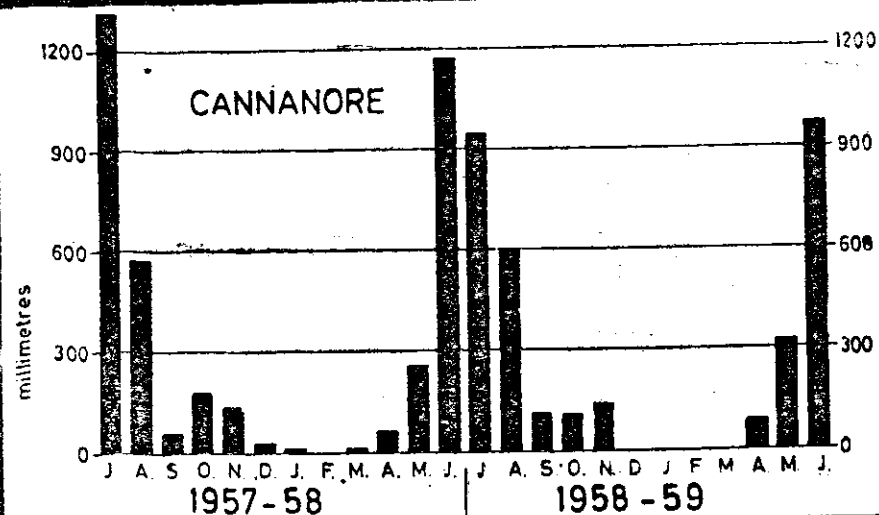
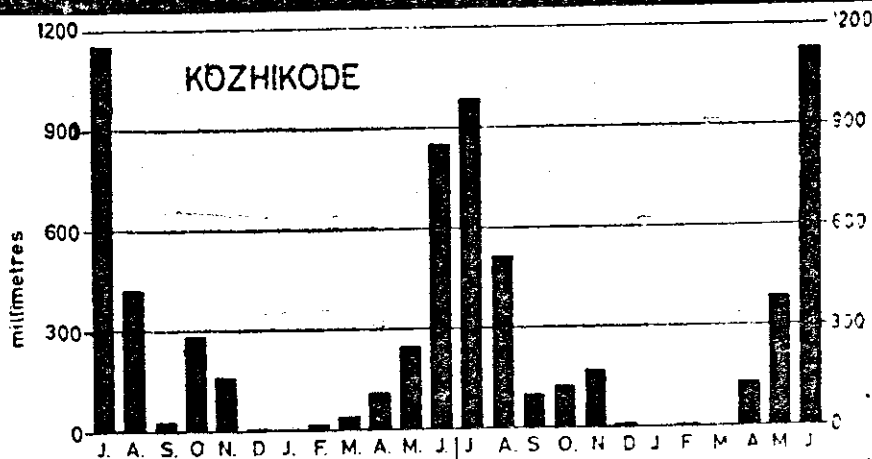
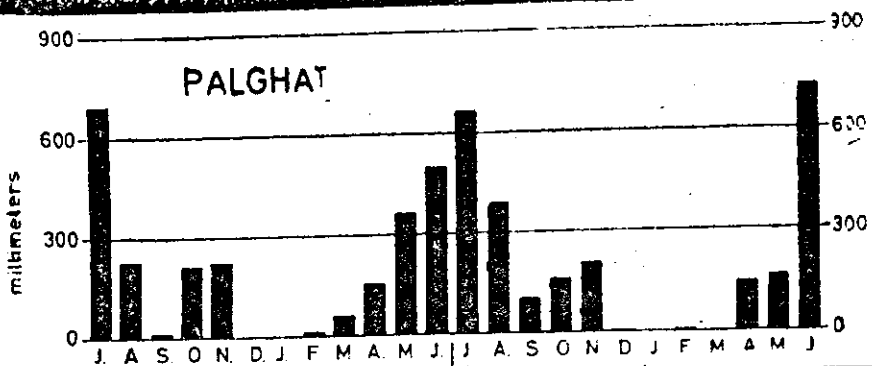
Finally, the document concludes with a summary of the key findings and a list of recommendations. It stresses the need for continuous monitoring and evaluation to ensure that the data remains relevant and useful over time.

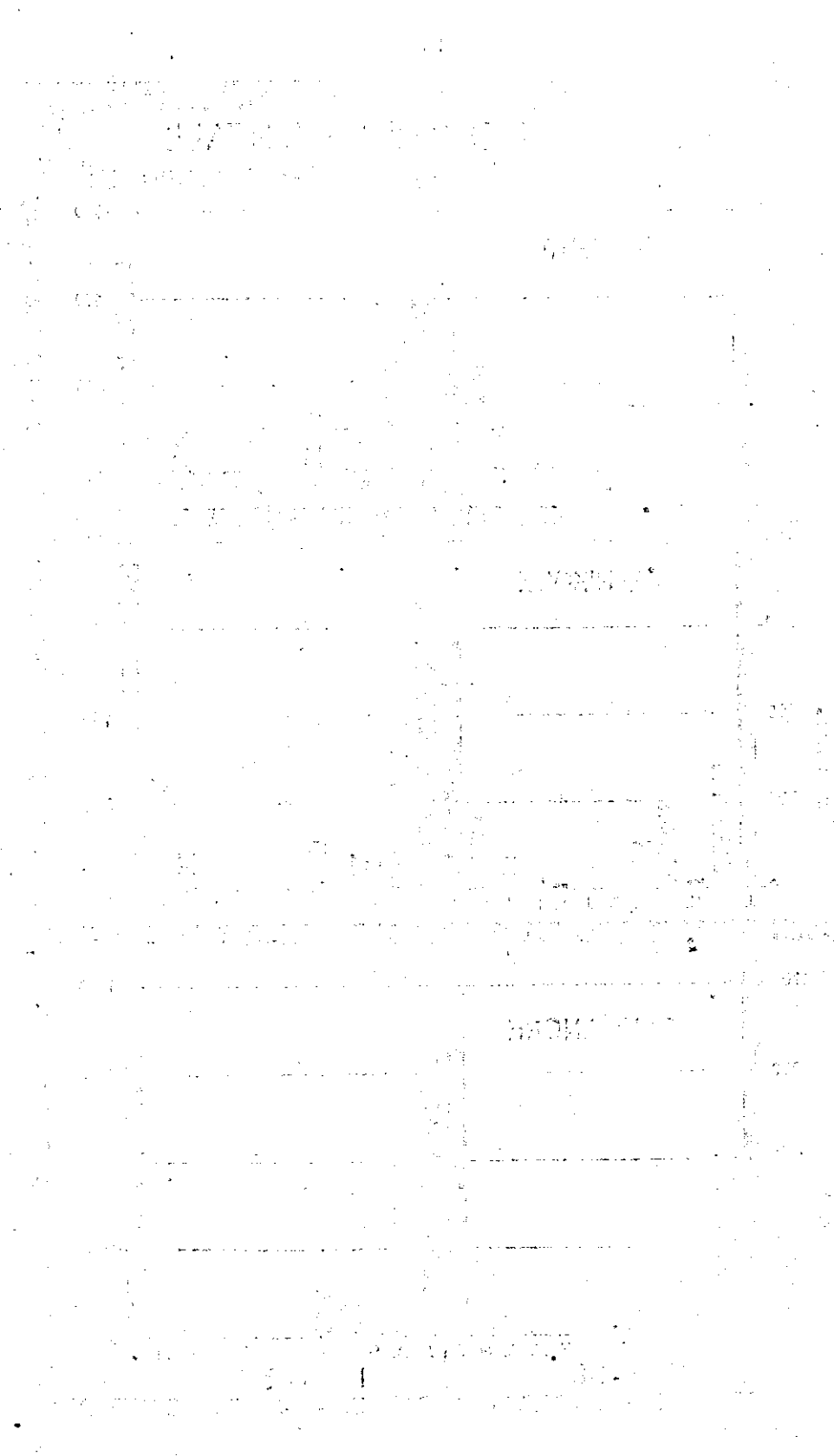
AVERAGE MONTHLY RAINFALL





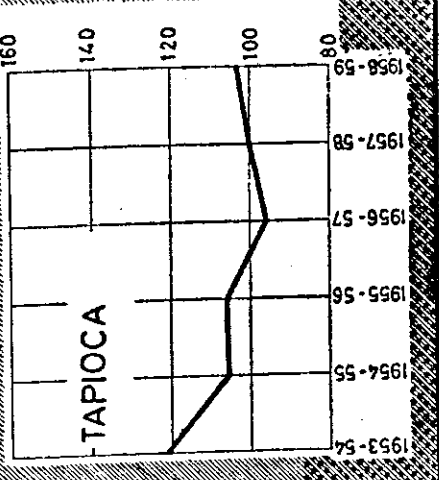
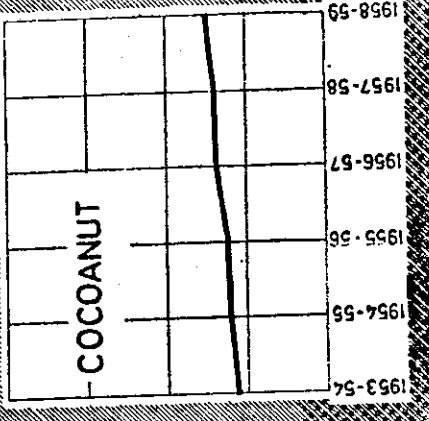
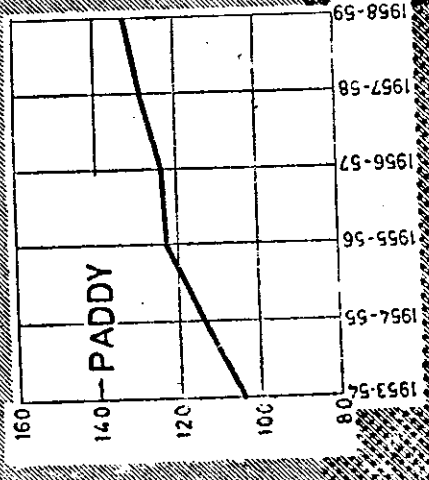
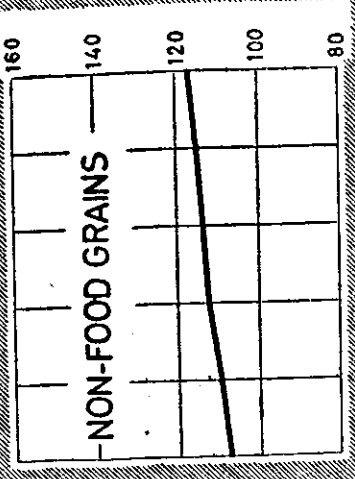
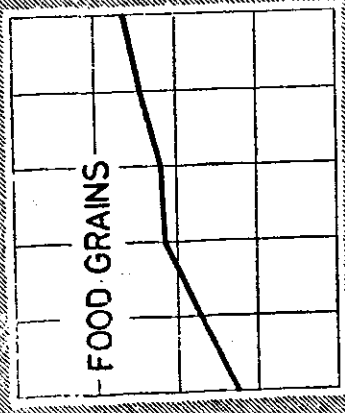
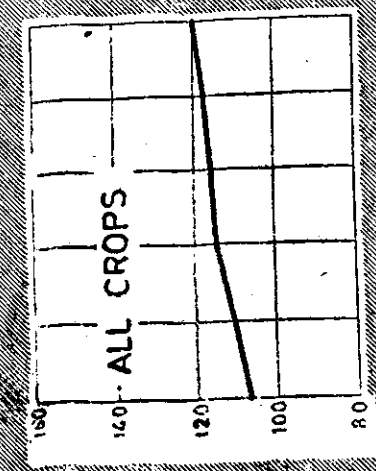
AVERAGE MONTHLY RAINFALL

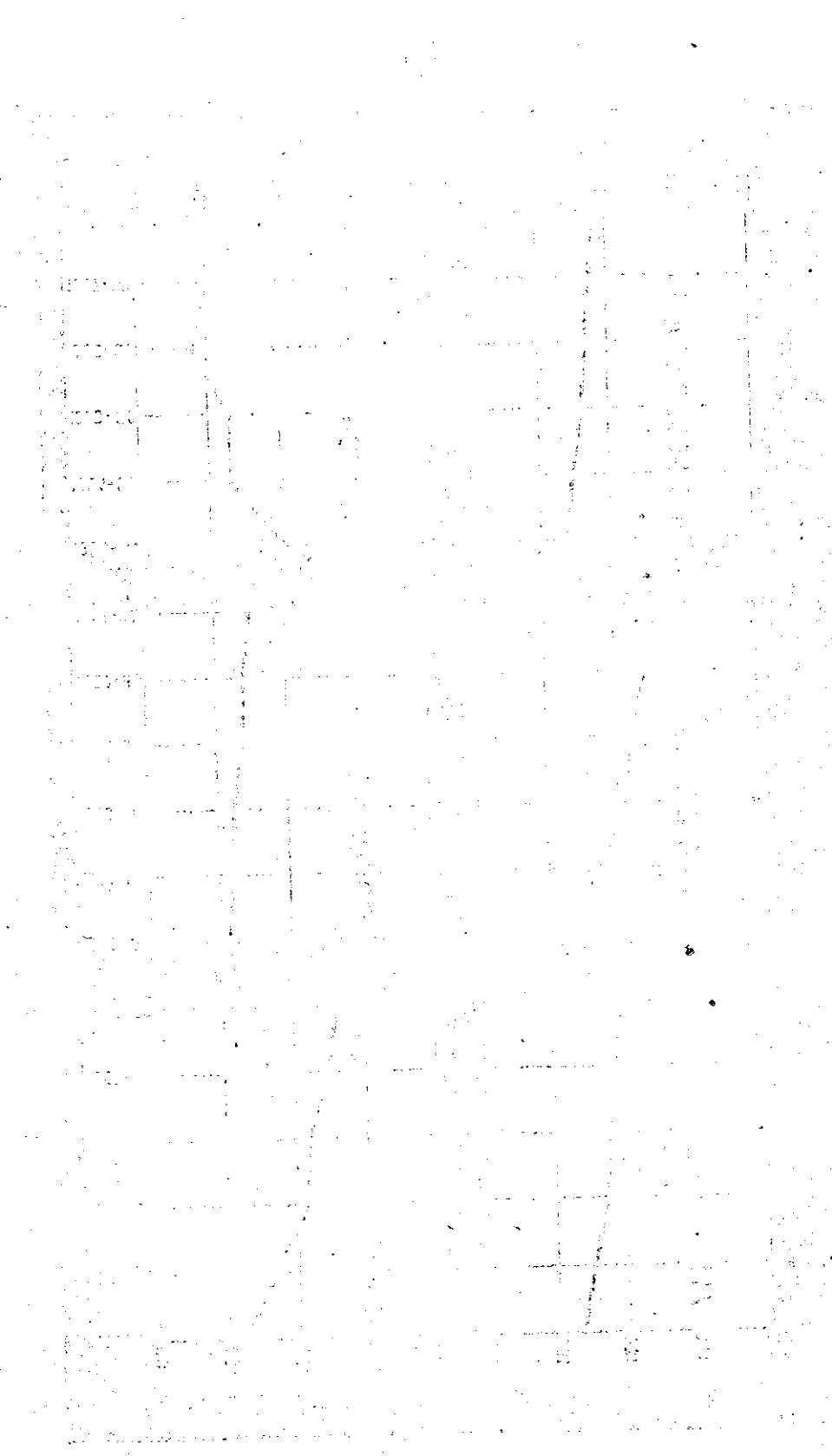




INDEX NUMBERS OF AGRICULTURAL PRODUCTION IN KERALA

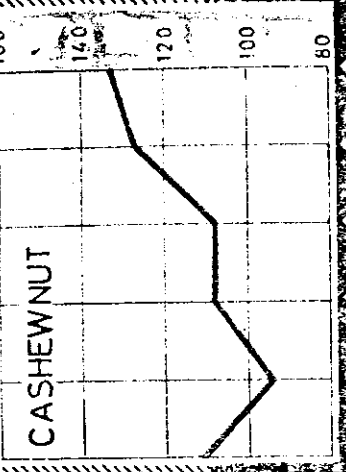
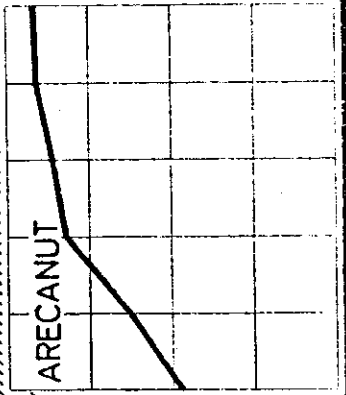
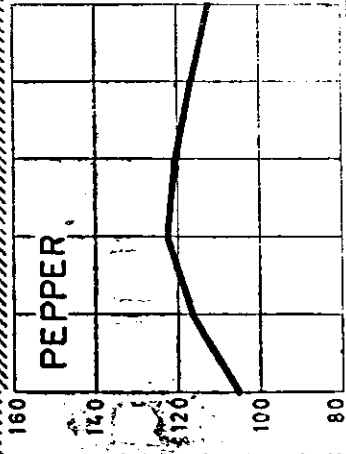
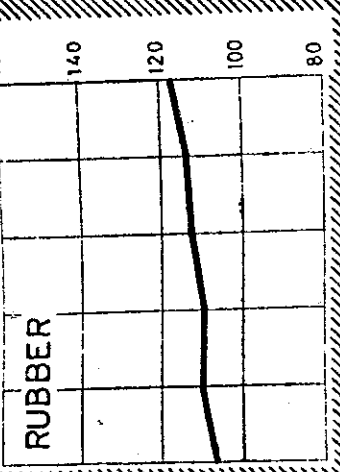
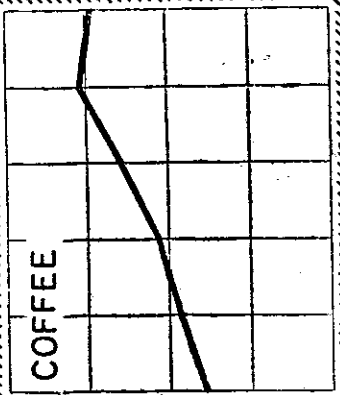
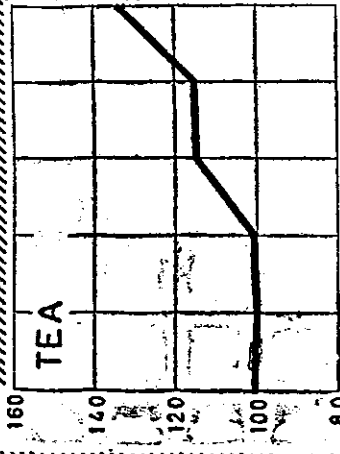
BASE • 1952-53 = 100





INDEX NUMBERS OF AGRICULTURAL PRODUCTION IN KERALA

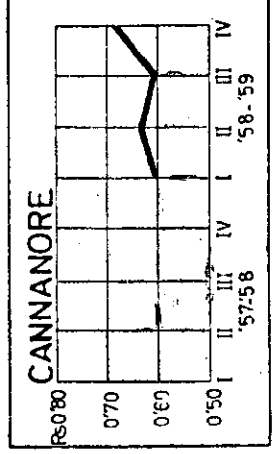
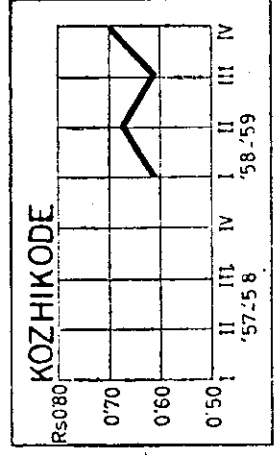
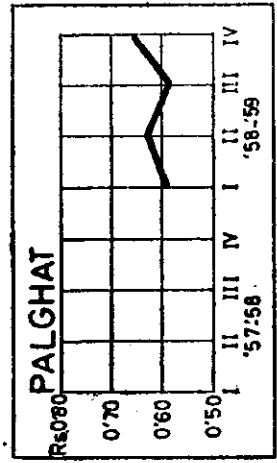
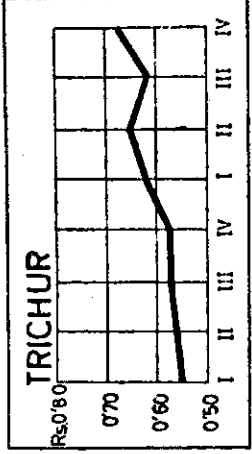
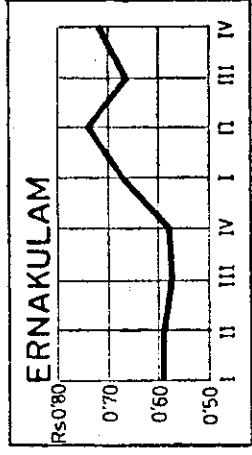
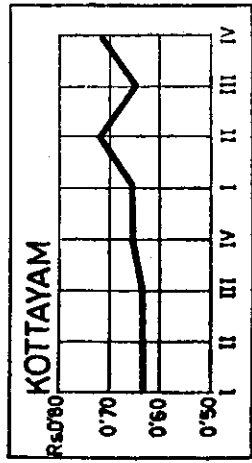
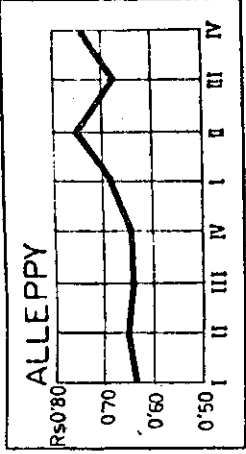
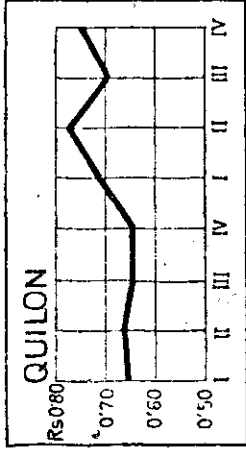
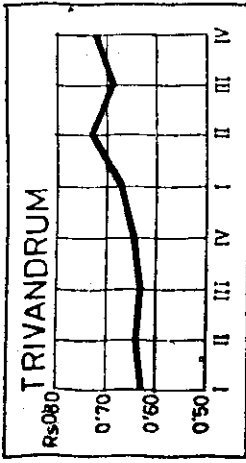
BASE 1952-53 = 100



- 1953-54
- 1954-55
- 1955-56
- 1956-57
- 1957-58
- 1958-59
- 1953-54
- 1954-55
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- 1956-57
- 1957-58
- 1958-59
- 1953-54
- 1954-55
- 1955-56
- 1956-57
- 1957-58
- 1958-59
- 1953-54
- 1954-55
- 1955-56
- 1956-57
- 1957-58
- 1958-59



QUARTERLY RETAIL PRICES OF RICE (EDANGAZI)



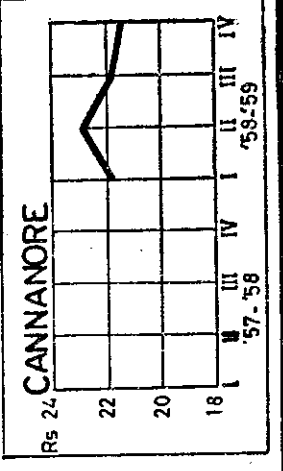
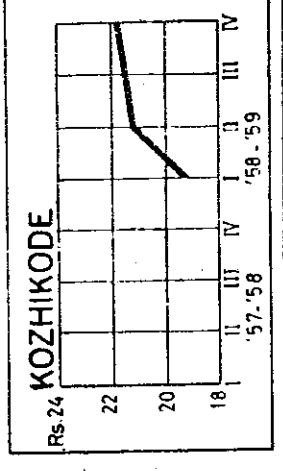
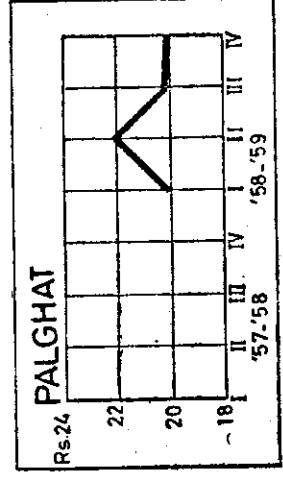
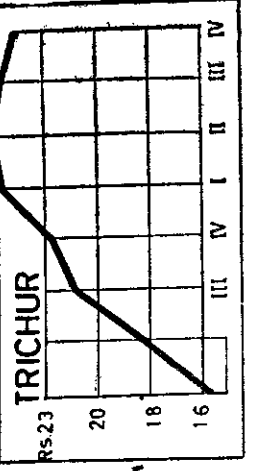
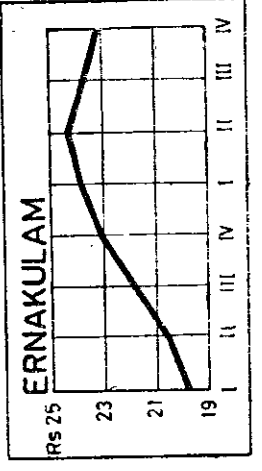
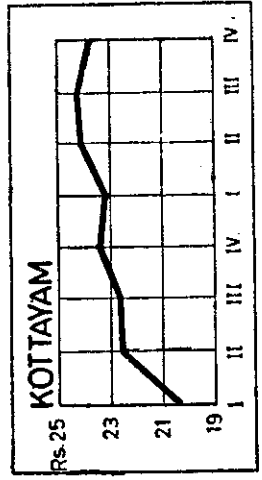
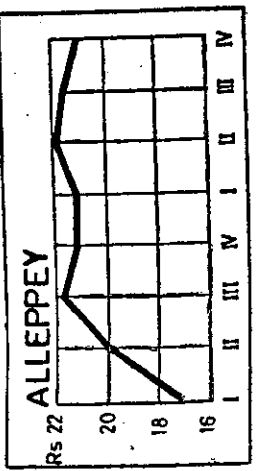
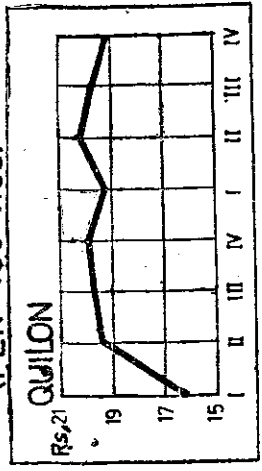
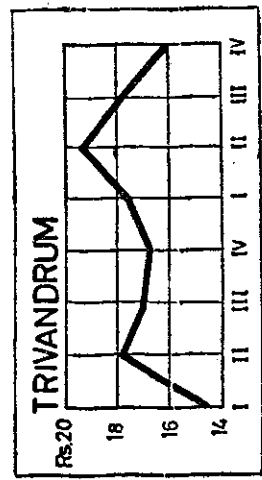
The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author outlines the various methods used to collect and analyze the data. This includes both manual and automated techniques. The goal is to ensure that the information gathered is both reliable and comprehensive.

The third section provides a detailed breakdown of the results. It shows that there has been a significant increase in the number of transactions over the period studied. This growth is attributed to several factors, including improved marketing strategies and a more efficient distribution network.

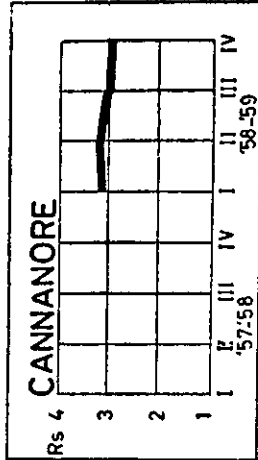
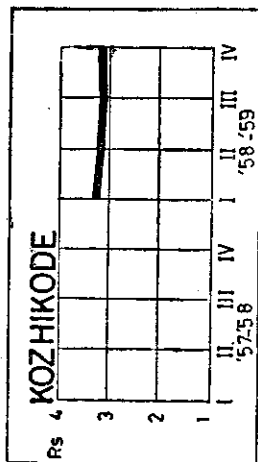
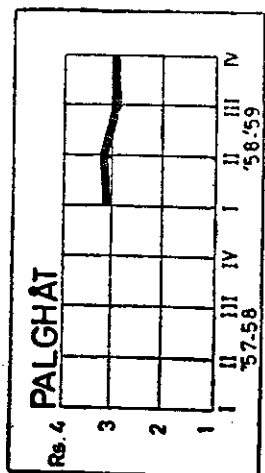
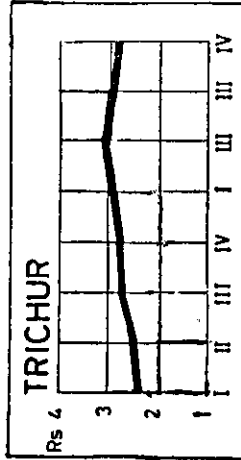
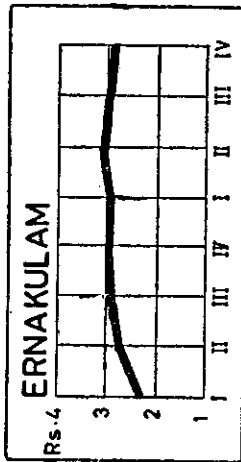
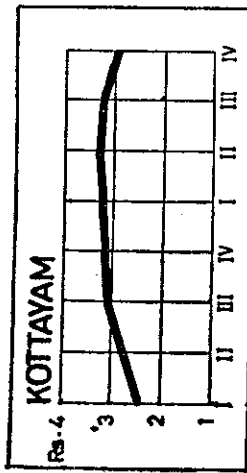
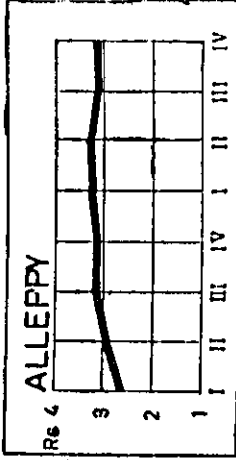
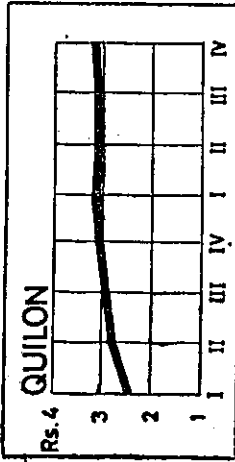
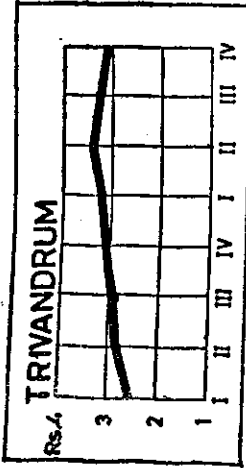
Finally, the document concludes with a series of recommendations for future operations. It suggests that continued investment in technology and staff training will be essential for maintaining the current level of performance and achieving further growth.

QUARTERLY RETAIL PRICES OF COCONUT (WITH OUT HUSK) (PER 100 nos)



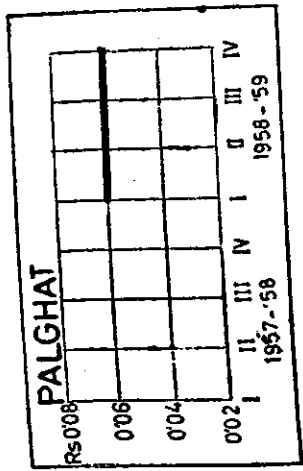
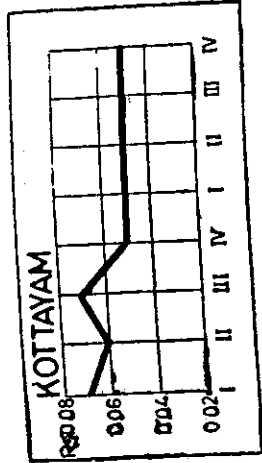
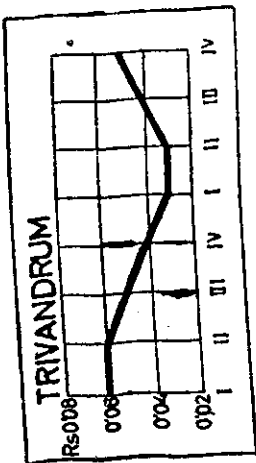
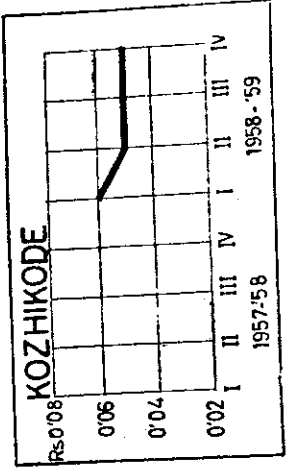
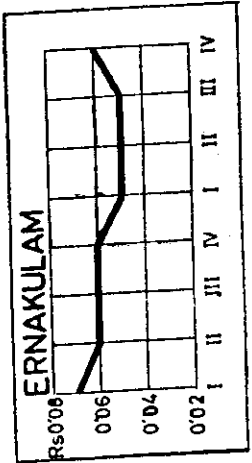
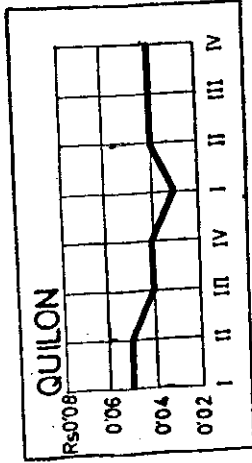
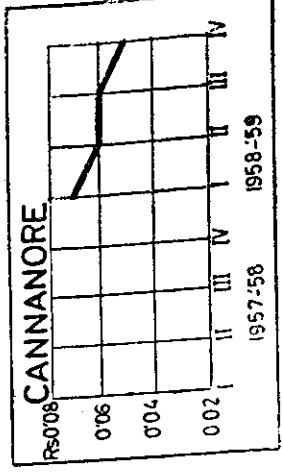
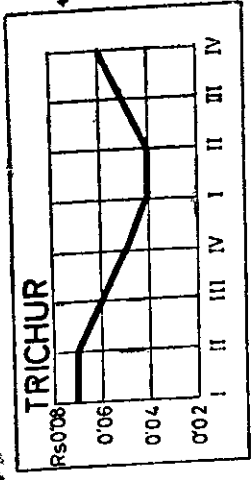
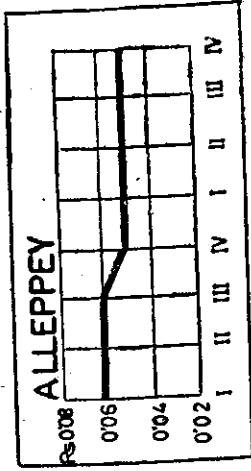


QUARTERLY RETAIL PRICES OF COCONUTOIL (EDANGAZHI)

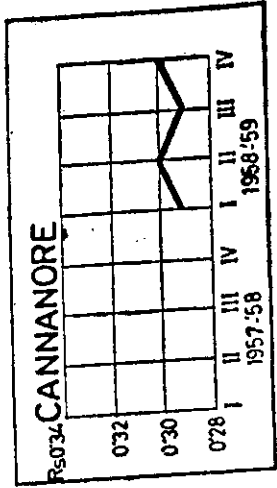
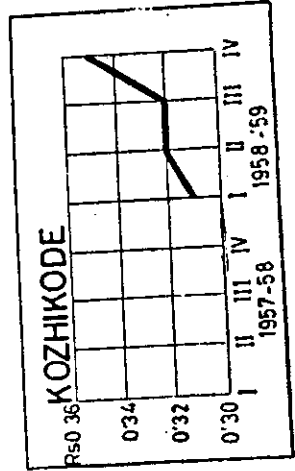
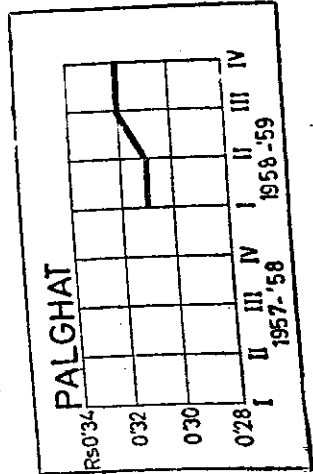
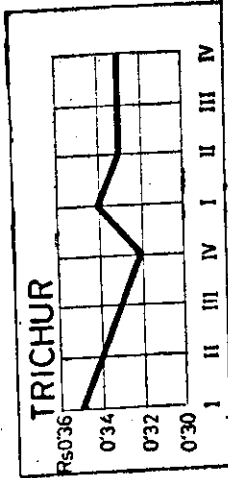
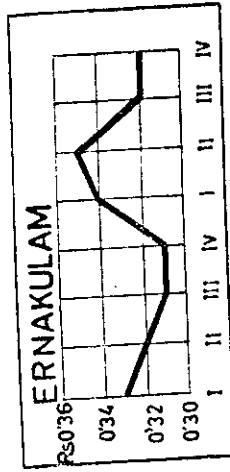
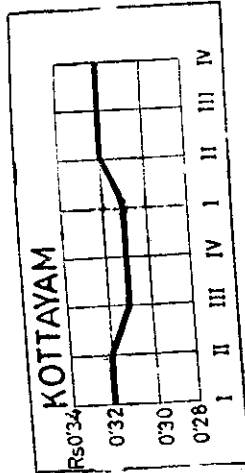
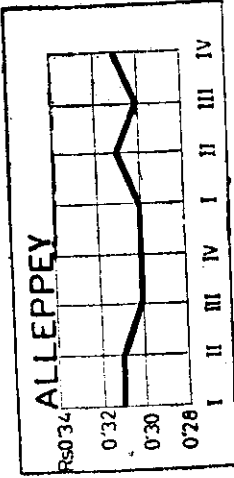
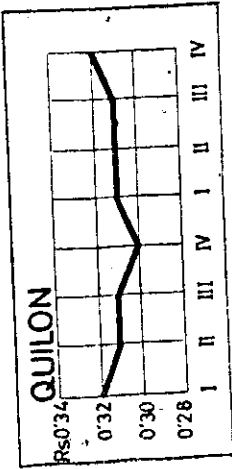
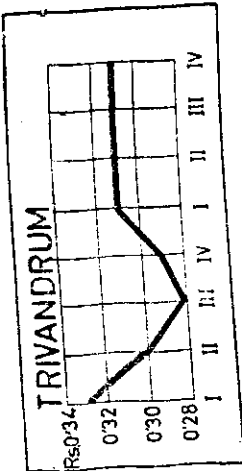


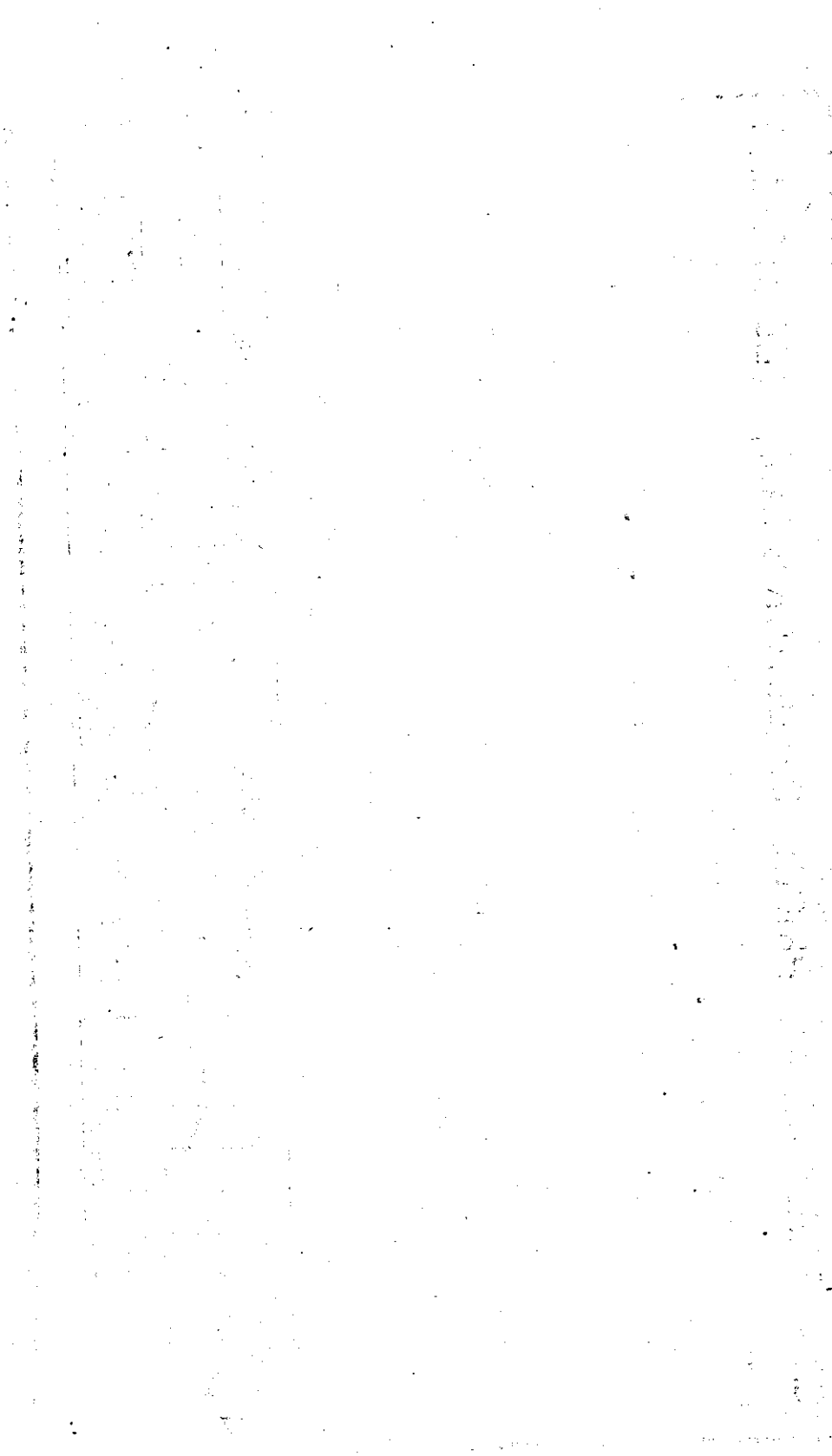


QUARTERLY RETAIL PRICES OF TAPIOCA (lb)

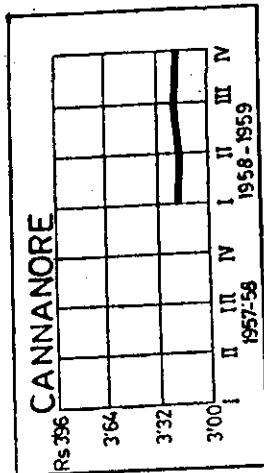
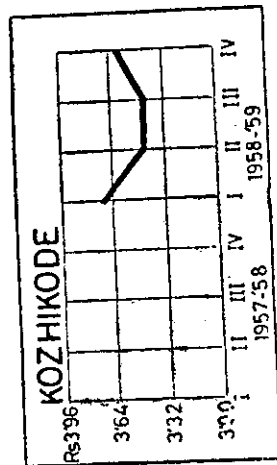
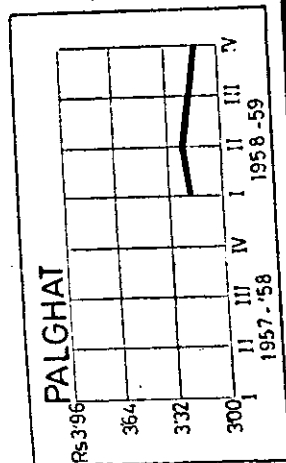
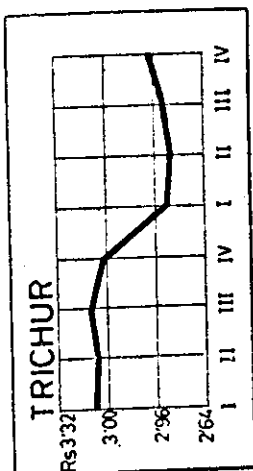
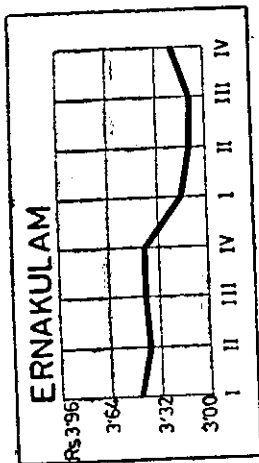
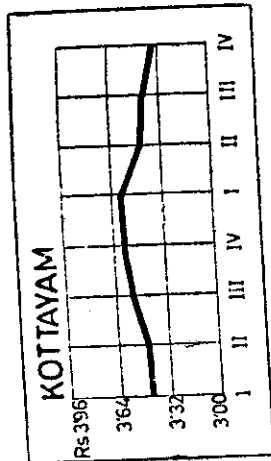
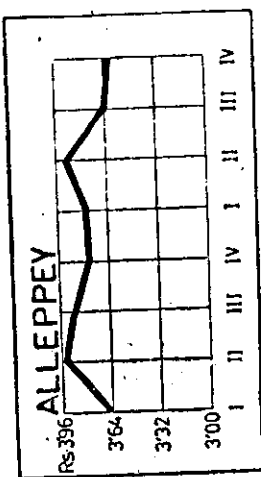
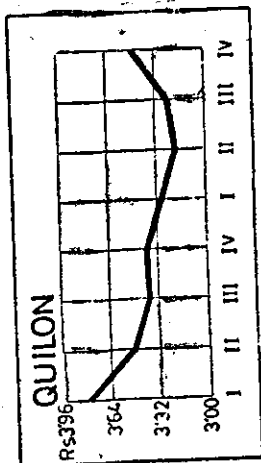
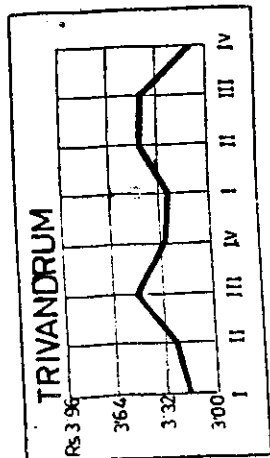


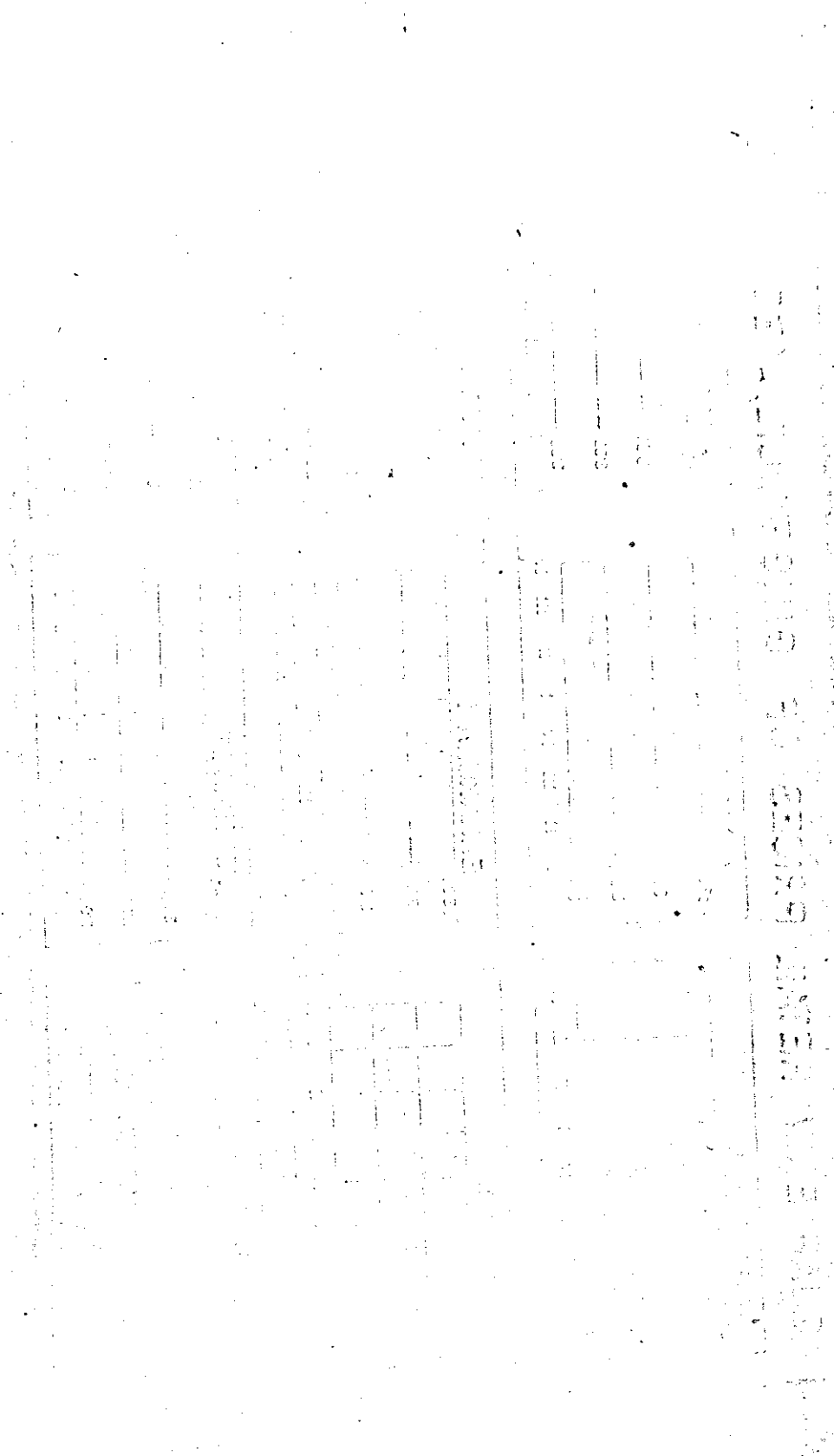
QUARTERLY RETAIL PRICES OF BLACK GRAM, - (EDANGAZHI)





QUARTERLY RETAIL PRICES OF GINGELLYOIL, -(EDANGAZI)

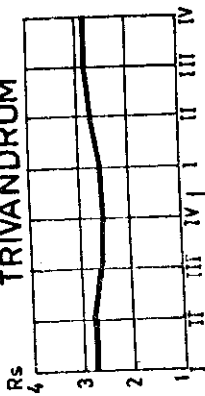




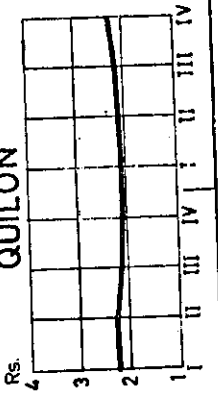
QUARTERLY RETAIL PRICES OF TEA

UNIT lb.

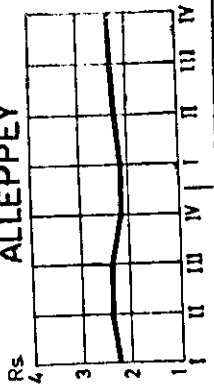
TRIVANDRUM



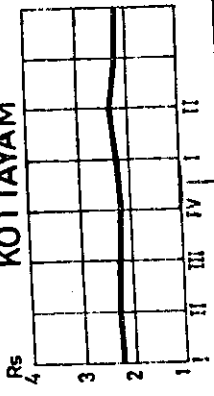
QUILON



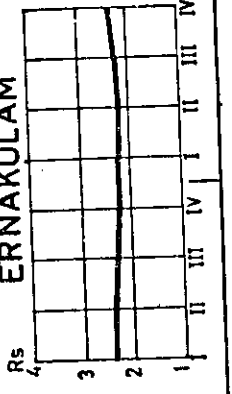
ALLEPPEY



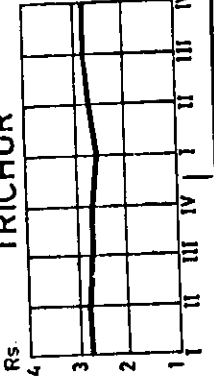
KOTTAYAM



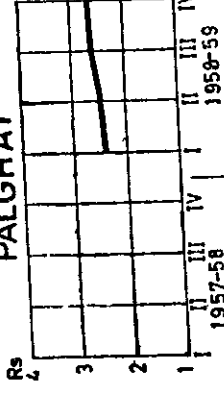
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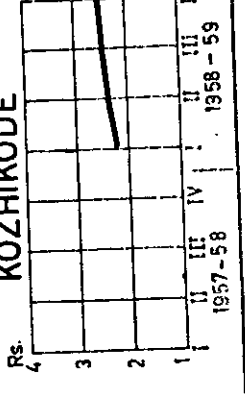
TRICHUR



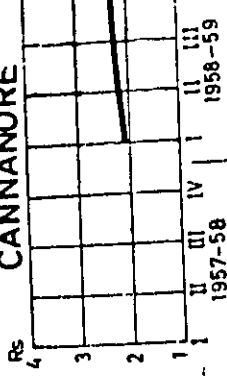
PALGHAT

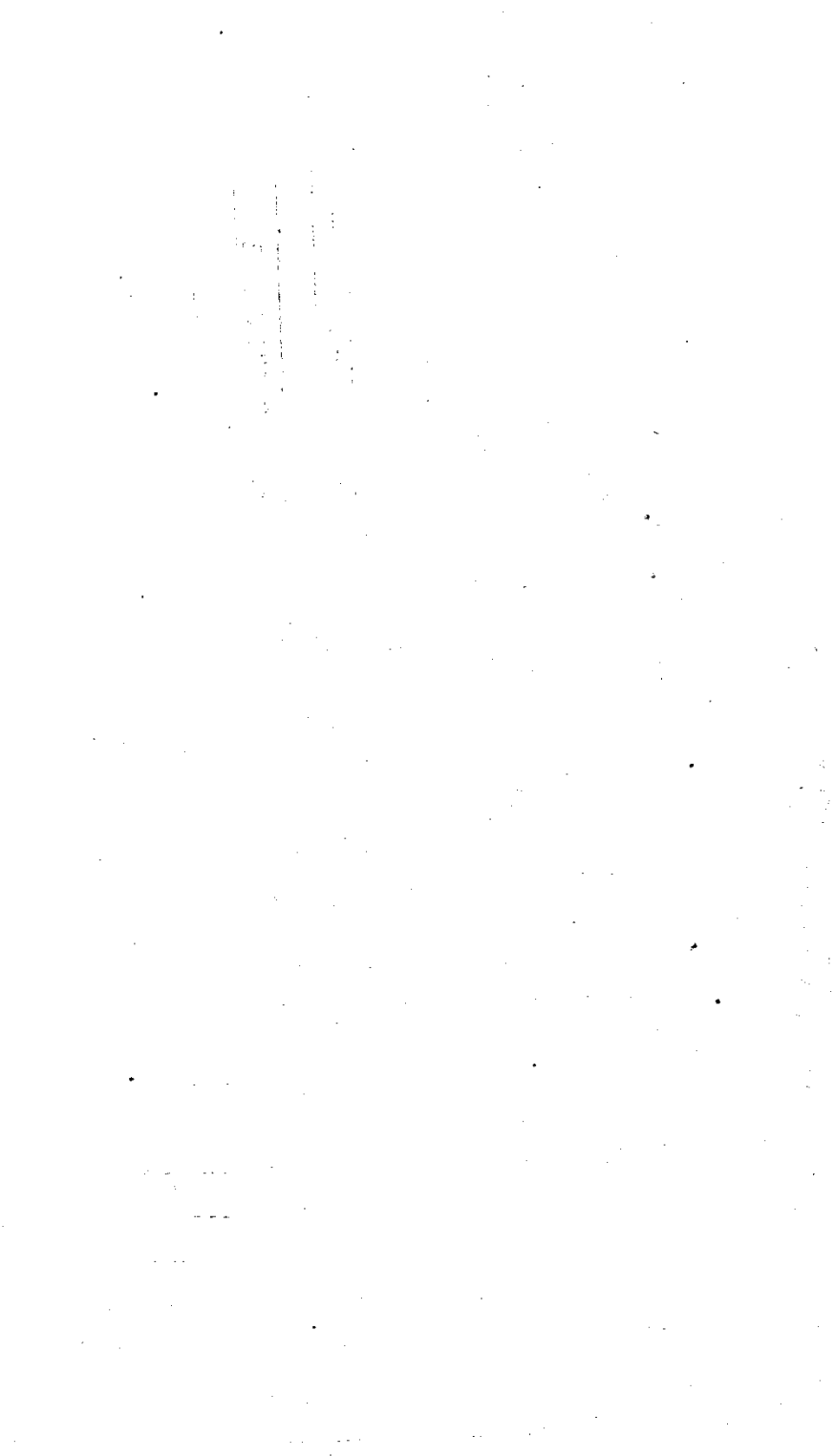


KOZHIKODE



CANNANORE

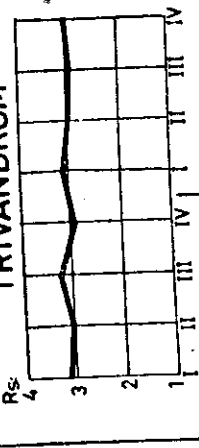




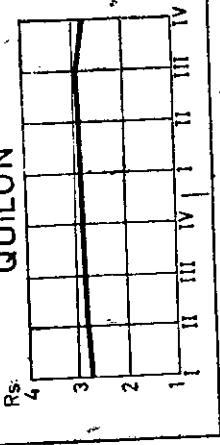
QUARTERLY RETAIL PRICES OF COFFEE SEEDS

UNIT Lb.

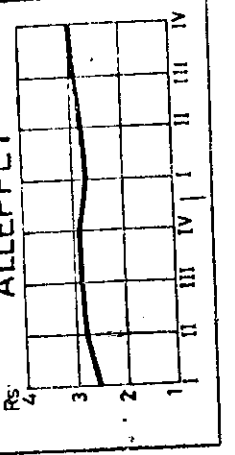
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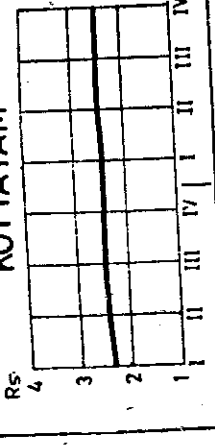
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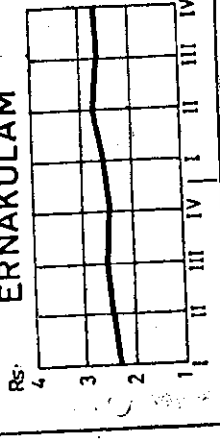
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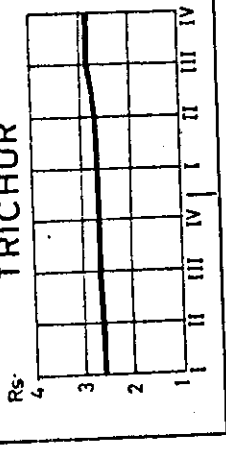
KOTTAYAM



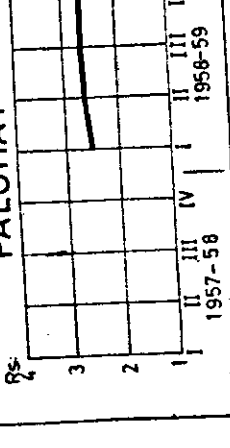
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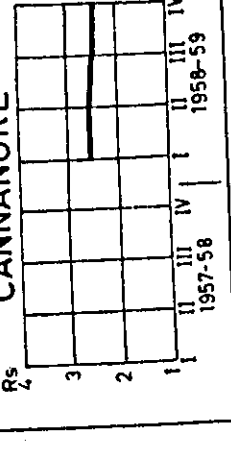
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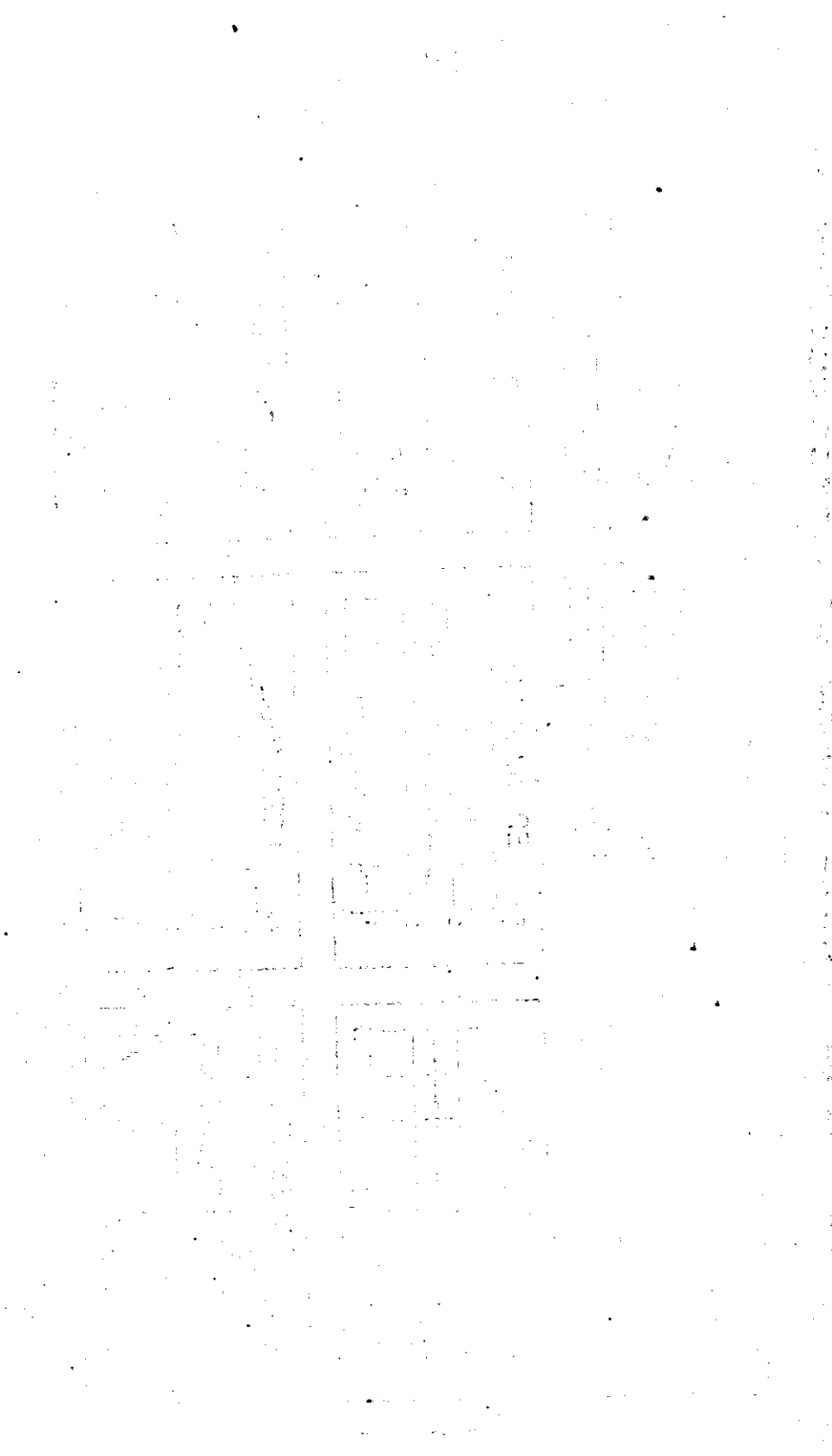


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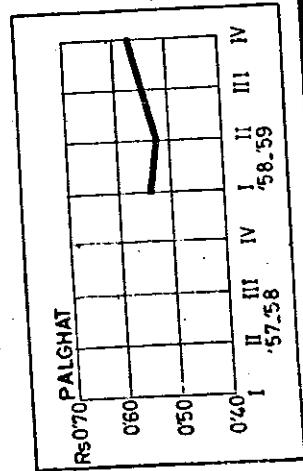
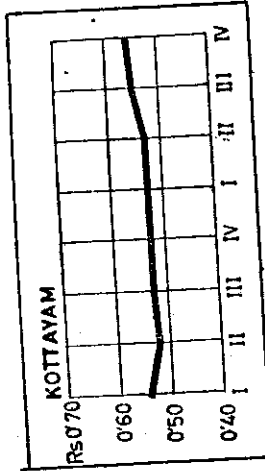
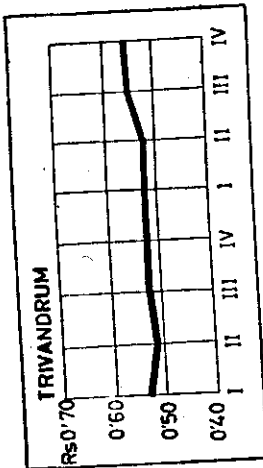
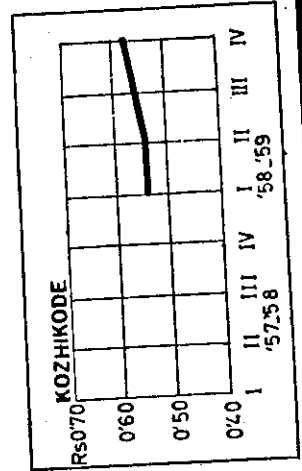
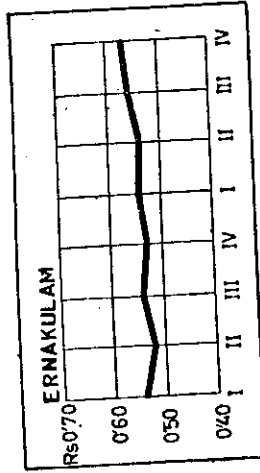
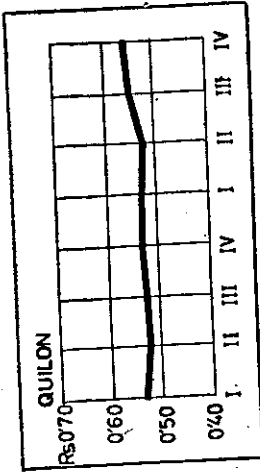
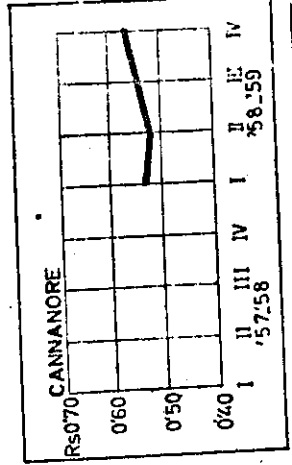
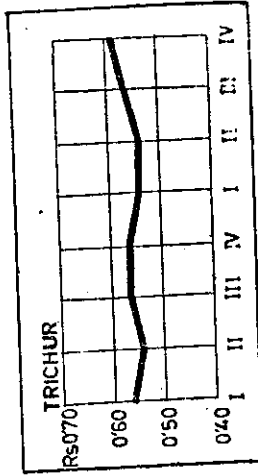
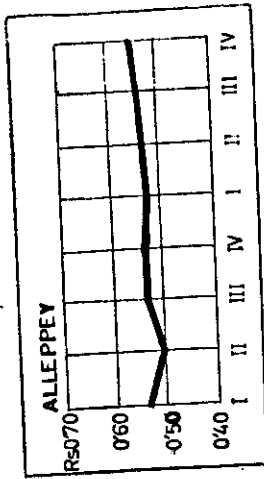


CANNANORE



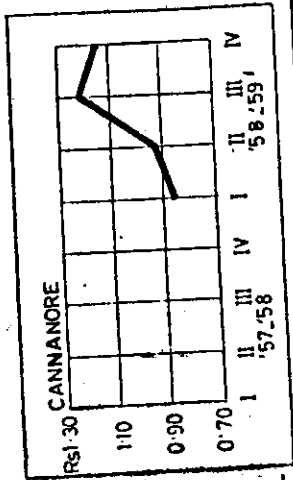
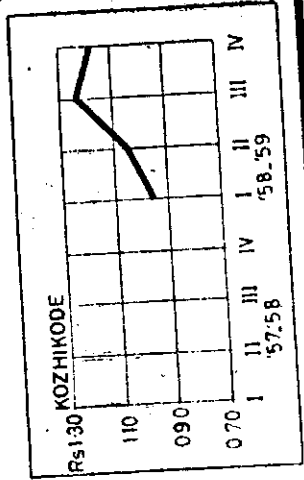
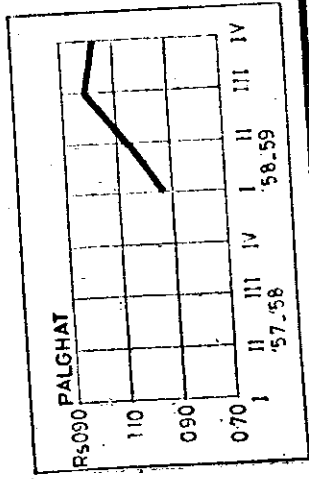
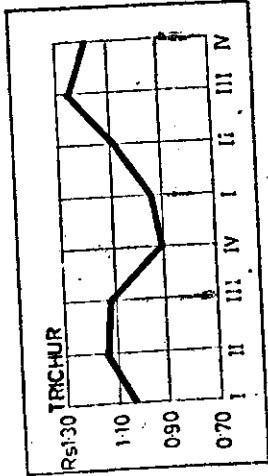
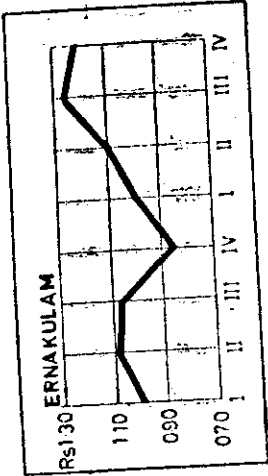
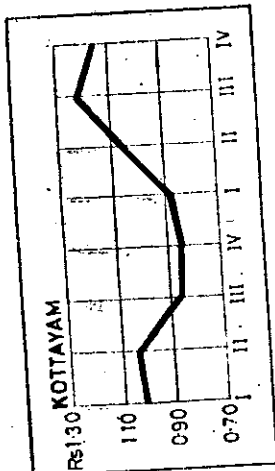
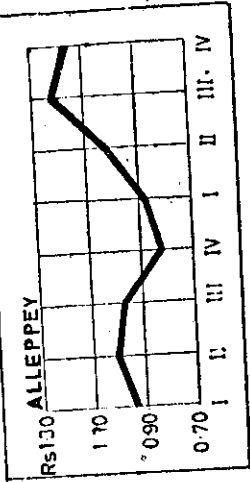
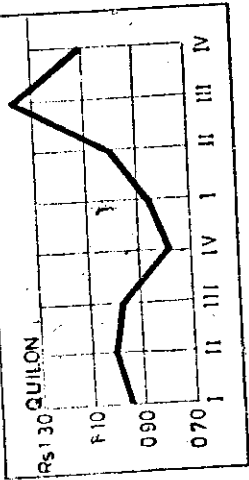
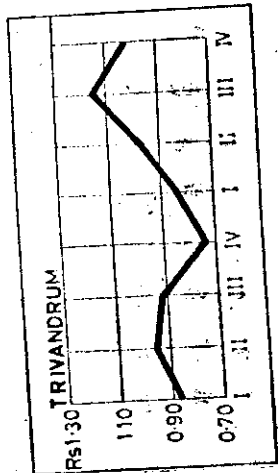


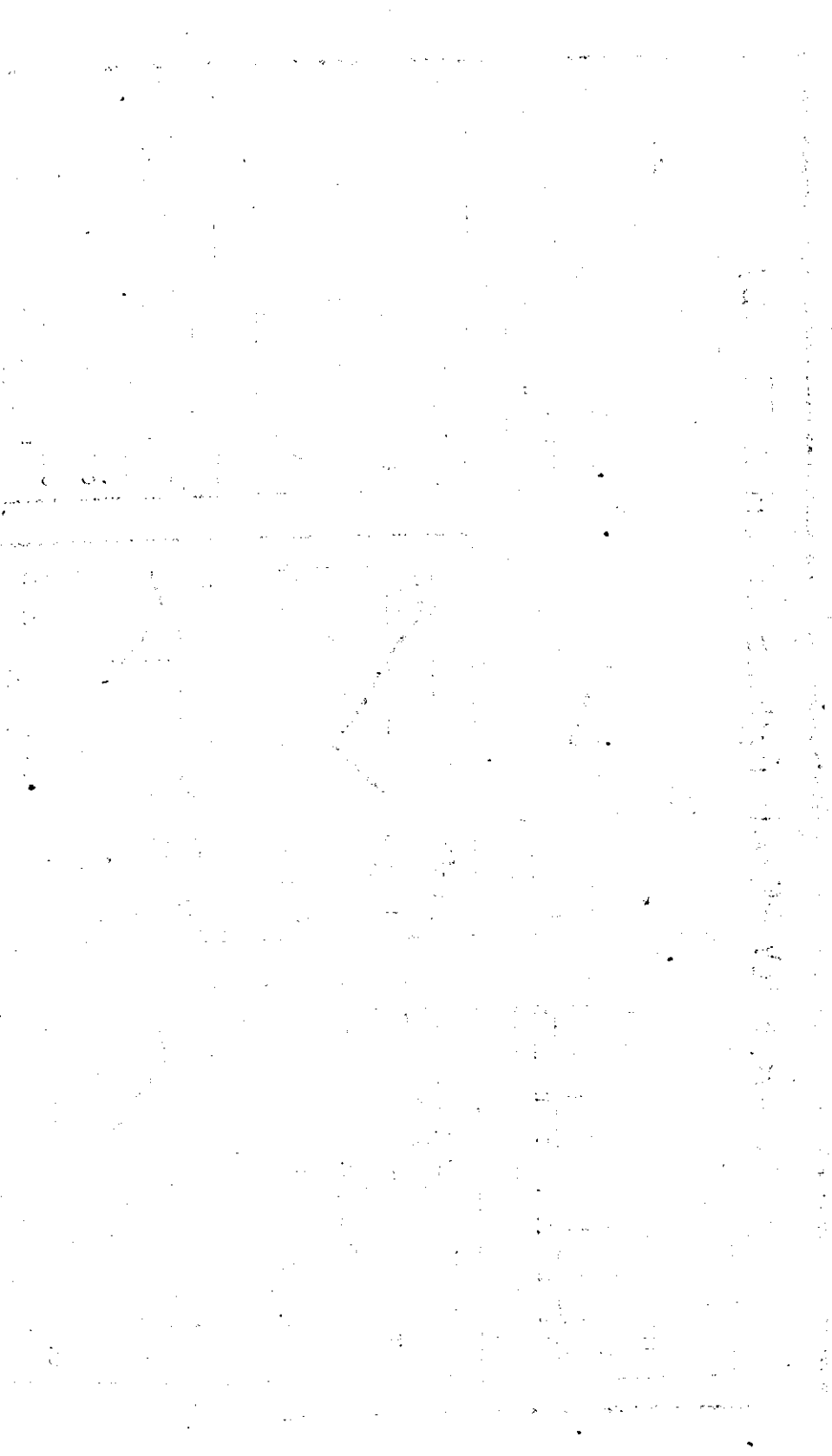
QUARTERLY RETAIL PRICES OF SUGAR (lb)



THE UNIVERSITY OF CHICAGO

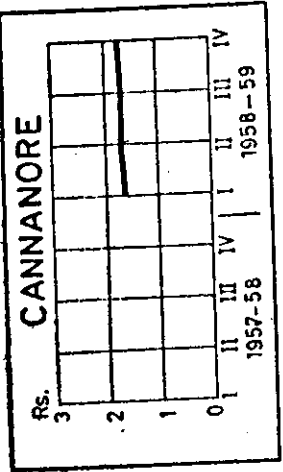
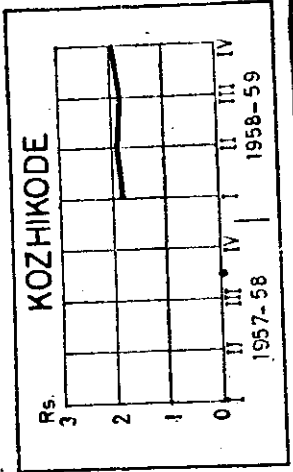
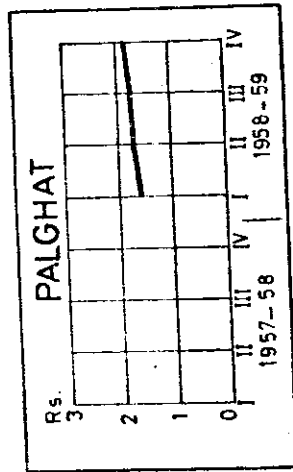
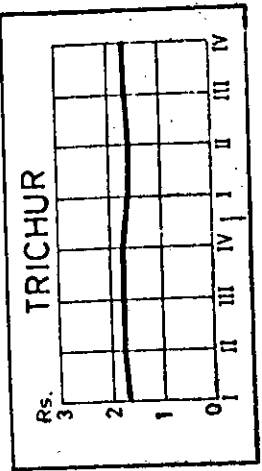
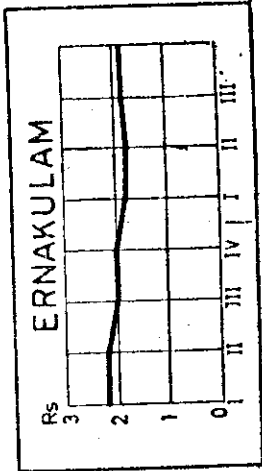
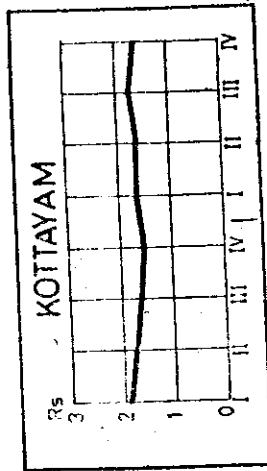
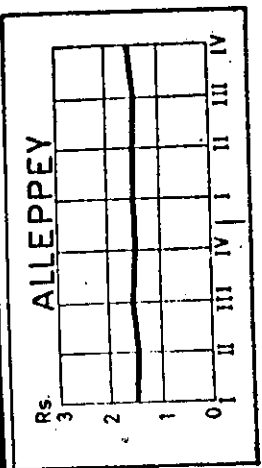
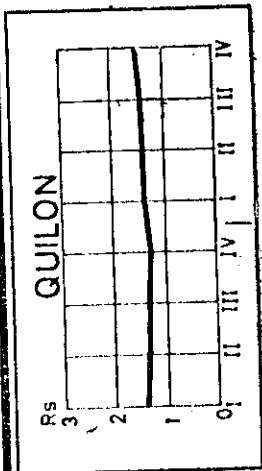
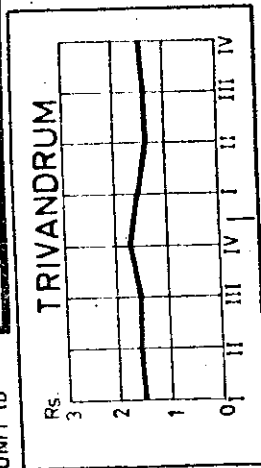
QUARTERLY RETAIL PRICES OF CHILLIES (lb)

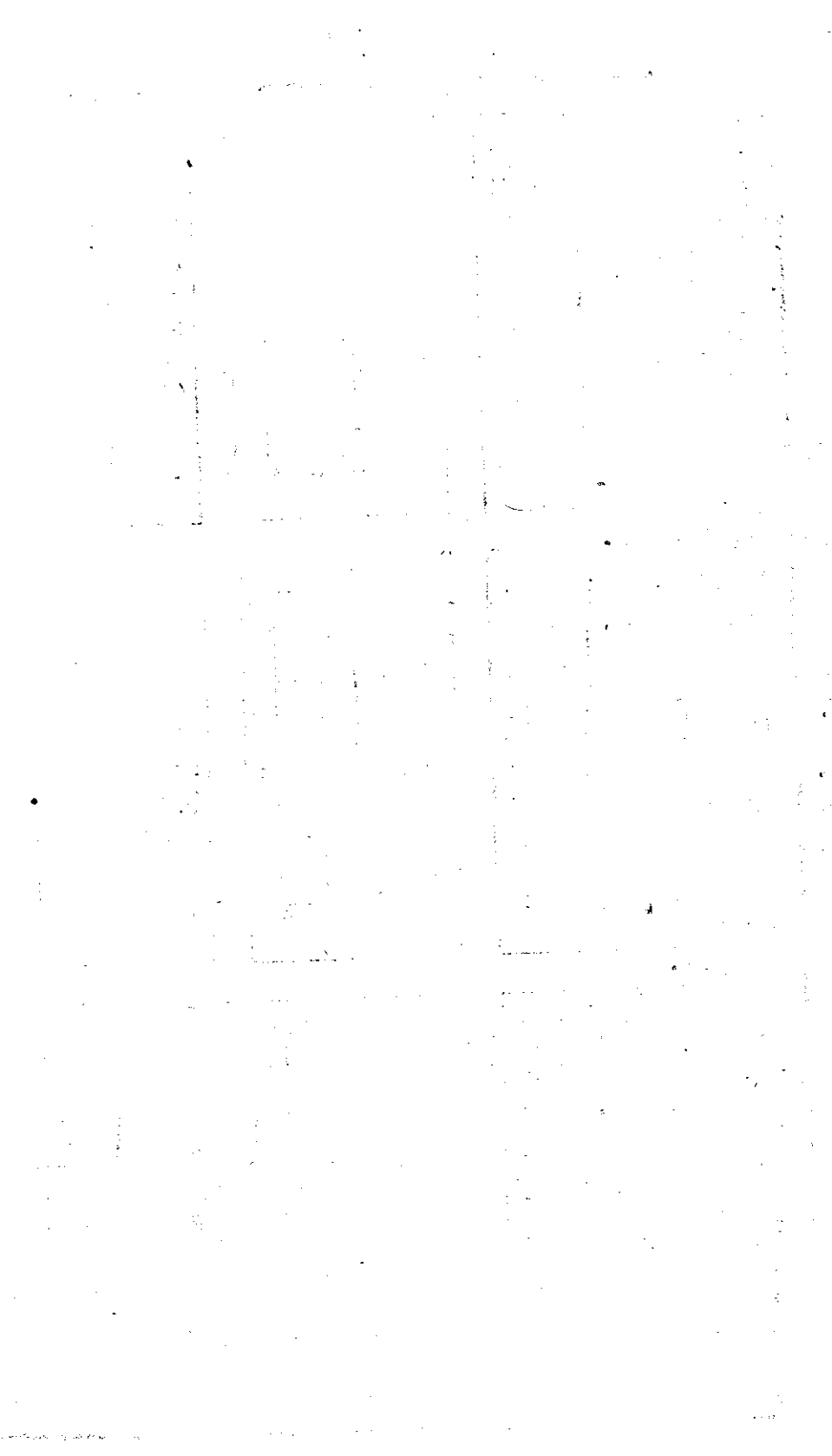




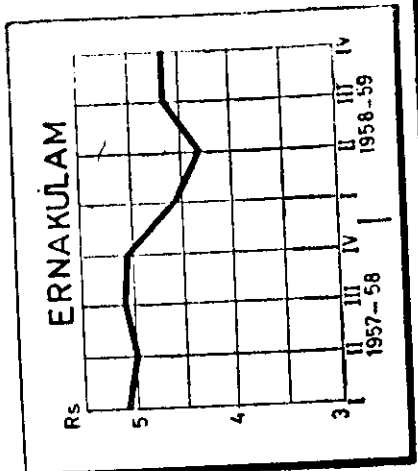
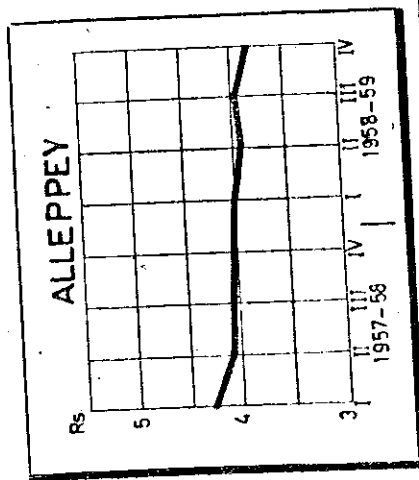
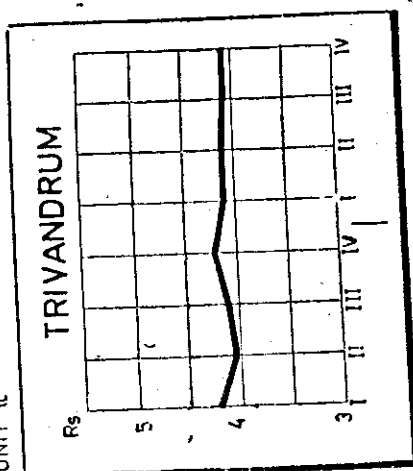
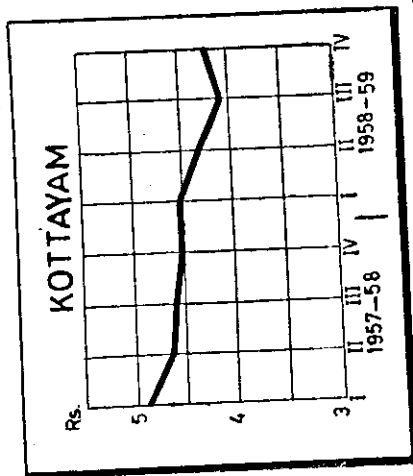
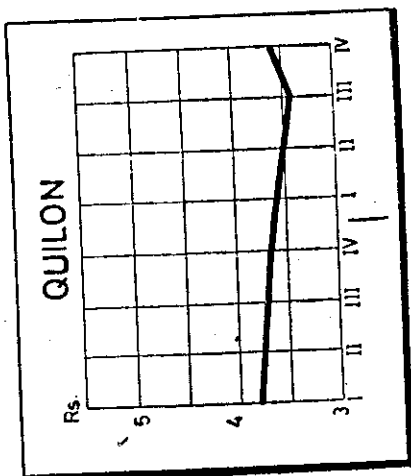
QUARTERLY RETAIL PRICES OF TOBACCO (ORDINARY)

UNIT 1b

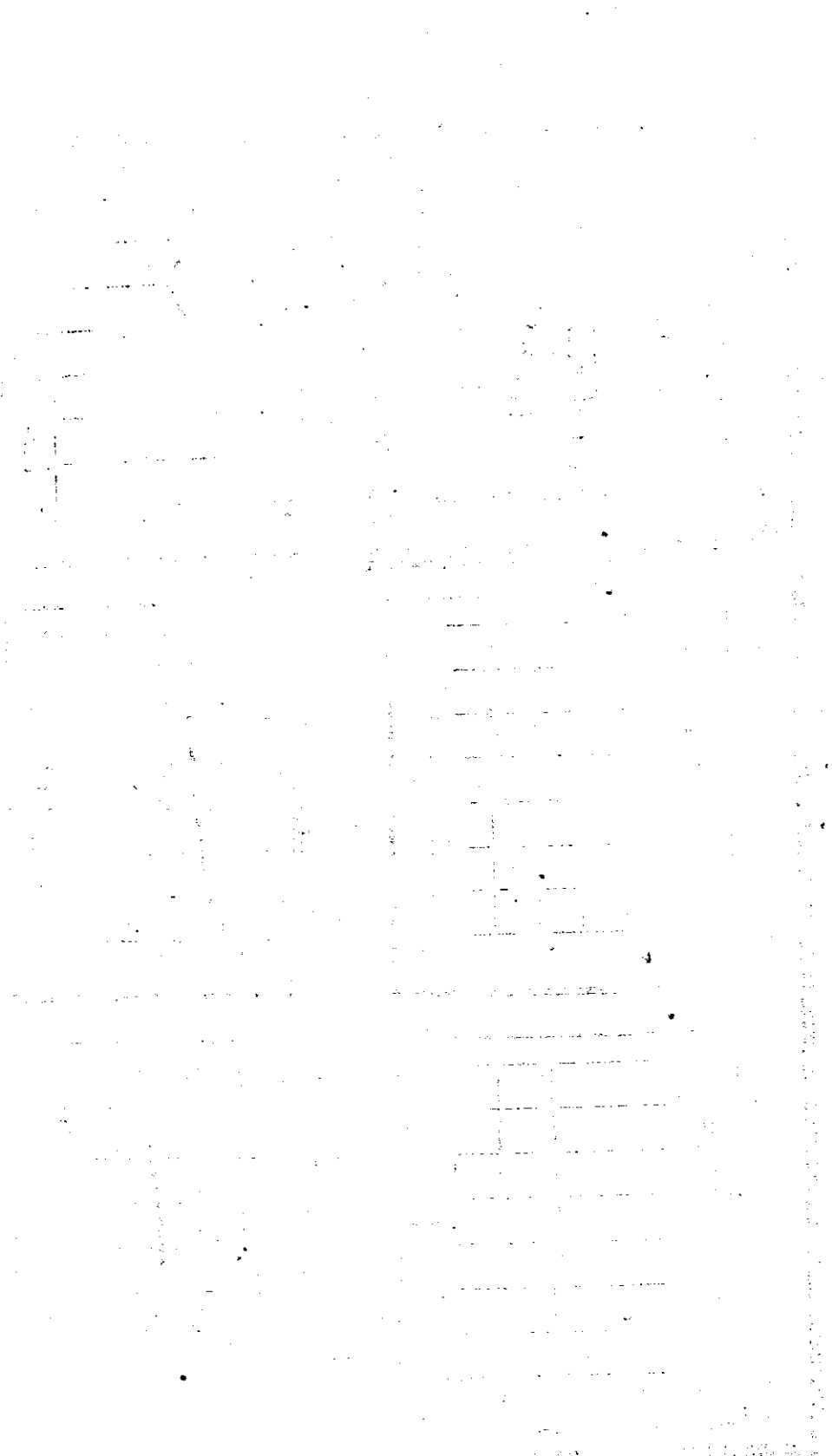




QUARTERLY RETAIL PRICES OF TOBACCO (Jaffna)

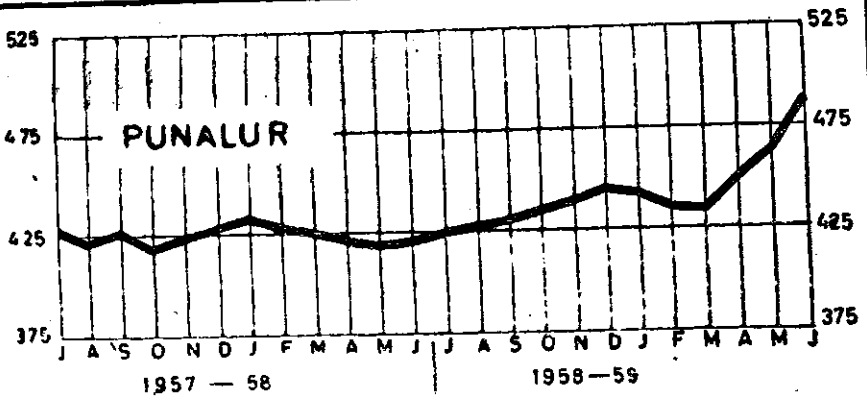
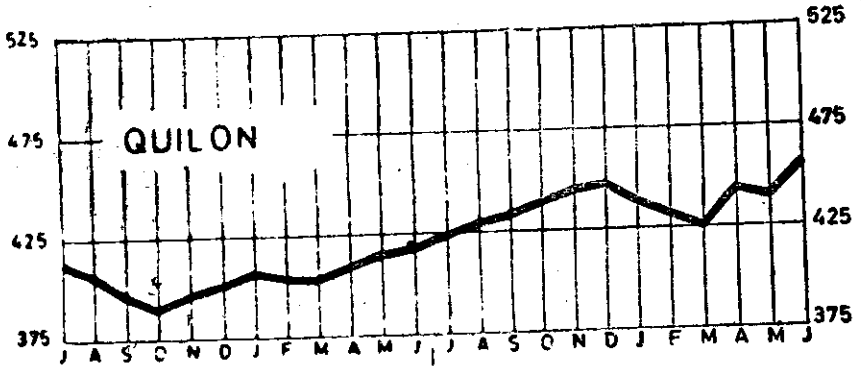
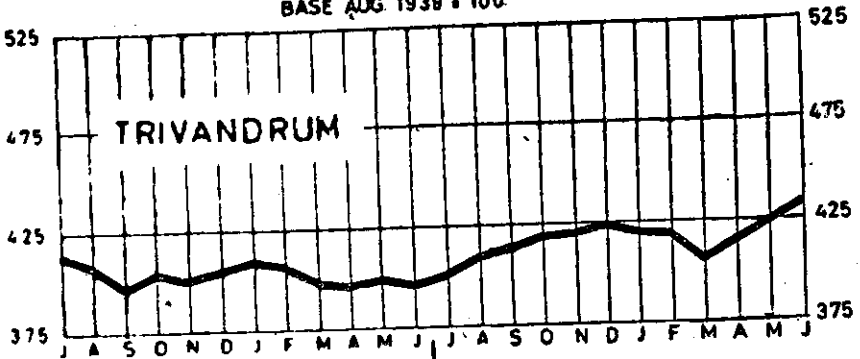


UNIT IC



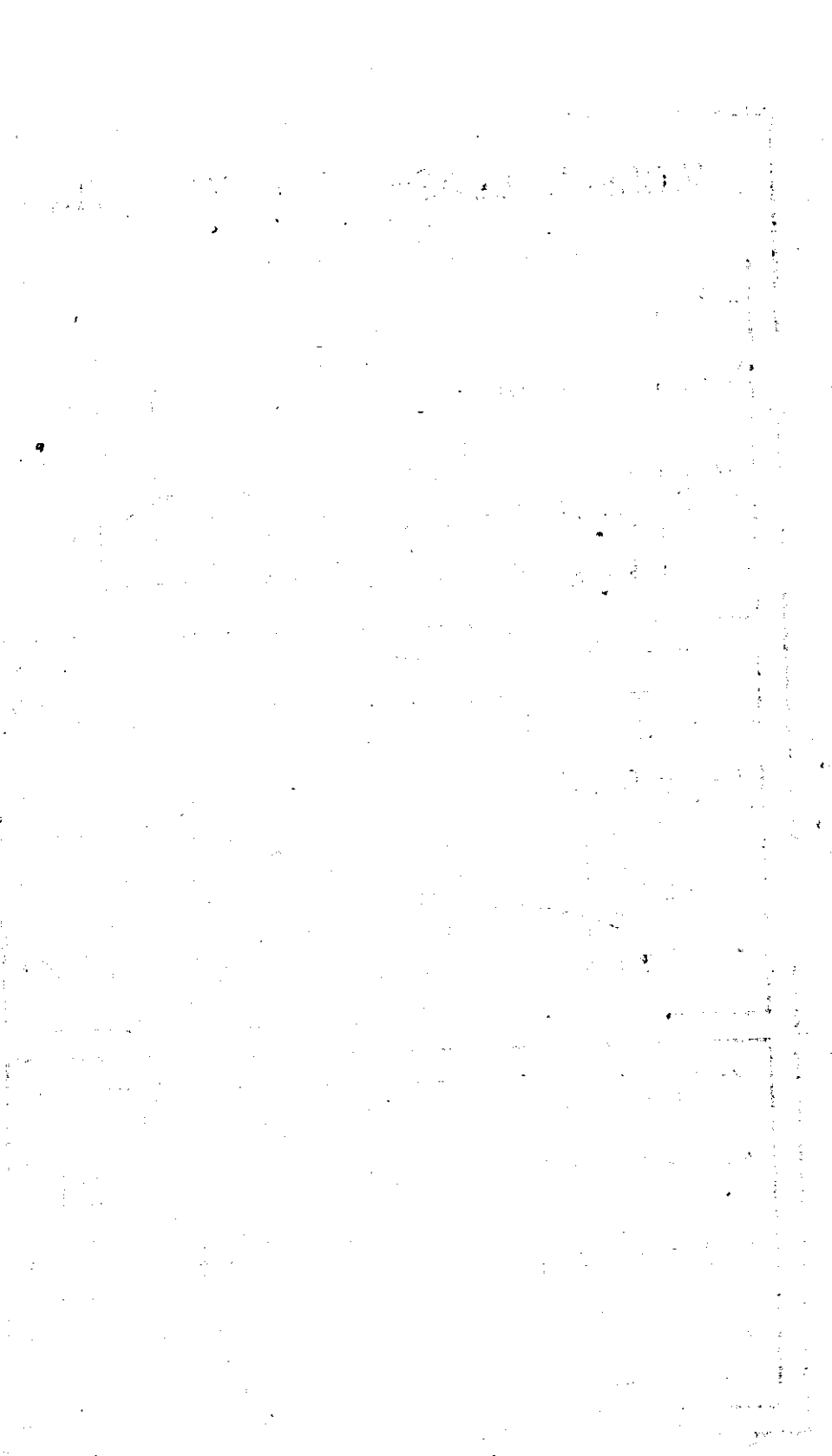
WORKING CLASS COST OF LIVING INDICES

BASE AUG. 1938 = 100



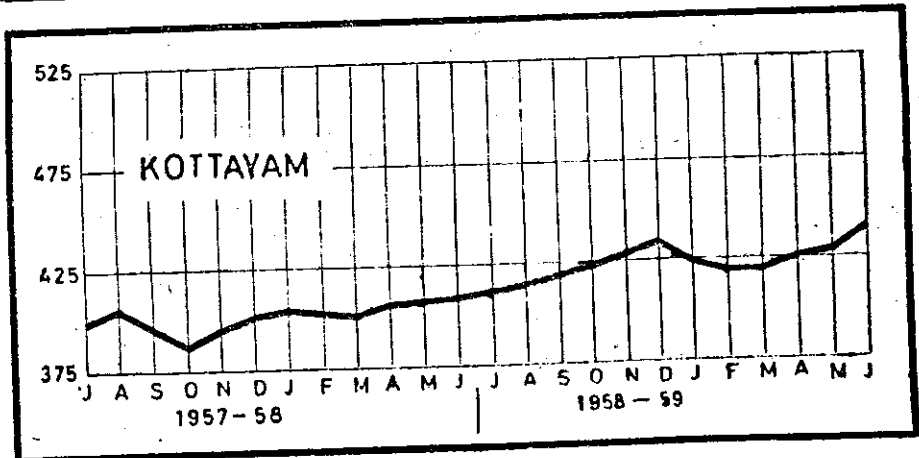
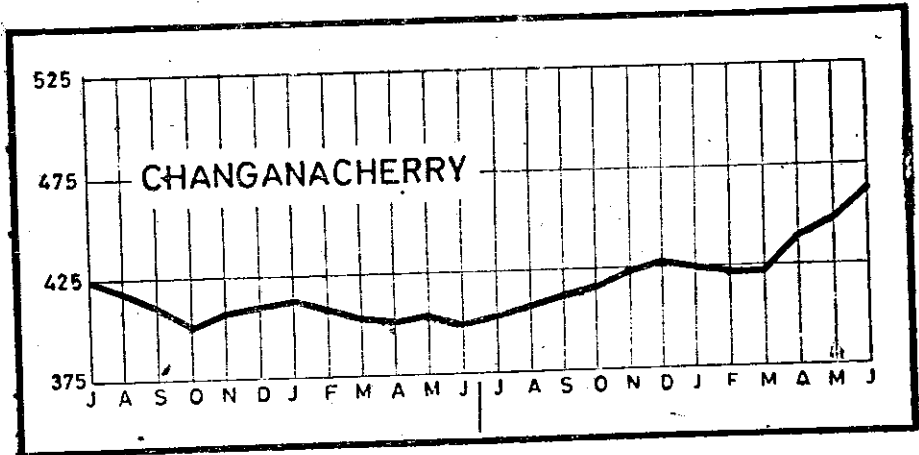
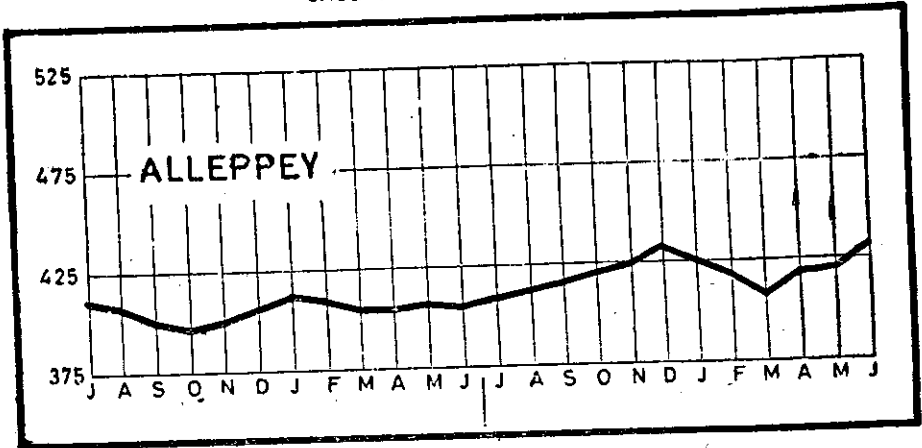
1957 - 58

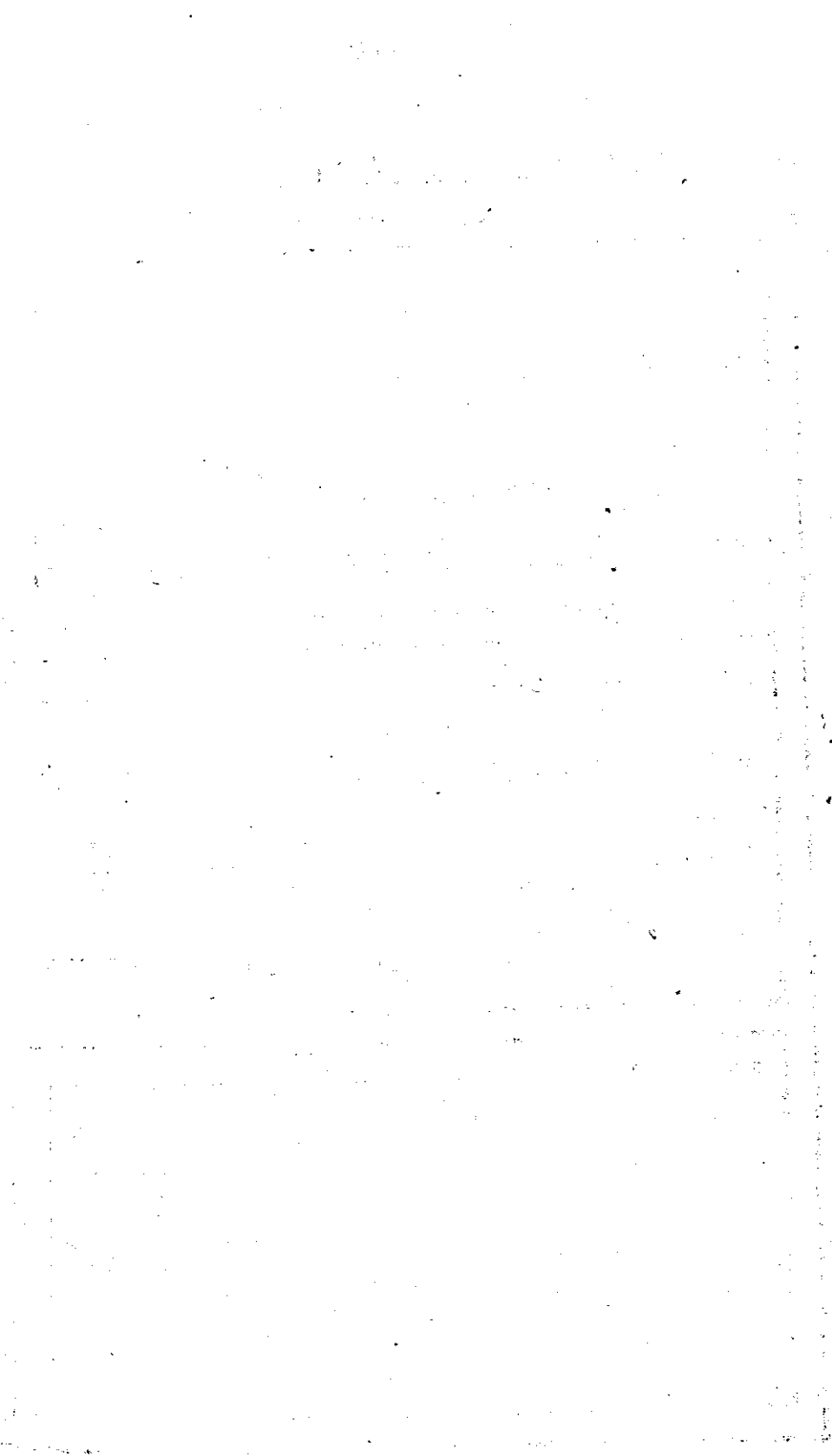
1958 - 59



WORKING CLASS COST OF LIVING INDICES

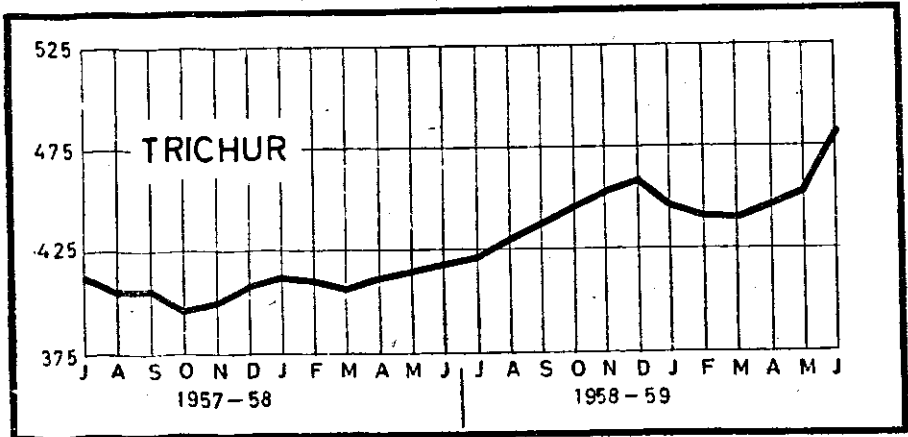
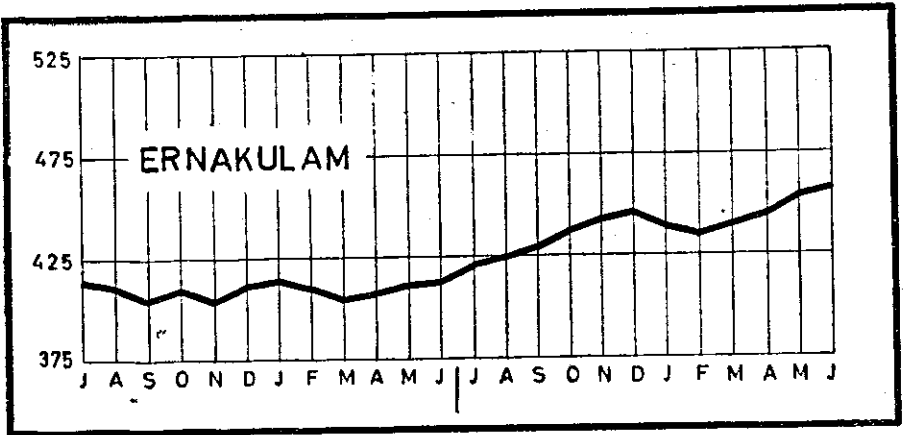
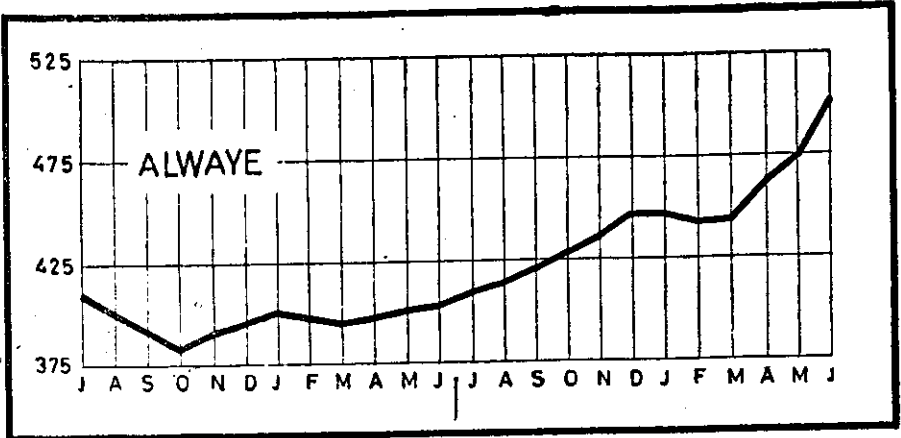
BASE AUG 1939 = 100

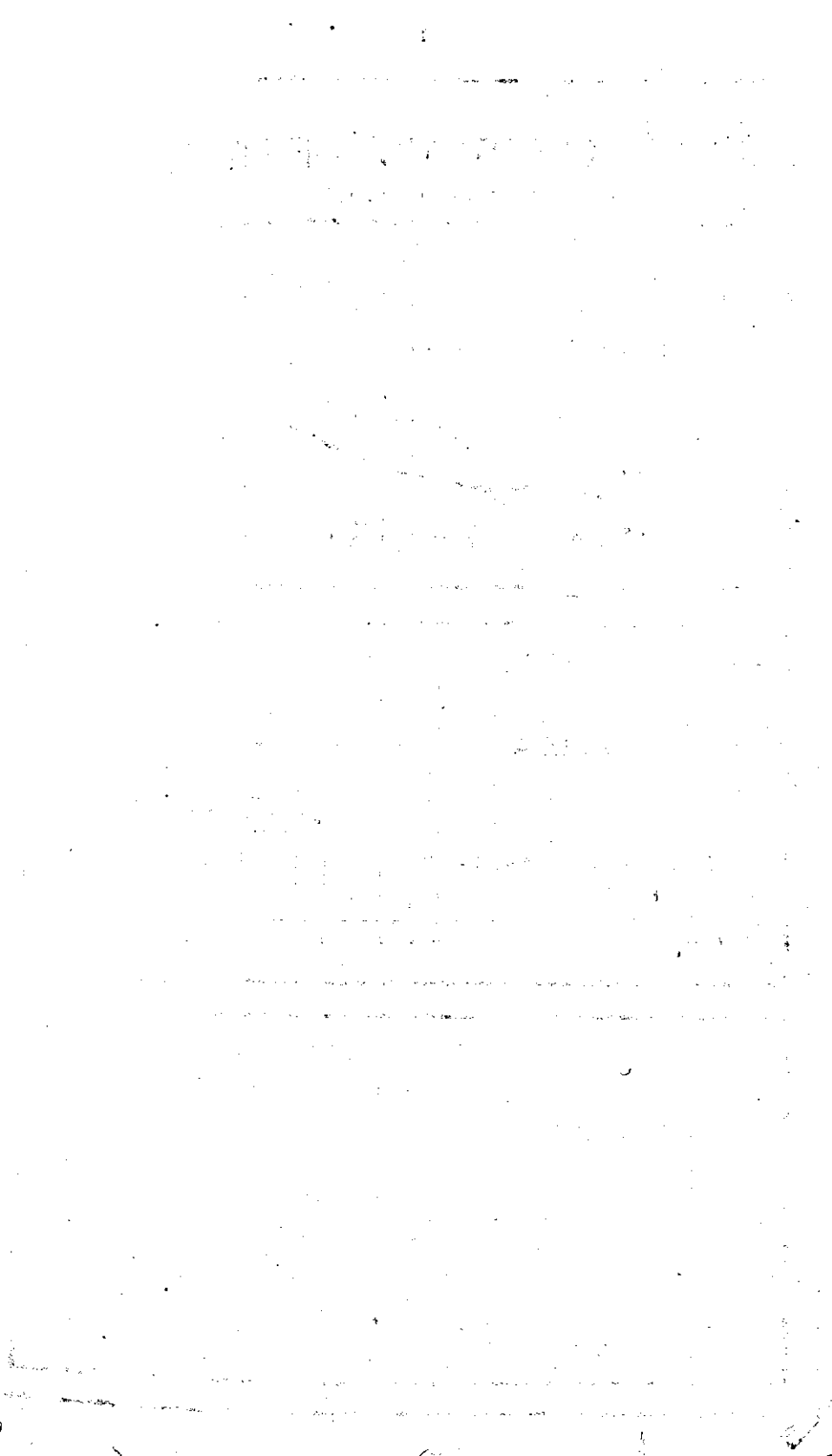




WORKING CLASS COST OF LIVING INDICES

BASE AUG. 1939 = 100.

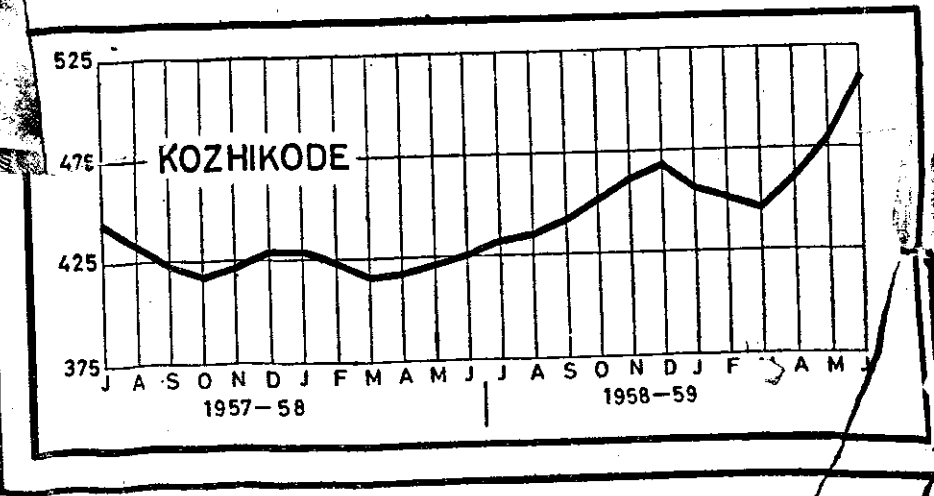
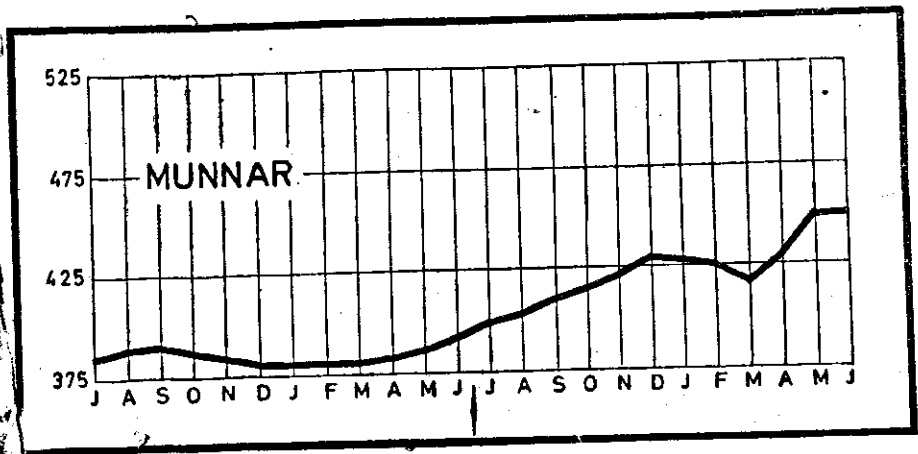
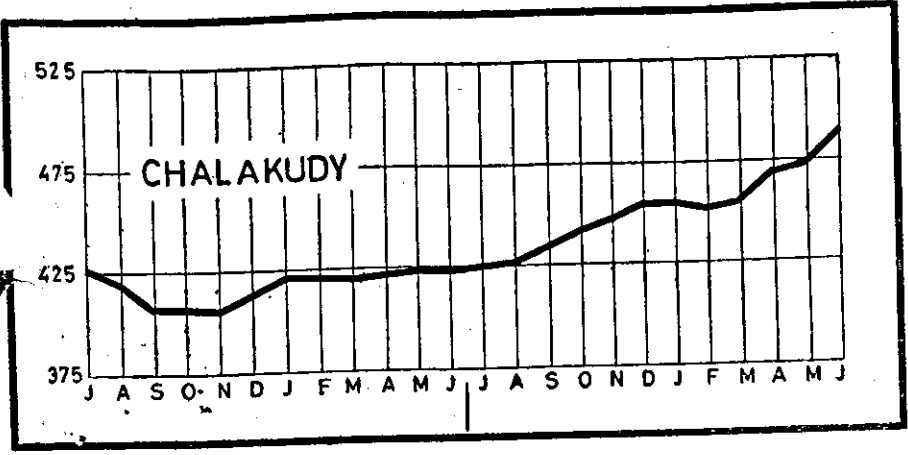




WORKING CLASS COST OF LIVING INDICES

BASE AUG. 1939=100

KOZHIKODE - JULY 1935 to JUNE '36=100



Names of Agents appointed for the sale of Government publications in the erstwhile Malabar area

1. Sri Justus Paul, Proprietor, J. S. Paul and S. Book Sellers, Cannanore.
2. Messrs. Moulavi Book Depot, Book Sellers, M. A. Bazaar, Kasargode.
3. Sri G. Vithal Prabhu, News Agent, Manjeswar.
4. Messrs. Touring Book Stall, Calicut.
5. Messrs. K. R. Brothers, Calicut.
6. Messrs. K. P. Ahmed Kunhi and Bros., Camp Bazar, Cannanore.
7. Sri Kottayi Gopalan, Book Seller and Station Merchant, Main Road, Tellicherry.