1968-69.

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SEASON AND CROP REPORT—1968-69

FORWORD

This report is the tenth in the series of Season and Crop Reports relating to Kerala State. It deals with the different aspects of Agricultural Economy of the State pertaining to the year 1968-69.

The report consists of four parts as detailed below:

Part I Narrative part
Part II Summary tables
Part III Detailed tables
Part IV Appendix

Trivandrum,
20-8-1970.

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SEASON AND CROP REPORT FOR THE YEAR 1968-69 FOR KERALA STATE

1. Introduction:

The State of Kerala which occupies only 1.2% of the total area of the Indian Union, lies in its South-west corner and has a coastal length of 580 K. M. The area of the State is 38,355 sq. K. M. It lies between 8°18′ and 12° 48′ north latitude and 74° 52′ and 77° 22′ east longitude. Its width varies from 130 K M. in the middle to 32 K. M. in the extremities.

The undulating topography of the State has created the three geographic divisions viz. low land, the mid land and the high land. The low land extends over the sea coast and the high land includes the forests of the Western Ghats. The area lying in between these two regions is the mid land. These natural divisions of the state have helped tremendously the diversity in plant growth.

The plantation crops are cultivated in the high land area and paddy and cocoanut are abundantly grown in the low land. In the mid land both major and minor crops are commonly cultivated to suit the change in season. The important crops cultivated in this region are paddy, tapioca, cocoanut, arecanut, pepper, sugarcane, and ginger.

The State has a normal rainfall of about 3000 m. m. per annum. The seasons are blessed with the two periods of rainfall which are mainly controlled by the South-west and North-east monsoons. The State has 44 rivers, of which 41 are west flowing and three east flowing. There are a good number of back waters also which provide ample communication facilities. These are interconnected, by a net work of canals. Even during the dry seasons these rivers do not dry up completely which provide water for Irrigation all the year round.

The State is divided into 10 districts and 56 taluks. The districts are Trivandrum, Quilon, Alleppey, Kottayam, Ernakulam, Trichur, Palghat, Kozhikode, Cannanore and Malappuram.

Agriculture is the chief occupation of the people in the state. The peculiar feature of agriculture in the State is diversity in crops and heterogeneity in cultivation. Paddy is the most important crop of the State. There are three Crops for paddy viz. Autumncrop (Virippu), Winter (Mundakan) Crop and Summer (Punja) crop. Next to paddy comes seasonal crops like Ragi, Pulses, Sesamum, Sugarcane, Tapioca, Groundnut, Ginger, Turmeric and Cotton. Perennial and Semi-perennial crops like Cocoanut, Arecanut, Cashew, Pepper and plantation crops like rubber, tea, coffee and cardamom are also abundantly grown in the State.

2. Population :

The population of the state as per 1961 census was 169.03 lakhs and the density per sq. k. m. was 435. The estimated population as on 1st March 1968 was 201.61 lakhs consisting of 100.83 lakhs males and 100.78 lakhs females and the density per sq. k. m. was 519.

The following table gives the details of 1961 census population and estimated population as on 1st March 1968.

District	1961 *Census* (*in lakhs*)	*Population as on 1st March* 1968 (*in lakhs*)
Trivandrum	17.45	21.55
Quilon	19.41	24.02
Alleppey	18.11	20.84
Kottayam	17.33	21.31
Ernakulam	18.60	21.73
Trichur	16.40	19.06
Palghat	17.77	19.77
Kozhikode	26.17	31.57
Cannanore	17.80	21.76
State	169.04	201.61

The State has 25 municipalities and 3 corporations. The per capita land available is only 0.19 hectare including forests. The per capita land available for cultivation is only 0.12 hectare and the per capita cultivated area is 0.11 hectare. The estimated population in Kerala during the year 1968 was 201.61 lakhs. As per the 1961 census the urban population of the state was 2.55 million only whereas the rural population was 14.35 millions. In the case of literary Kerala stands first among all the Indian States, the percentage of literacy being 46.8% against the All India average of 24.4%. The male literacy is 55% in Kerala where as the All India percentage is only 34.4. Similarly the percentage of female literacy is 38.9 in Kerala while it is as low as 12.9 at the All India level.

3. **Rain fall:**

The States normal rainfall ranges—between 2000 and 3600 m. m. The normal rainfall and the actual rainfall during the year 1968-69 are given below:—

Districts	*Normal Rainfall* (*In m. m.*)	*Actual Rainfall* 1968-69 (*In m. m*)
Trivandrum	2002	2007
Quilon	2761	3341
Alleppey	3021	3208
Kottayam	2995	3097
Ernakulam	3578	3727
Trichur	3159	3465
Palghat	2459	2538
Kozhikode	3461	3899
Cannanore	3438	3965
State	2986	3250

The rainfall was sufficient in almo t all the districts during the year 1968-69. The detailed st.tement showing the normal and average monthly rainfall in different districts are given in Tables 1.1 and 1.2 respectively.

4. **Soil:**

The soil of the State can be classified as detailed below:—

(1) The hilly and forest soil seen all along the eastern portion of the State.

(2) The sandysoil seen all along the coastal belt.

(3) The laterite soil in the mid-land portion.

(4) The black soil which occurs as a patch in the eastern border of Palghat District.

(5) The peat or kari soil in Alleppey District.

(6) The alluvial soil which occurs along the southern and eastern parts of Vembanad lake and in small patches in Trichur District.

(7) The red soil in the extreme tip of Trivandrum Taluk.

The classification of soil in Kerala is given in the appendix.

5. **Communication Facilities:**

The State is well advanced in the matter of communication facilities. There is a good system of roads which connects the State with other States and interlinks the districts within. There is also a rail link from Trivandrum in the South to Kasargod and Hosdurg in the North. Moreover the railways connect the State with important States of India. The

back waters also afford good transportation. To facilitate easy transportation the backwaters are interconnected with canals also. The State is linked with other States by airways also. There are daily air services from Trivandrum to Ernakulam, Madras, Bombay etc.

6. **Land Utilisation:**

The details regarding land utilisation for the years from 1952-53 to 68-69 are given in Table A of the summary tables, and district-wise details for the year 1968-69 are given in table 2.1 of the detailed tables.

(i) *Total area of the State.*—The total area of the State according to village papers is 3858523 hectares. The District-wise break up of this area is as follows:—

District	*Area (in hectares)*	*Percentage*
Trivandrum	2,16,096	5.6
Quilon	4,69,051	12.2
Alleppey	1,86,790	4.8
Kottayam	6,26,225	16.2
Ernakulam	3,17,428	8.2
Trichur	2,94,262	7.6
Palghat	5,10,424	13.2
Kozhikode	6,61,586	17.2
Cannanore	5,76,661	15.0
State	38,58,523	100.0

(ii) **Forests:—**

The total area under forests in the State during 68-69 was 10,55,810 hectares. The area is almost the same as in the previous year. The district-wise area under forests during the year 67-68 and 68-69 is as follows:—

District	*Forest area (hectares)* 1967-68	1968-69
Trivandrum	44,538	44,537
Quilon	2,10,857	2,10,857
Alleppey	5,13	5,13
Kottayam	2,52,964	2,52,964
Ernakulam	55,212	55,212
Trichur	1,32,376	1,32,376
Palghat	99,663	99,663
Kozhikode	1,93,756	1,93,756
Cannanore	65,932	65,932
State	10,55,811	10,55,810

(iii) *Land put to Non-agricultural uses*:—The area put to non-agricultural uses had increased from 2,40,830 hectares in 1967-68 to 2,50,945 hectares in 1968-69. The district-wise figures are given below:

District	*Area under non-Agricultural uses (hect.)* 1967-68	1968-69
T ivandrum	15665	17025
Quilon	15580	16234
Alleppey	12510	12660
Kottayam	16235	16332
Ernakulam	21300	24169
Trichur	15890	16208
Palghat	61935	63793
Kozhikode	31370	32920
Cannanore	50345	51604
State	240830	250945

The area put to non-agricultural uses is found to be the highest in Palg at District which is followed by Cannanore and Kozhikode Districts.

(iv) Barren and uncultivable land :—

The extent of area under this category of land during 1968-69 was 79959 hectares, while the corresponding figure for 1967-68 was 91,830 hectares.

(v) Permanent pastures and grazing land:—

27,800 hectares of land were under permanent pasture in the State during 68-69. 43% of the area lies in Cannanore District.

(vi) Land under miscellaneous tree crops:—

Land under miscellaneous tree crops not included in net area sown was 150277 hectares as against 161862 hectares during the previous year; 56% of this land lies in Cannanore District.

(vii) Cultivable waste land:—

The extent of cultivable waste land was 89263 hectares during the year under report. There is a fall in the area under this category compared to the previous year ie. 1967-68.

District	*Cultivable waste* 1967-68	1968-69
Trivandrum	677	633
Quilon	2,419	2,444
Alleppey	1,037	1,001
Kottayam	16,910	16,572
Ernakulam	8,646	5,748
Trichur	2,761	1,909
Palghat	19,631	19,238
Kozhikode	22,978	20,890
Cannanore	23,467	20,828
State	98,556	89,263

About 68% of the cultivable waste land lies in the Malabar area viz. Palghat, Kozhikode and Cannanore. Trivandrum District has the lowest area under this category.

(viii) Fallow land other than current fallow:—

The area under this category of land was 27630 hectares. During the year under report there was a remarkable reduction in this item of land when compared to the year 1967-68. The district-wise estimated areas of fallow land other than current fallow for the years 1967-68 and 1968-69 are given below.

District	*Fallow land other than current fallow (hect)* 1967-68	1968-69
Trivandrum	741	741
Quilon	1,246	596
Alleppey	1,517	1,371
Kottayam	872	1,290
Ernakulam	2,505	2,527
Trichur	437	431
Palghat	3,966	3,546
Kozhikode	4,012	4,395
Cannanore	14,360	12,733
State	29,656	27,630

75% of the total area under other fallow is accounted for by the three districts of the Malabar region.

(ix) Current fallow:—

During the year under review the extent of current fallow was 23,154 hectares while it was 23.333 hect. during 67-68. The district-wise break-up of the same is shown in the table given below.

District	*Current fallow*	
	1967-68	1968-69
Trivandrum	466	281
Quilon	1,384	480
Alleppey	494	344
Kottayam	1,815	3,159
Ernakulam	2,255	2,883
Trichur	1,860	1,847
Palghat	5,044	4,197
Kozhikode	5,093	5,492
Cannanore	4,922	4,471
State	23,333	23,154

(x) Net area sown.

The net area sown in the State was 2153685 hect in 1968-69. The district-wise details are shown below.

District	*Net area sown (in hectares)*	
	1967-68	1968 69
Trivandrum	152,573	151,523
Quilon	223,385	223,400
Alleppey	162,298	167,167
Kottayam	315,643	321,076
Ernakulam	216,376	217,242
Trichur	137,178	138,001
Palghat	270,082	276,564
Kozhikode	359,575	364,935
Cannanore	291,735	293,777
State	2,128,845	2153,685

(xi) Area sown more than once:

During the year under review the "area sown more than once" was 699078 hectares in the State. The corresponding area during the year

1967-68 was 628594 hectares ie. there was an increase of 70,484 hectares the percentage of increase being 11. The estimates of "area sown more than once" in the different districts are given in the table below:

District	*Area sown more than once (in hectares)*	
	1967-68	1968-69
Trivandrum	88,177	83,707
Quilon	110,254	122,161
Alleppey	67,715	68,708
Kottayam	38,998	53,076
Ernakulam	56,374	57,341
Trichur	82,829	92,578
Palghat	88,941	107,066
Kozhikode	54,029	64,816
Cannanore	41,277	49,625
State	628,894	699,078

The extent of area sown more than once is found to be the highest in Quilon District followed by Palghat and Trichur Districts.

(xii) Total cropped area.

The total cropped area in the State during 1968-69 was 2,852,763 hectares while it was 2,757,439 hectares during 1967-68. An increase of 95,324 hectares is noticed during this year compared to last year, the percentage increase being 3.

A comparative study of net area sown and total cropped area in the state on a district-wise basis shows the intensity of cropping in each district.

District	*Net area sown (hectares)*	*Total cropped (area (hect.)*	*Percentage of total cropped area to net area sown.*
Trivandrum	151,523	235,230	155
Quilon	223,400	345,561	155
Alleppey	167,167	235,875	141
Kottayam	321,076	374,152	117
Ernakulam	217,242	274,583	126
Trichur	138,001	230,579	167
Palghat	276,564	383,630	139
Kozhikode	364,935	429,751	118
Cannanore	293,777	343,402	117
State	2,153,685	2,852,763	132

7. Area under crops.

Agricultural crops in the State are broadly divided into 2 classes viz. Food and non-food crops. The details regarding area under different crops in the State are furnished in Table C of the summary tables and the district-wise break-up is given in table 3.1 of the detailed tables.

1. *Food crops.*—The area under food crops in the State was 18,20,856 hectares during 1968-69 while it was 17,32,790 hectares during 1967-68.

During the year under review food crops occupied 64% of the total cropped area in the State. The area under food crops in each district and the percentage of that to total cropped area in the districts areas follows:—

District	*Total cropped area (hectares)*	*Area under food crops (Hect.)*	*Percentage:*	*Area under food crops as% of the total cropped area.*
Trivandrum	235,230	149,946	8.23	63.74
Quilon	345,561	221,142	12.15	64.00
Alleppey	235,875	144,803	7.95	61.39
Kottayam	347,152	194,947	10.71	52.10
Ernakulam	274,583	162,430	8.92	59.16
Trichur	230,579	168,828	9.27	73 22
Palghat	383,630	309,879	17.02	80.78
Kozhikode	429,751	239,423	13.15	55.71
Cannanore	343,402	229,458	12.60	66.82
State	2,852,763	1,820,856	100.00	63.83

80% of the total cropped area in Palghat district is under food crops and it occupies the first place in regard to area under food crops.

(i) *Paddy.* The area under paddy during the year under report was 873871 hectares as against 809544 hectares in 1967-68. The district-wise area under paddy is shown below for the years 1967-68 and 1968-69. 52% of the area is in Trichur, Palghat and Kozhikode districts.

District	*Area under Paddy (Hectares)*	
	1967-68	*1968-69*
Trivandrum	39,583	39,962
Quilon	50,378	51,785
Alleppey	81,708	86,713
Kottayam	41,008	49,886
Ernakulam	85,987	93,994
Trichur	108,967	114,371
Palghat	196,968	211,352
Kozhikode	111,294	128,155
Cannanore	936,51	97,653
State	809544	873,871

The percentage distribution of Paddy area in each district of Kerala and the percentage of area under paddy to cropped area in each district are given in the following table.

District	*Area under paddy (hect.)*	*% to total*	*% to total cropped area in the district*
Trivandrum	39962	4.57	16.99
Quilon	51785	5.92	14.99
Alleppey	86713	9.92	36.76
Kottayam	49886	5.71	13.33
Ernakulam	93994	10.75	34.23
Trichur	114371	13.09	49.60
Palghat	211352	24.19	55.09
Kozhikode	128155	14.67	29.82
Cannanore	97653	11.18	28.44
State	873871	100.00	30.63

The highest percentage of area under paddy is seen in Palghat district. More than 55% of the total cropped area in the district is under paddy.

(ii) *Other cereals and millets.*—6562 hectares are under other cereals and millets out of which 4989 hectares are under Ragi and 1235 hectares under Jowar.

(iii) *Pulses.*—The area under pulses during 1968-69 was 42671 Hect. 61% of the area under pulses is accounted for by Trichur, Palghat and Kozhikode districts.

(iv) *Sugarcane.*—The total area under Sugarcane during the reference year was 7893 hectares. Alleppey is the major Sugarcane growing district in the State.

(v) *Pepper.*—98827 hectares were under Pepper in 1968-69. There is only a nominal decrease in the area during the year under review compared to previous year. Cannanore, Kozhikode and Kottayam are the important Pepper growing districts in the State.

(vi) *Chillies.*—Chillies cultivation is confined to Palghat, Kozhikode and Cannanore districts. The area under the crop during 1968-69 was 3192 hectares.

(vii) *Ginger.*—Kozhikode and Kottayam are the important districts with regard to the cultivation of Ginger. 11423 hectares were under ginger cultivation in the State during 1968-69.

(viii) *Turmeric.*—The area under cultivation of Turmeric during 1968-69 was 4374 hectares.

IX. *Cardamom.*—The area under Cardamom during 1968-69 was 47026 hectares. There is no change in the area under Cardamom during this year compared to the previous year.

X. *Arecanut.*—The area under Arecanut had increased from 76044 hectares in 1967-68 to 81182 hectares in 1968-69. Kozhikode, Cannanore and Trichur are the important districts for the cultivation of Arecanut in the State and nearly 52% of the area under the crop lies in these districts.

XI. *Mangoes.*—62223 hectares are under Mango cultivation in the State during the current year. Quilon district stands first in this respect.

XII. *Banana.*—Banana is cultivated in 9849 hectares during 1968-69.

XIII. *Other Plantains.*—During the year under review 41739 hectares were under cultivation of "other plantains".

XIV. *Cashew.*—The area under cashew trees had increased from 94990 hectares in 1967-68 to 96019 hectares in 1968-69. Cannanore district stands first in this respect.

XV. *Tapioca.*—296661 hectares are under Tapioca cultivation during the current year.

II. *Non-Food crops.*

i. *Groundnut.*—Palghat is the important district with regard to the cultivation of Groundnut. Groundnut is not cultivated in other districts. The area under Groundnut during the year was 13118 hectares.

ii. *Sesamum.*—The area under Sesamum during the year was 11995 hectares. It increased from 11163 hectares in 1967-68 to 11995 hectares in 1968-69. Quilon and Alleppey districts occupy important positions with regard to sesamum cultivation.

iii. *Cocoanut.*—The area under Cocoanut in the State was 686063 hectares during the year 1968-69 as against 638722 hectares during the year 1967-68. Cocoanut is cultivated on a large scale all over the State; Kozhikode stands first in Cocoanut cultivation. Cocoanut trees occupy about 66% of the total area under non-food crops in the State.

iv. *Cotton.*—Out of 6299 hectares under cotton cultivation in the State 6151 hectares are in Palghat District.

v. *Tobacco.*—Tobacco is cultivated only in Cannanore district and the area under Tobacco during the current year was 670 hectares.

vi. *Tea.*—The area under the crop during the year under review was 41158 hectares. 75% of the tea cultivation is in Kottayam district.

(vii) *Coffee.*—The area under Coffee cultivation in the State was 26468 hectares. Kozhikode stands first in this regard.

(viii) *Rubber.*—The area under Rubber in the state during the year 1968-69 was 168534 hectares. Important Rubber growing districts are Kottayam, Quilon, Ernakulam and Kozhikode.

8. Irrigation

The net area irrigated in the State during 68-69 was 418060 hectares as against 410510 hectares in 67-68. The percentage of net area irrigated to net area sown was 19.4. Of the different sources of irrigation government canals from the most important source.

The gross irrigated area during the year is estimated at 582860 hectares. The percentage of gross irrigated area to total cropped area in the State was 20.43 in 68-69. The source-wise and crop-wise irrigated area are given in Tables B-1 and B-2 of the summary tables respectively.

9. Weather and Crop conditions.

Trivandrum District.

Rainfall and crop conditions in Trivandrum district during the year 68-69 were favourable compared to that of the previous year. The yield in Autumn crop of paddy was better in comparison to the previous years crop. The weather conditions were favourable for the seasonal and perennial crops also and there was no considerable damage to the crops due to flood or draught during the year under review. The Rabi crops also had favourable weather and crop conditions.

Quilon District.

The condition of crops during 'Kharif season' was not satisfactory compared to those of the previous years, due to heavy rainfall and consequent flood. 'Rabi crops and favourable weather and crop conditions. The weather conditions of seasonal and perennial crops were normal.

Alleppey District.

The condition of crops during 'Kharif seasons' was not satisfactory and the yield of Kharif paddy had gone down by 10% in general as compared to the previous year. The weather conditions in 68-69 excepting for the heavy rains and flood conditions in June-July were quite favourable for the Rabi crops of Mundakan and Punja crops of paddy. The weather conditions of other seasonal and perennial crops were also satisfactory during 68 69.

Kottayam District.

The rainfall and crop conditions in all the taluks in the District were satisfactory during the year under review. Some loss was reported to paddy crop from Changanacherry and Vaikom taluks due to pest attack and draught.

Ernekulam District.

On the whole the crop and weather conditions in the different taluks of the District were favourable throughout the year The conditions for the seasonal and perennial crops were satisfactory. Ut slight damages to paddy crop were reported from Thodupuzha, Muvattupuzha, Cochin, Kanayannur and Parur taluks.

Trichur District.

During both Kharif and Rabi seasons the sainfall and crop conditions were normal in all the taluks of this district. The condition of both the Autumn and Winter paddy were good in all the taluks.

Palghat District.

Rainfall was adequate and normal during the kharif season while it was not sufficient during the Rabi season as it slightly affected the standing crops of the whole of district. During the kharif season rains were more or less moderate and favourable and the kharif crops were slightly better when compared to the output of the previous year. The perennial crops had no worth mentioning loss while there was considerable loss for the seasonal crops.

Kozhikode District.

The weather conditions in general were favourable in the District. But heavy rain had affected the Autumn crop to some extent in certain areas and scarcity of rain had affected the winter and summer crops of paddy to some extent. On the whole the condition of both kharif and Rabi crops were satisfactory in all the taluks. In certain taluks in the District lack of rain had adversely affected the yield of Cocoanut on a large scale. Almost all the other crops were in good conditions.

Cannanore District.

During Rabi season, the rains were moderate and the climatic conditions were favourable for almost all the crops. There were heavy damage to crops due to heavy rain and floods during kharif season in Kasargod taluk. The yield rate of paddy during kharif season was about 25% lower than that of the previous year in Hosdurg taluk.

There was no loss to any crop due to flood or pest attack during the year.

Production of Important crops.

The production trend of all important crops in the state for the last few years is given in table D of the summary tables. The District-wise details are given in Table 4.1 of the detailed tables.

i. Paddy. The total production of Rice during 68 -69 was 1251354 tonnes against 1123897 tonnes in 67—68. The district-wise production estimates of rice during these years are given below.

District	Production of Rice 67-68	68-69
Trivandrum	56841	56692
Quilon	75786	8 1489
Alleppey	121486	128874
Kottayam	49791	79064
Ernakulam	113631	126382
Trichur	145177	144811
Palghat	333603	373422
Kozhikode	113909	134915
Cannanore	113673	126705
State	1123897	1251354

The season-wise production figures for the two years are as follows:

Crop	Rice Production (Tonnes) 67-68	68-69
Autumn	521023	521258
Winter	470101	571748
Summer	132773	158348
STATE	1123397	1251354

The Autumn, Winter and Summer paddy had regis ered an appreciable increase during the year compared to the previous year.

(ii) *Pulses.*—The production of pulses during 1968-69 was 16757 tonnes against 16743 tonnes in 1967-68.

(iii) *Sugarcane (Gur).*—The production of Sugarcane (Gur) increased from 49973 tonnes in 1967-68 to 50304 tonnes in 1968-69.

(iv) *Black Pepper.*—20437 tonnes of Pepper were produced in the State during 1968-69 as against 21064 tonnes in 1967-68.

(v) *Ginger (dry).*—During 1968-69 the out-turn of dry ginger in the State was estimated at 10839 tonnes . Kozhikode district stands first in the production of ginger in the State.

(vi) *Turmeric (cured).*—The production of cured Turmeric in the State during 1968-69 was 3647 tonnes as against 3725 tonnes in 1967-68. Kottayam, Palghat and Kozhikode are important Turmeric producing Districts of the State.

(vii) *Cardamom (processed).*—The production of cardamom during 1968-69 was 1055 tonnes. Kottayam District accounts for the major share of the total production in the State.

(viii) *Betelnut (Arecanut).*—The production of Arecanut during the year under report was 12289 million nuts while it was 11473 million nuts in 1967-68. The percentage increase in production over the previous year is 11.

(ix) *Banana.*—The prodution of Banana was estimated at 71760 tonnes in 1968-69. An increase in production was noticed for Banana during this year. It has increased from 64008 tonnes in 1967-68 to 71760 tonnes in 1968-69. Quilon, Kottayam, Trichur and Kozhikode are the important Banana growing Districts in the State.

(x) *Other plantations.*—The production of other plantations in the State was 318719 tonnes in 1968-69 against 310274 tonnes in 1967-68. The Districts of Palghat, Kozhikode and Cannanore account for the major share of the production of Plantations in the State.

(xi) *Cashewnut.*—Cannanore district is the most important District with regard to the production of cashewnut. The production of cashewnut has increased from 106578 tonnes in 1967-68 to 107732 tonnes in 1968-69.

(xii) *Tapioca.*—During the year under review the production figure of tapioca was 4081115 tonnes while the corresponding figure for the previous year was 4198357 tonnes.

The yield rates of tapioca in each district are given in the following table.

Districts	*Yield rate of Tapioca for 1968-69 (tonnes/hectare)*
Trivandrum	11.43
Quilon	14.38
Alleppey	12.55
Kottayam	18.29
Ernakulam	13.76
Trichur	14.79
Palghat	13.07
Kozhikode	12.80
Cannanore	10.19
STATE	13.75

(xiii) *Groundnut.*—The production of groundnut in 1968-69 was 24029 tonnes while it was 24675 in 1967-68.

(xiv) *Sesamum.*—The production of sesamum increased from 2629 tonnes in 1967-68 to 3961 during 1968-69.

(xv) *Cocoanut.*—3834 million nuts were produced during the year under review while the production during the previous year was 3593 million nuts the increase being 241 million nuts. Kozhikode district leads the other districts with regard to Cocoanut production in the State.

(xvi) *Cotton.*—In 1968-69 cotton production in the State was 5556 bales. There was a fall in production compared to previous year.

(xvii) *Tobacco.*—911 tonnes of Tobacco were produced in 1968-69 as against 902 tonnes during 1967-68.

(xviii) *Tea.*—The production of Tea had increased from 44130 tonnes in 1967-68 to 44781 tonnes in 1968-69.

(xix) *Coffee.*—During the year under report the production of coffee in the State was 11988 tonnes as against 11458 tonnes in 1967-68.

(xx) *Rubber.*—The State produced 66473 tonnes of rubber in 1968-69 compared to 1967-68 the production had increased 11%. Kottayam is the important Rubber producing district in Kerala.

(xxi) *Lemongrass oil.*—Lemongrass oil which is a foreign exchange earning product is mainly cultivated in Ernakulam, Kozhikode and Cannanore districts. The State's production during 1968-69 was estimated at 1602 tonnes.

11. Farm price of certain commodities.

The average farm prices of certain commodities are given in table F of summary tables and Table 5.1 of the detailed tables. The value of production of these commodities is also furnished in table F.

12. Agricultural wages.

District-wise and class-wise statements showing agricultural wages of cultivators are given in table 6.1.

13. Livestock, Poultry, and Agricultural implements.

The details regarding the above are furnished in Table g of the summary tables and table 7.1 of the detailed tables. The figures are taken from 1961 and 1966 livestock censuses.

14. Sowing, Harvesting and peak marketing periods.

A detailed statement on this is given in table H of the summary tables.

PART—II

Summary Table

A. Classification of Area

B1. Source of Irrigation

B2. Area under crops Irrigated

C. Area under crop

D. Production of Important crops

E. Average yield of certain crops

F. Average price and value of production

G. Livestock, poultry and agricultural machinery

H. Sowing, harvesting and peak marketing seasons of principal crops.

TABLE—A.

Classification of Area (Area in Hectares)

Head of Classification	1952–53		1955–56		1960–61		1965–66	
	Area	%	Area	%	Area	%	Area	%
1	2	3	4	5	6	7	8	9
Total area by village papers	3808861	100.00	3808861	100.00	3858523	100.00	3858523	100.00
Forests	947251	24.87	1007624	26.46	1056143	27.37	1055076	27.34
Land put to non-agricultural use	205011	5.38	204971	5.38	209486	5.43	228230	5.92
Barren & uncultivable land	214849	5.64	204328	5.36	146120	3.79	109925	2.85
Permanent pastures and other grazing land	55722	1.46	47080	1.24	4439	1.15	27800	0.72
Land under miscellaneous tree crops	186322	4.89	197011	5.17	202394	5.24	200005	5.18
Cultivable waste	181578	4.77	151602	3.98	140898	3.65	107950	2.80
Current fallow	44010	1.16	56552	1.48	60961	1.58	33220	0.86
Other fallows	197259	5.18	108524	2.85	66409	1.72	31980	0.83
Net area sown	1776859	46.65	1831169	48.08	1931773	50.07	2064337	53.50
Total cropped area	2089108	54.85	2178310	57.19	2341200	60.68	2551344	66.12
Area sown more than once	312249	8.20	347141	9.11	409427	10.61	487007	12.62

TABLE—A (*contd.*)

Head of Classification	1966-67		1967-68		1968-69	
	Area	%	Area	%	Area	%
1	10	11	12	13	14	15
Total area by village papers	3858523	100.00	3858523	100.00	3858523	100.00
Forests	1055832	27.36	1055811	27.36	1055810	27.36
Land put to non-agrl. uses	235321	6.10	240830	6.24	250945	6.50
Barren & uncultivable land	100437	2.60	91830	2.38	79959	2.07
Permanent pastures & other grazing land	27800	0.72	27800	0.72	27800	0.72
Land under miscellaneous tree crops	181842	4.71	161862	4 20	150277	3.90
Cultivable waste	105651	2.74	98556	2.55	89263	2.31
Current fallow	26446	0.69	23333	0.61	23154	0.60
Other fallows	33965	0.88	29656	0.77	27630	0.72
Net area sown	2091229	54.20	2128845	55.17	2153685	55.82
Total cropped area	2621971	67.95	2757439	71.46	2852763	73.93
Area sown more than once	530742	13.75	628594	16.29	699078	18.11

TABLE—B1

Sources of Water Supply and Net area Irrigated (In hectares)

Sources	1955-56	1960-61	1965-66	1966-67	1967-68	1968-69
1	2	3	4	5	6	7
Net area irrigated by:						
1. Government canals ..	67368	133049	168977	179000	182960	189290
2. Private canals .	5738	5738	7689	10160	10160	10160
3. Tanks ..	41598	46952	59736	72280	70500	71360
4. Wells ..	2032	2032	4030	5460	5460	5460
5. Other sources ..	130940	130940	121406	126510	141430	141790
6. Total ..	247676	318711	361838	393410	410510	418060
Percentage of net area irrigated to net area sown .	1353	16.57	17.53	18.81	19.28	19.41
Area irrigated more than once in an year ..	101766	137545	147123	133390	161690	164800
Total irrigated area ..	349442	456256	508961	526800	572200	582860
Percentage of total irrigated area to total cropped area ..	16.04	19.42	19.95	20.09	20.75	20.43

TABLE—B2

Gross area Irrigated in Kerala (In hectares)

Name of crop	1955-56		1960-61		1965-66		1966-67		1967-68		1968-69	
	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%
1	2	3	4	5	6	7	8	9	10	11	12	13
Paddy	240986	69.0	347799	76.2	405920	79.8	424120	80.5	459720	80.4	470110	80.7
Sugarcane	2796	0.8	3650	0.8	4306	0.8	4290	0.8	4290	0.7	4290	0.7
Other food crops	66163	18.9	65310	14.3	56049	11.0	55690	10.6	5569	9.7	55690	9.5
Total food crops	309945	88.7	416759	91.3	466275	91.6	484100	91.9	519700	90.8	530090	90.9
Total non-food crops	39497	11.3	39497	8.7	42686	8.4	42700	8.1	52500	9.2	52770	9.1
All crops	349442	100.0	456256	100.0	508961	100.0	526800	100.0	572200	100.0	582860	100.0

TABLE—C

Area under Crops in Kerala (Area in Hectares)

Name of crop	1952-53	1955-56	1960-61	1965-66	1966-67	1967-68	1968-69
1	2	3	4	5	6	7	8
Paddy ..	742160	759353	778910	802329	799438	809544	873871
Jowar ..	1235	1862	1473	1235	1235	1235	1235
Ragi ..	4591	4702	5573	5097	5106	5086	4989
Other Cereals & Millets ..	5450	5422	5846	6717	6686	6569	6562
Total Cereals & Millets ..	753436	771339	791802	815358	812465	822434	886657
Tur ..	4541	12460	8932	8545	8501	7531	7487
Other Pulses ..	30223	32291	35188	34767	35046	35101	35184
Total Pulses ..	34764	44751	44120	43312	43547	42632	42671
Sugarcane ..	6497	7294	9146	9193	8773	8033	7893
Palmyrah (Others) ..	3938	5456	5050	5576	5846	9300	8479
Total sugarcrops ..	10435	12750	14196	14769	14619	17333	16372
Pepper ..	78806	86487	99755	99695	99695	99702	98827
Chillies ..	4139	4046	3318	3085	3185	3192	3192
Ginger ..	14072	10466	12004	11847	11793	11795	11423
Turmeric ..	4511	4552	4665	4464	4443	4443	4374
Cardamom ..	25540	28069	28607	28684	47026	47026	47026
Arecanut ..	59996	58098	54256	64478	71231	76044	81182
Other condiments & spices ..	16017	16002	18630	19317	19317	19317	19317
Total condiments & Spices ..	203081	207710	221235	231580	256690	64479	265341
Mangoes ..	56984	57106	59579	62217	61976	64479	62223
Citrus fruits ..	3312	2312	1959	1959	1959	1959	1959

1	2	3	4	5	6	7	8
Banana ..	31014*	47067*	10014	10626	9204	8785	9849
Other Plantains ..	..	..	34410	37153	36385	40633	41739
Other fresh fruits ..	35080	50940	58154	64393	65553	64889	61952
Cashewnuts ..	35409	37464	54138	87366	90559	94990	96019
Other dried fruits ..	16396	6051	24	24	24	24	24
Total fruits ..	172195	200940	218458	263738	265560	275759	273765
Tapioca ..	204723	222132	242201	229684	244647	297646	296661
Sweet potatoes ..	6117	8401	8031	8211	8617	8797	7413
Other vegetables ..	39785	39786	25014	28654	30577	36670	31976
Total vegetables ..	250625	270319	275247	266549	283841	343113	336050
Total food crops ..	1424536	1507809	1565057	1635326	1676822	1762790	1820856
Groundnut ..	11053	13197	16030	15215	13745	13714	13118
Castor ..	672	703	214	355	374	273	124
Sesamum ..	18562	20125	12087	11950	12070	11163	11995
Coconut ..	430401	447945	500758	586313	609583	638722	686063
Other oil seeds ..	10801	11205	9699	11299	11128	10774	7844
Total oil seeds ..	471489	493175	538788	625132	646900	674646	719167
Cotton ..	6406	8767	7160	7160	6625	6625	6299
Other fibres ..	..	67	36	36	36	36	36
Tobacco ..	523	571	743	705	712	698	670
Tea ..	44986	39883	37631	39470	39799	39282	41158
Coffee ..	12599	14295	16798	23602	25152	26468	27673
Rubber ..	62586	64708	122865	149634	153357	162932	168534
Other Drugs & Plantation crops ..	2040	101	1406	1406	1406	1406	1406
Total Drugs & Plantation crops ..	122734	119558	179443	214817	220426	230786	239446
Fodder crops ..	605	605	466	462	462	670	471
Green manure crops ..	1448	1448	1429	13525	15814	25916	20833

* Banana including Plantation.

1	2	3	4	5	5	7	8
Lemongrass ..	NA	14085	25712	24036	24036	24036	24036
Other Non-food crops ..	61889	32796	28103	30850	30850	31934	21619
Total Non-food crops ..	664572	670501	783799	916018	945149	994649	1031907
Total area under all crops ..	2089108	2178310	2348856	2551344	2621971	2757439	2852763
Area sown more than once ..	312249	347141	425134	487001	530742	628594	699078
Net area sown ..	1776859	1831169	1923722	2064337	2091229	2128845	2153685

TABLE D

Production of important crops in Kerala

Name of crops	Unit	1952-53	1955-56	1960-61	1965-66	1966-67	1967-68	1968-69
1	2	3	4	5	6	7	8	9
Rice ..	'000 tonnes	722	884	1068	997	1084	1124	1251
(Paddy) ..	,,	(1099)	(1345)	(1625)	(1518)	(1650)	(1711)	(1904)
Jowar ..	Tonnes	496	833	640	450	450	450	450
Ragi ..	,,	5548	6213	8006	7084	7113	7046	7062
Tur ..	,,	..	..	..	3994	3950	3570	3509
Other Pulses ..	,,	13637*	17556*	17546*	12907	13121	13173	13248
Sugarcane (Gur) ..	,,	29464	33982	38090	40948	54902	49973	50304
Pepper (Black) ..	,,	22627	27672	27026	21685	21406	21064	20437
Chillies (Dry) ..	,,	N.A.	N.A.	2225	2025	2105	2121	2069
Ginger (Dry) ..	,,	10175	11111	11263	11190	11054	11117	10839
Turmeric (cured) ..	,,	5056	5101	4181	3766	3747	3725	3647
Cardamom (processed) ..	,,	1231	1259	1280	1606	1606	1606	1055
Arecanut (Betelnut) ..	Million nuts	4448	6460	7737	9681	10683	11473	12289
Banana ..	Tonnes	208745**	316794**	65100	77421	67060	64008	71760
Other plantain ..	,,	..	..	262766	283701	277836	310274	318719
Cashewnut ..	,,	54751	58786	84630	98025	101607	106578	107732

** Banana including other plantain.

TABLE D—*Contd.*

1	2	3	4	5	6	7	8	9
Tapioca (Raw) ..	'000 tonnes	1514	1594	1683	3096	3410	4198	4081
Sweet Potatoes ..	Tonnes	N.A.	N.A.	N.A.	40644	42655	43546	36695
Groundnut ..	,,	13937	14468	13797	25220	23601	24675	24029
Sesamum ..	,,	5927	6460	2586	2365	2400	2629	3961
Cocoanut ..	Million nuts	2978	3099	3229	3293	3525	3593	3834
Cotton ..	Bales of 180 Kg.	6934	9444	10481	6933	6458	6461	5556
Tobacco ..	Tonnes	..	700	1006	911	920	902	911
Tea ..	,,	30220	30396	40373	39154	44130	43189	44781
Coffee ..	,,	5110	6253	7409	9878	10513	11458	11983
Rubber ..	,,	19261	21174	23045	46953	50495	59978	66473
Lemongrass Oil ..	,,	..	1016	1703	1602	1602	1602	1602

* Total pulses (Tur + other pulses)

N. A. Not available.

TABLE E

Average yield per Hectare of certain Crops in Kerala

Name of Crop	Unit	1952-53	1955-56	1960-61	1965-66	1966-67	1967-68	1968-69
1	2	3	4	5	6	7	8	9
1. Paddy	Kg./Hectare	1482	1772	2086	1892	2064	2113	2179
2. Jowar	,,	321	447	435	364	364	364	364
3. Ragi	,,	1208	1321	1437	1390	1393	1385	1416
4. Sugarcane (gur)	,,	4535	4659	4165	4454	6258	6221	6373
5. Pepper (black)	,,	287	321	271	218	215	211	207
6. Ginger (dry)	,,	723	1063	938	945	937	942	949
7. Turmeric (cured)	,,	1121	1121	897	844	843	838	834
8. Cardamom(processed)	,,	48	45	45	56	34	34	22
9. Arecanut	Nuts/Hect.	74130	111195	142601	150360	149971	150893	151372
10. Banana	Kg./Hect.	6731	6731	6501	7286	7286	7286	7286
11. Other plantain	,,	..	..	..	7636	7636	7636	7636
12. Cashewnuts.	,,	1547	1569	1558	1122	1122	1122	1122
13. Tapioca (raw)	,,	7398	7061	6949	13478	13937	14105	13757
14. Gorundnut	,,	1261	1096	861	1657	1717	1799	1832
15. Sesamum	,,	319	321	214	198	199	236	330
16. Cocoanut	Nuts/Hect.	6919	6919	6430	5617	5617	5626	5589
17. Cotton	Kg./Hect.	195	193	192	174	175	175	158
18. Tea	,,	671	762	1073	992	1109	1099	1088
19. Coffee	,,	406	372	442	418	418	433	433
20. Rubber	,,	308	327	187	313	329	368	394

TABLE—F

Average price and Total value of Production 1968-69

Name of Crop	Unit	Average Farm price (Rs.)	Value of production (Rs. in lakhs)
1. Paddy	Tonnes	1119.80	21327.27
2. Coconut (with husk)	1000 nuts	392.70	15056.12
3. Arecanut (ripe)	,,	39.00	4792.71
4. Tapioca (raw)	Tonnes	205.50	8386.69
5. Cashewnut	,,	1238.60	1334.37
6. Banana	1000 Nos.	169.90	806.38
7. Pepper (black)	Tonnes	3299.20	674.25
8. Ginger (dry)	,,	5690.10	117.73
9. Sugarcane	,,	103.75	521.90

TABLE G

Number of Livestock, Poultry and Agricultural Machinery

Sl. No.					1961 Census	1966 Census
1	2		3		4	5
		Male	(a) Breeding		29319	19387
		Over	(b) Working		515241	491281
1	Cattle	3 Years	(c) Others		21471	8855
			Total:		566031	519523
		Female	(a) Breeding	(1 In milk	428194	483419
		Over		(2) Dry	502935	592972
		3 Years		(3) Not calved	207277	133999
			(b) Working		11274	3605
			(c) Others		12306	5247
			Total		1161986	1219242
			Young stock		1025148	1117962
			Total Cattle		2753165	2856727
		Males	(a) Breeding		10627	6106
		Over	(b) Working		267871	241048
2	Buffaloes	3 Yars	(c) Others		6614	6696
			Total		285112	253850
		Females	(a) Breeding	(1) In Milk	59542	66705
				(2) Dry	49341	52777
				(3) Notcalved	16846	9119
		Over	(b) Working		7266	4589
		3 years	(c) Others		2188	1580
			Total		135113	134770
			Young stock		64864	82615
			Total Buffaloes		485089	471235
			(a) One year and above		18949	7920
			(b) Below one year		5292	3599
3	Sheep		(c) Total		24241	11519
			(a) One year and above		869414	757766
			(b) Below one year		442848	431452
4	Goats		Total		1312262	1189218

TABLE G—(*contd.*)

1	2	3	4	5
5	Horse and Ponies	(a) 3 years and above	366	372
		(b) Below 3 years	42	54
		Total	408	426
6	Mules		31	8
7	Donkeys		377	310
8	Camels		..	4
9	Pigs		122381	111928
		Total Livestock	4697954	4641375
10	Poultry	(a) Fowls	8708664	9587286
		(b) Ducks	387072	318751
		(c) Others	..	2950
11	Ploughs	(a) Wooden	562281	475930
		(b) Iron	6441	17179
12	Carts		21037	16309
13	Sugarcane Crushers	(a) Power	175	457
		(b) Bullocks	1071	989
14	Oil Engines		3372	6824
15	Electric pumps		2565	4869
16	Tractors		276	418

TABLE H

Sowing, harvesting and peak marketing seasons of principal crops in Kerala State

Sl. No.	*Crop*		*Sowing*	*Harvesting*	*Peak marketing*
1	2	3	4	5	6
1	Rice	Autum Winter Summer	April-June August-October November-December January-March	August-October December-February February-March April-May	September-October January-February March-April May-June
2	Ragi	1st crop 2nd crop	April-July September-October	August-October December-January	September-October December-January
3	Small Millets (Samai)	Kharif Rabi	May September	August December	August December
4	Red gram	1st crop 2nd crop 3rd crop	May-June August-October February	August-September November-January April	September-October January April
5	Horse gram	1st crop 2nd crop	August-October February-March	November-January April-May	January-February May-June
6	Green gram		May-June	August-September	September-October
7	Black gram	1st crop 2nd crop	May-June October-November	August-October January-February	October February

TABLE H—(*concld.*)

1	2	3	4	5	6
8	Other pulses		May-June October	August-September December-January	August-September January
9	Sugarcane	1st crop 2nd crop	November -February January-March	October-December December.February	November- December February
10	Ginger (raw)	..	April-May	November-January	December-January
11	Pepper	..		November-January	December-January
12	Sesamum	1st crop 2nd crop 3rd crop	August-October December-January February-March	December-January March-April June-July	December-January April-May July-August
13	Cotton		August-September	February-March	February-March
14	Sweet Potatoes	1st crop 2nd crop 3rd crop	June-July September-October November- December	September-October December-January February-March	September-October December-January February-March
15	Turmeric	..	April-May	December-January	January-February
16	Lemongrass		..	June-September	September
17	Tapioca	1st crop 2nd crop 3rd crop	October-November March-May July-September	August-September November-January May-July	August-September December-January June-July

PART III

Detailed Tables

TABLE—1.1

Normal Rainfall in Kerala (in Millimeters)

District	July	August	September	October	November	December	January	February	March	April	May	June	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Trivandrum	257.4	203.5	168.9	280.2	210.2	70.1	21.2	18.0	48.0	118.1	213.9	391.1	2001.6
Quilon	449.6	318.1	226.1	344.9	242.9	64.8	24.1	32.1	84.6	166.3	260.3	547.4	2761.2
Alleppey	548.1	371.3	272.3	328.1	224.0	64.0	27.6	31.6	59.7	134.1	293.7	666.1	3020.6
Kottayam	628.0	412.4	263.5	330.8	213.6	72.2	31.2	27.0	59.5	133.1	237.4	585.8	2994.5
Ernakulam	785.9	523.5	296.6	365.7	216.9	54.6	18.0	23.6	54.4	136.1	310.1	792.1	3577.5
Trichur	747.6	441.7	245.5	305.7	163.5	32.8	10.1	9.2	28.4	91.1	283.5	800.3	3159.4
Palghat	657.1	361.9	175.7	257.4	144.3	30.4	9.1	9.3	26.6	80.0	175.2	532.2	2459.2
Kozhikode	1005.9	530.5	239.2	286.6	160.1	33.4	9.0	6.8	18.4	84.0	233.5	853.9	3461.3
Cannanore	1063.5	584.7	239.4	218.0	106.0	22.8	5.3	4.8	11.2	58.6	200.6	923.0	3437.6
State Average	682.6	416.5	236.4	301.9	186.8	49.4	17.3	18.0	43.4	111.3	245.4	676.9	2985.9

TABLE—1.2

Average Monthly Rainfall (in Millimetres) in Kerala during the year 1968-1969

District	July 1968	August 1968	September 1968	October 1968	November 1968	December 1968	January 1969	February 1969	March 1969	April 1969	May 1969	June 1969	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Trivandrum	517.9	114.7	352.8	218.8	182.5	78.6	..	4.4	14.3	127.6	203.7	192.0	2007.3
Quilon	1018.8	313.6	411.2	320.5	238.5	96.2	..	29.0	65.8	167.3	257.0	423.3	3341.2
Alleppey	1241.1	245.7	299.9	212.7	186.3	63.0	23.0	13.1	4.7	93.2	305.3	519.7	3208.6
Kottayam	1187.5	313.8	336.4	210.9	151.2	72.3	7.2	4.4	33.3	121.3	195.9	463.2	3097.4
Ernakulam	1346.6	426.5	406.6	259.7	106.2	33.1	3.2	4.3	31.5	153.1	264.8	691.2	3726.8
Trichur	1509.9	492.2	357.5	110.2	53.7	9.6	..	..	1.0	43.1	195.0	692.6	3464.8
Palghat	896.8	381.0	226.7	176.7	71.2	2.4	..	..	2.3	102.2	152.3	526.1	2537.7
Kozhikode	1701.1	614.2	304.8	99.8	82.7	1.8	..	..	5.9	124.4	263.4	700.9	3899.0
Cannanore	2066.4	451.4	335.7	93.7	47.1	0.1	..	..	..	86.4	248.6	636.0	3965.4
State Average	1276.2	372.6	336.9	189.2	124.4	39.7	3.8	6.1	17.6	113.2	231.8	538.3	3249.8

TABLE—2.1

Classification of area in each District of Kerala—(Area in hectares)

District	Total geographical area according to village papers	Classification								Area sown more than once	Total cropped area
		Forests	Land put to non-agricultural uses	Barren & uncultivable Land	Permanent pastures & other grazing land	Land under miscellaneous tree crops not included in net area sown	Cultivable waste	Fallow land other than current fallow	Current fallow	Net Area sown	
1	2	3	4	5	6	7	8	9	10	11	12	13
Trivandrum .	216096	44537	17025	590	550	216	633	741	281	151523	83707	235230
Quilon .	469051	210857	16234	10156	1300	3584	2444	596	480	223400	122161	345561
Alleppey .	186790	513	12660	722	250	2762	1001	1379	344	167167	68708	235875
Kottayam .	626225	252964	16332	8176	3500	3156	16572	1290	3159	321076	53076	374152
Ernakulam .	317428	55212	24169	4986	2000	2661	5748	2527	2883	217242	57341	274583
Trichur .	294262	132375	16208	2079	600	911	1909	431	1847	138001	92578	230579
Palghat .	510424	99663	63793	17680	5000	20743	19238	3546	4197	276564	107066	383630
Kozhikode .	661586	193756	32920	12525	2700	23973	20890	4395	5492	364935	64816	429751
Cannanore .	576661	65932	51604	23045	12000	92271	20828	12733	4471	293777	49625	343402
STATE .	3853523	1055810	250945	79959	27800	150277	89263	27630	23154	2153685	699078	2852763

TABLE—2.2

Classification of area as percentage to total area according to Village Papers

District	Area according to village papers	Classification of Area									Area sown more than once	Total cropped area
		Forests	Land put to non-agricultural uses	Barren and uncultivable land	Permanent pastures & other grazing land	Land under misc. tree crops not included in net area sown	Cultivable Waste	Fallow land other than current fallow	Current fallow	Net area sown		
1	2	3	4	5	6	7	8	9	10	11	12	13
Trivandrum ..	100	20.61	7.88	0.27	0.26	0.10	0.29	0 34	0.13	70.12	38.73	108.85
Quilon ..	100	44.95	3.46	2.17	0.28	0.76	0.52	0.13	0.10	47.63	26.04	73.67
Alleppey ..	100	0.27	6.78	0.39	0.13	1.48	0.54	0.73	0.18	89.50	36.78	126.28
Kottayam ..	100	40.40	2.61	1.31	0.56	0.50	2.65	0.20	0.50	51.27	8.48	59.75
Ernakulam ..	100	17.39	7.61	1.57	0.63	0.84	1.81	0.80	0.91	68.44	18.06	86.50
Trichur ..	100	44.99	5.51	0.70	0.17	0 31	0.65	0.14	0.63	46.90	31.47	78.36
Palghat ..	100	19.53	12.50	3.46	0.98	4 06	3.77	0 70	0.82	54.18	20.98	75.16
Kozhikode ..	100	29.29	4.98	1.89	0.41	3.62	3.16	0.66	0.83	55.16	9.80	64.96
Cannanore ..	100	11.43	8.95	4.00	2.08	16.00	3.61	2.21	0.78	50.94	8.61	59.55
STATE ..	100	27.36	6.50	2.07	0.72	3.90	2.31	0.72	0.60	55.82	18.11	73.93

TABLE—3.1

Area under crops in each District of Kerala (area in hectares)

District	Food crops							
	Cereals							
	Rice (Oryza Sativa)				Jowar	Ragi	Other Cereals and Millets	Total Cereals & Millets
	Autumn	Winter	Summer	Total				
1	2	3	4	5	6	7	8	9
Trivandrum ..	18834	20280	848	39962	..	..	..	39962
Quilon ..	21324	29109	2352	51785	..	459	..	52244
Alleppey ..	29027	22982	41704	86713	..	..	50	86763
Kottayam ..	7807	24555	17524	49886	..	47	825	50758
Ernakulam ..	41058	42487	10449	93994	..	51	309	94354
Trichur ..	38494	61499	14378	114371	..	1212	..	115583
Palghat ..	116805	89462	5085	211352	1235	832	4079	217498
Kozhikode ..	62725	61231	4199	128155	..	1463	1249	130867
Cannanore ..	65805	29015	2833	97653	..	925	50	98628
STATE ..	394879	380620	98372	873871	1235	4989	6562	886657

TABLE—3.1—(*Contd.*)

District	Food Crops								
	Pulses				Total pulses	Total Food grain	Sugar Crops		
	Other Pulses						ugar-cane	Others' (Palmyrah)	Total
	Tur	Khariff	Kabi	Total					
	9	10	11	12	13	14	15	16	17
Trivandrum ..	..	1169	1409	2578	2578	42540	..	452	452
Quilon ..	..	4647	2724	7371	7371	59615	932	212	1144
Alleppey ..	..	482	546	1028	1028	87791	4075	31	4106
Kottayam ..	247	281	171	452	699	51457	1127	507	1634
Ernakulam ..	69	641	1198	1839	1908	96262	428	554	982
Trichur ..	..	2450	5497	7947	7947	123530	.	1437	1437
Palghat ..	4861	3348	4289	7637	12498	229996	998	3745	4743
Kozhikode ..	2146	253	3222	3475	5621	136488	..	1394	1394
Cannanore ..	164	1625	1232	2857	3021	101649	333	147	480
STATE ..	7487	14896	20288	35184	42671	929328	7893	8479	16372

Table 3.1 (*Contd.*)

District	Food Crops							
	Condiments and Spices							
	Pepper	Chillies	Ginger	Turmeric	Cardamom	Betelnut	Others	Total
	18	19	20	21	22	23	24	25
Trivandrum	8429	..	..	..	..	4946	4261	17636
Quilon	4764	..	169	..	..	8571	3560	17064
Alleppey	1275	..	60	27	..	3787	1122	6271
Kottayam	14448	..	3447	1177	42666	5470	2351	69559
Ernakulam	6807	..	1072	372	1042	9682	2132	21107
Trichur	745	..	76	..	..	10539	1894	13254
Palghat	3480	830	1814	1329	1847	6598	2894	18792
Kozhikode	15989	662	4312	1236	1079	19065	902	43245
Cannanore	42890	1700	473	233	392	12524	201	58413
STATE:	98827	3192	11423	4374	47026	81182	19317	265341

Table 3.1 (*Contd.*)

District	Food Crops									
	Fresh Fruits						Dried Fruits			Total fruits
	Mangoes	Citrus fruits	Banana	Other plantain	Others	Total	Cashew nut	Other	Total	
	26	27	28	29	30	31	32	33	34	35
Trivandrum	8012	..	543	3524	6961	19040	3971	..	3971	23011
Quilon	11031	..	1497	4197	6822	23547	10512	..	10512	34059
Alleppey	5256	..	455	2886	7488	16085	3261	..	3261	19346
Kottayam	7020	..	1594	4149	10644	23407	1516	..	1516	24923
Ernakulam	7171	..	985	2847	8151	19154	7482	..	7482	26636
Trichur	5673	..	1454	4268	2560	13955	7917	..	7917	21872
Palghat	5561	..	321	7334	4018	17234	9074	..	9074	26308
Kozhikode	7551	96	1785	5885	8030	23347	15577	12	15589	38936
Cannanore.	4948	1863	1215	6649	7278	21953	36709	12	36721	58674
STATE:	62223	1959	9849	41739	61952	177722	96019	24	96043	273765

TABLE: 3.1—(*Contd.*)

District	Food Crops							Non-Food Crops				
	Vegetables					Total fruits and vegetales	Total Food crops	Oil Seeds				
	Tapioca	Sweet Potatoes	Onions	Others	Total			Ground nut	Castor	Sesamum	Rape and Mustard	Linseed
	36	37	38	39	40	41	42	43	44	45	46	47
Trivandrum ..	65385	252	..	670	66307	89318	149946	..	39	35	..	..
Quilon ..	100889	157	7	8207	109260	143319	221142	..	1	3588	..	..
Alleppey ..	22901	67	45	4276	27289	46635	144803	..	6	3683	..	..
Kottayam ..	37838	1077	38	8421	47374	72297	194947	..	46	95	..	..
Ernakulam ..	15181	208	11	2043	17443	44079	162430	..	17	899	..	..
Trichur ..	7287	162	..	1286	8735	30607	168828	..	5	1160	..	..
Palghat ..	22111	4224	20	3685	30040	56348	309879	13118	2	1600	..	..
Kozhikode ..	16247	741	17	2355	19360	58296	239423	..	3	625	..	..
Cannanore ..	8822	525	..	895	10242	68916	229458	..	5	310	8	15
STATE ..	296661	7413	138	31838	336050	609815	1820856	13118	124	11995	8	15

TABLE 3.1—(*Contd.*)

District	Non-Food Crops											
	Oil seeds			Fibres			Drugs, Narcotics and Plantation Crops					
	Coconut	Others	Total	Cotton	Others	Total	Tobacco	Tea	Coffee	Rubber	Others	Total
0	48	49	50	51	52	53	54	55	56	57	58	59
Trivandrum ..	73885	785	74744	..	..	..	..	1075	3	6328	..	7406
Quilon ..	85000	100	88689	..	..	..	..	2803	127	29320	..	32250
Alleppey ..	81557	427	85673	..	..	..	..	..	..	3217	..	3217
Kottayam ..	78272	3578	81991	..	..	..	..	30723	2085	52411	..	85219
Ernakulam ..	62784	1303	65003	..	..	..	..	141	261	25383	..	25785
Trichur ..	48916	996	51077	49	..	49	..	466	..	8076	..	8542
Palghat ..	32911	509	48140	6151	..	6151	..	597	3547	8190	372	12706
Kozhikode ..	132345	57	133030	99	..	99	..	4015	18073	21591	1034	44713
Cannanore ..	0393	89	90820	..	36	36	670	1388	3582	14018	..	19608
STATE ..	686063	7844	719167	6299	36	6335	670	41158	27678	168534	1406	239446

TABLE 3.1—(*Contd.*)

District	Non-Food Crops				Total area sown under all crops	Area sown more than once	Net area sown
	Fodder crops	Green manure crops	Other non-food crops	Total non-food crops			
0	60	61	62	63	64	65	66
Trivandrum ..	21	692	2421	85284	235230	83707	151523
Quilon ..	11	428	3041	124419	345561	122161	223400
Alleppey ..	151	613	1418	91072	235875	68708	167167
Kottayam ..	11	4290	7694	179205	374152	53076	321076
Ernakulam ..	216	4034	17115	112153	274583	57341	217242
Trichur ..	25	349	1709	61751	230579	92578	138001
Palghat ..	24	4821	1909	73751	383630	107066	276564
Kozhikode ..	8	4304	8174	190328	429751	64816	364935
Cannanore ..	4	1302	2174	113944	343402	49625	293777
STATE ..	471	20833	45655	1031907	2852763	699078	2153685

Percentage of Area under Crops to the total cropped area in each District

District	Total cropped area	Total food crops	Total non food crops	Net area sown	Area sown more than once	Cereals and Millets			Total pulses	Total food grains	Sugar
						Rice	Others	Total			
1	2	3	4	5	6	7	8	9	10	11	12
Trivandrum ..	100	63.74	36.26	64.41	35.59	16.99	..	16.99	1.09	18.08	0.19
Quilon ..	100	64.00	36.00	64.65	35.35	14.99	0.13	15.12	2.13	17.25	0.33
Alleppey ..	100	61.39	38.61	70 87	29 .13	36.76	0.02	36.78	0.44	37.22	1.74
Kottayam ..	100	52.10	47.90	85.81	14.19	13 33	0.24	13.57	0.18	13.75	0.44
Ernakulam ..	100	59. 16	40.84	79.12	20.88	34.23	0.13	34.36	0 69	35.05	0.36
Trichur	100	73.22	26.78	59.85	40.15	49.60	0.53	50.13	3.44	53.57	0.62
Palghat ..	100	80.78	19.22	72.09	27.91	55.09	1.60	56.69	3.26	59.95	1.24
Kozhikode ..	100	55.71	44.29	61.65	38.35	29.82	0.63	30.45	1.31	31.76	0.32
Cannanore ..	100	66.82	33.18	85.55	14.45	28.44	0.28	28.72	0.88	29.60	0.14
STATE ..	100	63.83	36.17	75.49	24.51	30.63	0.45	31.08	1.50	32.58	0.57

TABLES 3.2—(*Contd.*)

District	Condiments & Spices					Fresh Fruits				Dried fruits (cashewnut)	Total fruits	Vegetables		
	Pepper	Cardamom	Bekelnut	Others	Total	Mangoes	Banana including plantain	Others	Total			Tapioca	Others	Total
	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Trivandrum	3.58	..	2.10	1.82	7.50	3.41	1.72	2.96	8.09	1.69	9.78	27.80	0.39	28.19
Quilon	1.38	..	2.48	1.08	4.94	3.19	1.65	1.97	6.81	3.05	9.86	29.20	2.42	31.62
Alleppey	0.54	..	1.61	0.51	2.66	2.23	1.42	3.17	6.82	1.38	8.20	9.71	1.86	11.57
Kottoyam	3.86	11.40	1.46	1.87	18.59	1.88	1.53	2.84	6.25	0.41	6.66	10.11	2.55	12.66
Ernakulam	2.48	0.38	3.53	1.30	7.69	2.61	1.40	2.97	6.98	2.72	9.70	5.53	0.83	6.36
Trichur	0.32	..	4.57	0.86	5.75	2.46	2.48	1.11	6.05	3.43	9.48	3.16	0.64	3.80
Palaghat	0.91	0.48	1.72	1.79	4.90	1.45	1.99	1.05	4.49	2.37	6.86	5.76	2.07	7.83
Kozhikode	3.72	0.25	4.44	1.65	10.06	1.76	1.78	1.89	5.43	3.63	9.06	3.78	0.73	4.51
Cannanore	12.49	0.11	3.65	0.76	17.01	1.44	2.29	2.66	6.39	10.70	17.09	2.57	0.41	2.98
STATE	3.46	1.65	2.85	1.34	9.30	2.18	1.81	2.24	6.23	3.37	9.60	10.40	1.38	11.78

TABLE 3.2—(*Contd.*)

District	Total fruits and vegetables	Total food crops	Oil seeds					Fibres (cotton)	Drugs, Narcotics and plantation crops					Other Nonfood crops	Total nonfood crops
			Sesamum	Coconut	Groundnut	Others	Total		Tea	Coffee	Rubber	Other	Total		
	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Trivandrum	37.97	63.74	0.01	31.41	..	0 35	31.77	..	0.46	..	2.69	..	3.15	1.34	36.26
Quilon	41.48	64.00	1.04	24.60	..	0.03	25.67	..	0.81	0.04	8.48	..	9.33	1.00	56.00
Alleppey	19.77	61.39	1.56	34.58	..	0.18	36.32	..	..	..	1.36	..	1.36	0.93	38.61
Kottayam	19.32	52.10	0.02	20.91	..	0.97	21.91	..	8.21	0.56	14.01	..	22.78	3.21	47.90
Ernakulam	16.06	59.16	0.33	22.86	..	0.48	23.67	..	0.06	0.09	9.24	..	9.39	7.78	40.84
Trichur	13.28	73.22	0.50	21.21	..	0.44	22.15	0.02	0.20	..	3.50	..	3.70	0.91	26.78
Palghat	14.69	80.78	0.42	8.58	3.42	0.13	12.55	1.60	0.16	0.92	2.13	0.10	3.31	1.76	19.22
Kozhikode	13.57	55.71	0.15	30.80	..	0.01	30.96	0.02	0.93	4.21	5.02	0.24	10.40	2.91	44.29
Cannanore	20.07	66.82	0.09	26.32	..	0.04	26.45	0.01	0.39	1.04	4.08	0.20	5.71	1.01	33.18
STATE	21.38	63.83	0.42	24.05	0.46	0.28	25.21	0.22	1.44	0.97	5.91	0.07	8.39	2.35	36.17

TABLE 4.1

Total Out-turn of important commodities in Each District of Kerala

District	Rice (Tonnes)				Jowar (tonnes)	Ragi (tonnes)	Other cereals & millets (tonnes)	Tur (tonnes)	Other pulses	Sugar-cane (gur) (Tonnes)
	Autumn	Winter	Summer	Total						
	1	2	3	4	5	6	7	8	9	10
Trivandrum	26211	2[illegible]838	643	56692	..	..	..	..	949	..
Quilon	26048	53136	1305	80489	..	508	..	..	3287	5243
Alleppey	19132	26831	82911	128874	..	..	19	..	325	23375
Kottayam	9729	41870	27465	79064	..	44	380	93	205	8103
Ernakulam	47576	65464	13342	126382	..	52	133	22	690	2621
Trichur	45778	79593	19440	144811	..	1387	..	..	3019	..
Palghat	197377	171921	4124	373422	450	1110	1871	2256	2495	8904
Kozhikode	60996	68146	5773	134915	..	2406	620	1052	1301	..
Cannanore	88411	34949	3345	126705	..	1555	23	86	977	2058
STATE	521258	571748	158348	1251354	450	7062	3051	3509	13248	50304

TABLE 4.1—(*contd.*)

District	Black pepper (tonnes)	Dry chillies (tonnes)	Dry Ginger (tonnes)	Cured Turmeric (tonnes)	Processed cardamom (tonnes)	Betel-nuts (Million nuts)	Banana (tonnes)	Other plantain (tonnes)	Cashew-nut (raw)	Tapioca (tonnes)
	11	12	13	14	15	16	17	18	19	20
Trivandrum	3663	..	..	..	..	769	3956	26909	4455	747351
Quilon	1811	..	256	..	..	1726	10907	32048	11794	1450734
Alleppey	290	..	83	24	..	590	3315	22033	3659	287408
Kottayam	4261	..	3157	992	817	549	11614	31682	1701	692057
Ernakulam	1886	..	1118	333	52	1170	7177	21740	8395	208891
Trichur	326	..	126	..	..	1568	10594	32590	8883	107775
Palghat	517	445	1601	980	104	833	2339	56002	10181	288991
Kozhikode	2178	417	4112	1108	60	3519	13006	44038	17477	207962
Cannanore	6005	1207	386	210	22	1565	8852	50772	41187	89896
STATE	20437	2069	10839	3647	1055	12289	71760	318719	107732	4081115

TABLE 4.1—(*contd.*)

District	Sweet Potatoes (tonnes)	Groundnut (tonnes)	Sesamum (tonnes)	Cocoa-nut (Million nuts	Cotton (Bales of 180 Kg.)	Tobacco (tonnes)	Tea (tonnes)	Coffee (tonnes)	Rubber (tonnes)	Lemon grass oil (tonnes)
	21	22	23	24	25	26	27	28	29	30
Trivandrum	1247	..	18	454	..	..	993	2	2079	1
Quilon	777	..	1048	479	..	..	2043	16	12146	3
Alleppey	332	..	1039	545	..	..	..	..	936	1
Kottayam	5331	..	30	378	..	..	32405	963	21296	107
Ernakulam	1030	..	333	368	..	..	145	61	8176	783
Trichur	802	..	817	309	78	..	837	..	4601	43
Palghat	20909	24029	462	129	5339	..	942	2102	3049	11
Kozhikode	3668	..	124	826	139	..	5927	7370	9815	341
Cannanore	2599	..	90	346	..	911	1489	1474	4375	312
STATE	36695	24029	3961	3834	5556	911	44781	11988	66473	1602

TABLE 5.1

Average farm (harvest) price in rupees for certain commodities for the year 1968-69

Sl. No.	District	Paddy/ Qtl.	Cocoanut/ 100 Nos.	Arecanut/ 100 Nos.	Tapioca/ Qtl.	Cashewnut/ Qtl.	Banana 100 Nos.	Pepper/ Qtl.	Ginger/ Qtl.	Sugarcane (M.T.)
1	2	3	4	5	6	7	8	9	10	11
1	Trivandrum ..	119.33	35.63	4.08	21.11	116.25	18.33	315.77	..	..
2	Quilon ..	135.03	41.63	4.31	21.98	111 25	21.66	331.02	..	..
3	Alleppey ..	113 81	39.37	4.02	22.90	125.00	16.65	..	..	..
4	Kottayam ..	111.47	41.06	3.37	21.04	119.57	16.00	322.68	531.24	..
5	Ernakulam .	113.54	43.72	3.89	18.86	135.00	14.59	331.32	602.86	120.00
6	Trichur ..	104.31	41.27	4 69	19.07	120.49	16.94	327.81	..	..
7	Palghat ..	93.15	35.79	3.63	15.06	128.75	16.88	.		87.50
8	Kozhikode ..	104.44	37.52	3.46	19.11	125.33	16.35	341.10	556.07	..
9	Cannanore ..	112.71	37.44	3.61	25.86	133 09	15.52	339.72	585.87	
	STATE .. Average (S. A.)	111.98	39.27	3.90	20.55	123.86	16.99	329.92	569.01	103.75

TABLE 6.1

Average daily wages of Agricultural Labours 1968-69

Carpenter

District	July 1968	August 1968	September 1968	October 1968	November 1968	December 1968	January 1969	February 1969	March 1969	April 1969	May 1969	June 1969
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Trivandrum	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
2. Quilon	7.06	7.06	7.06	7.06	7.06	7.06	7.56	7.56	7.56	7.56	7.56	7.56
3. Alleppey	8.00	8.00	8.00	8.00	8.	8.00	8.00	8.00	8.00	8.00	8.00	8.00
4. Kottayam	7.50	7.50	7.50	7.50	7.50	7.50	7.38	7.38	7.38	7.38	7.38	7.38
5. Ernakulam	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.5	7.50	7.50
6. Trichur	6.95	6.95	6.95	6-95	6.95	6.95	6.95	6.95	6.95	6.95	7.45	7.45
7. Palghat	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75
8. Kozhikode	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.83
9. Cannanore	6.68	6.68	6.68	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93	6.93

TABLE 5.1—(*contd.*)

Mason

1	2	3	4	5	6	7	8	9	10	11	12	13
1. Trivandrum	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
2. Quilon	7.00	7.00	7.00	7.00	7.00	7.00	8.00	8.00	8.00	8.00	8.00	8.00
3. Alleppey	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
4. Kottayam	7.50	7.50	7.50	7.50	7.50	7.50	7.38	7.38	7.38	7.38	7.38	7.38
5. Ernakulam	7.25	7.25	7.25	7.25	7.25	7.25	7 25	7.25	7.25	7.50	7.50	7.50
6. Trichur	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6 90	6.90	6.90
7. Palghat	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75
8. Kozhikode	7.17	7.17	7.17	7.17	7.17	7.17	6.58	6.58	7.58	6.58	6.58	6.58
9. Cannanore	5.93	5.93	5.93	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6 18	6.18

TABLE 6.1—(*contd.*)

Field Labour (Paddy Field) (Men)

District 1	2	3	4	5	6	7	8	9	10	11	12	13
Trivandrum	5.00	4.75	4.75	4.50	4.50	4.50	4.63	4.63	4.50	4.75	5.00	5.00
Quilon	4.22	4.22	4.22	4.22	4.22	4.22	4.47	4.47	4.47	4.47	4.47	4.47
Alleppey	4.65	4.65	4.65	4.65	4.65	4.65	4.47	4.47	4.65	5.05	5.05	5.05
Kottayam	4.13	4.13	4.13	4.13	4.13	4.13	4.00	4.00	4.75	4.75	4.75	4.75
Ernakulam	5.00	5 00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Trichur	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.45	5.45
Palghat	4.07	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.25	4.25	4.50	4.50
Kozhikode	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33
Cannanore	5.20	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.90	5.90	5.90

TABLE 7.1

Number of Livestock Poultry and Agricultural machinery and implements in Kerala (1966 Census)

District	Cattle											
	Males over three years				Females over three years							
	Breading	Working	Others	Total	In milk	Breeding Dry	Not Calved	Working	Others	Total	Young Stock	Total
	1	2	3	4	5	6	7	8	9	10	11	12
Trivandrum	1446	16446	381	18273	30385	29310	6305	157	257	66414	63897	148584
Quilon	1850	49302	806	51958	59342	83004	16771	140	389	159746	148507	360211
Alleppey	1150	16614	530	18294	57952	85002	23027	157	723	166861	140938	326093
Kottayam	2443	29888	1230	33561	72778	89466	20446	231	611	183532	165177	382270
Ernakulam	1671	80268	885	82824	44791	52299	11592	559	525	109766	110441	303031
Trichur	815	55245	506	56566	37196	34631	6328	237	310	78502	86576	221884
Palghat	1794	80308	980	83082	55867	57337	9204	1008	421	123837	115980	322899
Kozhikode	4503	95010	1682	101195	57577	78429	20863	608	576	158053	132511	391759
Cannanore	3715	68200	1855	73770	67531	83494	19463	508	1335	172331	153935	400036
STATE	19387	491381	8855	519523	483419	592972	133999	3605	5247	1219242	1117962	2856727

TABLE 7.1—(*Contd.*)

District	Buffaloes											
	Males over three year				Females over three years							
	Breeding	Working	Others	Total	In milk	Breeding Dry	Not Calved	Working	Others	Total	Young Stock	Total
	13	14	15	16	17	18	19	20	21	22	23	24
Trivandrum	818	14358	1049	16225	8746	7035	1309	395	160	17645	8871	42741
Quilon	608	10287	878	11773	4806	4338	714	124	113	10095	5156	27024
Alleppey	218	7908	313	8439	2171	2586	410	40	45	5252	1913	15604
Kottayam	350	4930	519	5799	3872	3063	699	145	132	7911	4500	18210
Ernakulam	179	10387	618	11184	4204	1988	362	189	42	6785	3098	21067
Trichur	393	34087	857	35347	10835	6323	1200	355	236	18949	11743	66039
Palghat	996	113529	1009	115534	13732	10584	1344	1579	305	27544	25199	168227
Kozhikode	1346	28129	935	30510	10459	8948	1694	1448	317	22866	12799	66175
Cannanore	1098	17433	508	19039	7880	7912	1387	314	230	17723	9336	46098
STATE	6106	241048	6696	253850	66705	52777	9119	4589	1580	134770	82615	471235

TABLE 7.1—(Contd.)

District	Sheep			Goats			Horse & Ponies			Mules	Donkeys	Camels	Pigs	Total Livestock
	One year & above	Below one year	Total	One year & above	Below one year	Total	3 years & above	Below 3 years	Total					
	25	26	27	28	29	30	31	32	33	34	35	36	37	38
Trivandrum	425	302	727	78340	49950	128290	62	2	64	3	5	3	3799	324216
Quilon	1730	849	2579	84568	52576	137144	10	..	10	..	..	..	598	527566
Alleppey	685	485	1170	50591	29643	80234	10	1	11	..	2	..	170	423284
Kottayam	517	296	813	103748	56275	160023	66	12	78	1	118	..	63515	625028
Ernakulam	360	223	583	89068	54347	143415	19	..	19	..	..	..	37473	505588
Trichur	79	33	112	72559	43182	115741	16	5	21	..	2	1	1450	405210
Palghat	3618	1162	4780	108946	49371	158317	121	23	114	..	183	..	369	654969
Kozhikode	55	53	108	106009	57970	163979	35	3	38	4	..	..	1234	623297
Cannanore	451	196	647	63937	38138	102075	33	8	41	..	..	..	3320	552217
STATE	7920	3599	11519	757766	431452	1189218	372	54	426	8	310	4	111928	4641375

TABLE 7.1—(*Contd.*)

District	Poultry						Carts	Sugarcane crushers		Oil Engines	Electric pump	Tractors	Ghanis		Persian wheel
	Fowls	Ducks	Others	Total	Wooden	Iron		Power	Bullocks				More than 5 Kg.	Less than 5 Kg.	
	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
Trivandrum	799963	3778	166	803907	20060	1222	1218	15	41	9	5	7	39	14	39
Quilon	772924	4606	130	977660	37978	3825	1702	48	94	15	32	23	81	110	358
Alleppey	971776	168312	219	1140307	18235	3329	911	63	65	441	405	57	127	142	8868
Kottayam	1307984	59929	690	1368603	24037	660	1012	48	230	124	258	61	28	52	464
Ernakulam	1250254	54543	1012	1305809	63879	2016	739	38	143	646	1276	35	26	41	473
Trichur	1000114	21198	224	1021536	49481	1711	2247	62	164	1116	1940	75	56	54	551
Palghat	941566	2564	207	945337	134976	2069	7440	139	118	1481	739	108	48	31	191
Kozhikode	1517189	3048	157	1520394	72009	1433	594	25	59	1122	138	26	205	132	36
Cannanore	825516	773	145	826434	55275	914	445	19	75	1870	76	26	82	52	7
STATE	9587286	318751	2950	9908987	475930	17179	16309	457	989	6824	4869	418	692	628	10987

PART IV

APPENDICES

1. Working Class Cost of Living Indices.
2. Parity Index.
3. Quarterly Retail price.
4. Export of Agricultural commodities
5. Notes on certain crops
   - (1) Tea
   - (2) Coffee
   - (3) Rubber
   - (4) Cardamom
   - (5) Pepper
   - (6) Ginger
   - (7) Lemongrass
6. Classification of soils in Kerala
7. Conversion ratio between the raw materials and the processed product
8. Average analysis of important fertilisers
9. Insect pests affecting paddy crop, their distribution and some practical methods of control.
10. List of centres selected for recording meteorological information
11. Glossary of English, Botanical and Malayalam names of crops
12. Graphs and Charts.

1. Working Class Cost of Living Indices.

The average consumer price index numbers in 13 selected centres of the State during the years 1967-68 and 1968-69 are furnished in the following table.

Centres	*Average Cost of Living Indices* 1967-68	1968-69
1. Trivandrum	761	811
2. Quilon	762	800
3. Punalur	663	773
4. Alleppey	699	800
5. Changanacherry	720	810
6. Sherthallai	691	788
7. Kottayam	718	824
8. Munnar	633	741
9. Alwaye	702	800
10. Ernakulam	725	819
11. Trichur	724	820
12. Chalakudy	715	831
13. Kozhikode	764	878

The month-war details are given in Table I of the appendix.

1. Parity Index:

The index of parity between prices received and paid by farmers during each month is given in the following table for the years 1967-68 and 1968-69

	Index of Parity 1967-68	1968-69
July	108	91
August	104	92
September	107	93
October	109	93
November	111	92
December	108	89
January	104	88
February	102	88
March	103	88
April	103	89
May	103	89
June	98	92
Average	105	90

The above table shows that the position of farmers has deteriorated when compared to that of the previous year. The details regarding the prices paid and received by farmers are given in Table II.

3. **Quarterly Retail Prices:**

The trend in the quarterly retail prices of 12 important commodities in he State is dealt with in the following paragraph. District-wise quarterly price of these commodities for the four quarters in 68-69 are given in Table III.

(1) *Rice.*—The price of Rice remained (Rs. 1.3/kg.) more or less the same throughout the year under review. As light increase in price can be noticed in the Fourth quarter in Palghat District.

(2) *Chillies.*—The price of chillies ranged between Rs. 2.34 and 3.06 in the first quarter in all the districts. The maximum price was recorded in Palghat District, the price being Rs 3.06/kg. In the II quarter also the prices continued more or less the same trend. But in the 3rd and 4th quarters the price of chillies registered a slight increase and the prices came to Rs. 4.72 in Palghat.

(3) *Tapioca.*—The price of tapioca was the highest in Cannanore District during all the quarters in the year. The maximum price per kg. was Rs. 0.50.

(4) *Blackgram.*—The price varied from 1.18 to Rs. 1.77.

(5) *Tea.*—The price of tea was the highest in Trichur District the price being Rs. 10.70/kg. throughout the year. The lowest price viz. Rs. 5.12 was noticed in the Quilon District.

(6) *Coffee.*—The highest price of Coffee was noticed in Trivandrum District and the lowest price was in Ernakulam District.

(7) *Sugar.*—The price of Sugar was more or less the same throughout the 4 quarters.

(8) *Coconut oil.*—The price of Coconut oil ranged between Rs. 4.05 and 5.03 during the reference period.

(9) *Gingelly Oil.*—The price of Gingelly Oil recorded the maximum of Rs. 5.54/litre in Trivandrum District and the minimum price of Rs. 3.79 in Trichur District.

(10) *Coconut.*— The price of Coconut varied in the range between Rs. 61.47/100 nuts (Kottayam) and Rs. 35.43 in Alleppey District.

(11) *Tobacco (Ordinary).*—The highest price for Tobacco (ordinary) was noticed in Ernakulam (9.18).

(12) *Tobacco (Jaff).*—The price for this variety is available only for 6 districts viz. Trivandrum, Quilon, Alleppey, Kottayam, Ernakulam and Trichur.

EXPORT OF AGRL. COMMODITIES

Foreign exports of Agricultural commodities from the ports o Kerala for the year 1968-69 are furnished in Table IV.

TABLE I

Working class consumer price index numbers for selected centres in the State for the year 1968–69

Month & year	Trivandrum	Quilon	Punalur	Alleppey	Changanacherry	Kottayam	Alwaye	Ernakulam	Trichur	Chalakudi	Munnar	Sherthalai	Kozhikode
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1968 July	786	783	750	789	797	810	782	798	800	809	723	779	859
August	806	803	768	804	814	834	805	821	825	832	740	794	878
September	816	811	774	809	820	839	809	825	829	838	742	798	880
October	823	815	777	812	822	842	812	831	836	844	748	802	885
November	817	808	773	804	814	833	803	825	827	836	739	792	874
December	812	800	773	796	808	822	796	819	818	830	743	785	870
1969 January	804	791	765	785	797	809	784	808	806	820	734	775	863
February	796	781	758	779	789	802	775	797	795	811	728	767	859
March	803	789	769	789	798	810	787	807	806	821	732	778	871
April	811	796	776	797	807	818	797	817	817	830	743	783	881
May	818	803	786	806	815	825	807	826	828	836	751	791	894
June	841	823	807	829	841	849	833	851	853	860	770	814	918
Average	811	800	773	800	810	824	800	819	820	831	741	788	878

Base for Kozhikode is the average prices for the year ended June 1936 = 100 and for other centres is August = 100.

TABLE II

Parity index numbers between prices received and prices paid by farmers 1968-69

Base : 52-53 = 100

Index numbers on	July—1968	August—1968	September—1968	October—1968	November—1968	December—1968	January—1969	February—1969	March—1969	April—1969	May—1969	June—1969
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Prices received by farmers	203	206	212	212	209	201	198	196	199	202	205	214
2. Farm cultivation cost	247	248	250	250	251	252	252	251	252	255	259	259
3 Parity	91	92	93	93	92	89	88	88	88	89	89	92

TABLE III

Quarterly District Average Retail Prices for 1968-1969

Sl. No.	Name of commodity	Unit	Qty.	Trivandrum	Quilon	Alleppey	Kottayam	Ernakulam	Trichur	Palghat	Kozhikode	Cannanore
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Coconut	100 Nos.	I	39.10	41.37	39.58	56.50	47.78	41.73	37.28	39.62	43.30
			II	43.42	43.50	35.43	61.47	49.07	41.33	41.15	39.81	43.23
			III	38.23	43.62	45.56	57.45	43.37	38.32	37.81	39.43	39.92
			IV	36.68	42.11	50.50	52.11	46.24	40.01	35.75	37.58	44.65
2	Coconut Oil	Ltr.	I	4.83	4.88	4.55	4.82	4.86	4.80	4.87	4.79	4.86
			II	5.02	5.03	4.59	4.88	4.80	4.81	4.93	4.79	4.81
			III	4.45	4.48	4.05	4.37	4.27	4.34	4.52	4.36	4.48
			IV	4.46	4.40	4.05	4.32	4.33	4.34	4.45	4.32	4.52
3	Rice (F. P)	Kg.	I	1.02	1.01	1.01	1.01	1.01	1.01	1.07v	1.01	1.01
			II	1.03	1.03	1.03	1.03	1.03	1.03	1.10	1.03	1.03
			III	1.03	1.03	1.03	1.03	1.03	1.03	1.10	1.03	1.03
			IV	1.03	1.03	1.03	1.03	1.03	1.03	1.10	1.03	1.03
4	Blackgram	Kg.	I	1.68	1.69	1.64	1.71	1.58	1.48	1.72	1.54	1.47
			II	1.56	1.63	1.53	1.75	1.59	1.37	1.77	1.51	1.49
			III	1.35	1.38	1.31	1.47	1.38	1.18	1.47	1.29	1.38
			IV	1.43	1.40	1.35	1.49	1.40	1.28	1.44	1.28	1.40
5	Gingelly Oil	Litre	I	4.24	4.34	4.47	4.20	3.96	3.79	4.11	4.29	4.47
			II	5.04	4.97	4.65	4.80	4.64	4.30	4.67	4.51	4.77
			III	4.85	4.85	4.58	4.44	4.59	4.42	4.64	4.66	4.67
			IV	5.54	5.31	5.14	4.99	5.31	5.16	5.28	5.36	5.03

v. change in variety.

TABLE III (contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13
6	Tapioca	Kg.	I	0.28	0.29	0.29	0.32	0.29	0.25	0.24	0.27	0.46
			II	0.27	0.31	0.31	0.34	0.29	0.25	0.29	0.27	0.50
			III	0.23	0.28	0.24	0.31	0.27	0.22	0.25	0.24	0.50
			IV	0.21	0.25	0.23	0.28	0.25	0.22	0.24	0.22	0.50
7	Sugar (F.P)	,,	I	1.75	1.74	1.74	1.75	1.75	1.75	1.76	1.75	1.76
			II	1.70	1.70	1.70	1.71	1.70	1.70	1.70	1.70	1.70
			III	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
			IV	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78
8	Chillies	,,	I	2.75	2.34	2.40	2.56	2.55	2.51	3.06	2.73	2.71
			II	3.31	2.87	2.90	3.18	3.05	2.85	3.50	3.08	2.95
			III	3.48	3.22	3.22	3.19	3.30	3.24	3.53	3.31	3.28
			IV	4.37	4.11	4.14	4.11	4.18	4.39	4.72	4.34	4.33
9	Coffee powder	,,	I	11.25	9.38	8.00	8.41	7.55	9.06	10.00	9.25	8.90
			II	11.38	9.38	8.00	8.52	7.71	9.50	9.96	8.49	9.13
			III	11.62	9.38	8.00	8.75	7.87	9.59	9.47	7.99	9.23
			IV	11.81	9.29	8.00	8.74	8.11	9.60	9.42	7.94	9.29
10	Tea	,,	I	8.60	5.14	6.50	6.36	6.79	10.70	7.50	5.23	8.80
			II	8.60	5.12	6.50	6.46	6.77	10.70	7.99	5.58	8.80
			III	8.61	7.74v	6.50	6.60	6.80	10.70	8.13	5.72	8.80
			IV	9.77	7.73	6.50	6.70	6.97	10.70	8.26	6.14	8.80
11	Tobacco (Jaff.)	,,	I	8.40	8.42	8.31	8.74	10.33	13.00	..	..	..
			II	8.42	8.46	8.25	8.64	10.33	13.00	..	..	..
			III	8.30	8.69	8.25	8.62	10.39	13.00	..	..	..
			IV	8.25	8.88	8.25	8.50	10.25	13.00	..	..	..
12	Tobacco (ord.)	,,	I	6.50	5.91	7.38	8.17	9.18	6.90	6.75	9.01	7.41
			II	6.50	6.06	7.38	8.10	9.10	6.92	6.75	8.76	7.23
			III	6.50	6.25	7.38	8.19	9.06	7.25	6.75	8.72	7.22
			IV	6.50	6.25	7.38	8.17	9.13	7.25	6.75	8.58	7.28

v. change in variety.

TABLE IV

Foregin Exports from the Ports of Kerala 1968-69

Sl. No.	*Commodity*	*Unit*	*Quantity*	*Value in lakhs of Rs*
(1)	(2)	(3)	(4)	(5)
1.	Cardamom	Qtl.	4,007	216.93
2.	Cashew Kernels	,,	6,15,603	5790.18
3.	Cashew shell liquid	Litre	94,65,039	114.83
4.	Coffee	Qtl.	1,53,878	927.96
5.	Coir and Coir products	,,	5,59,182	1329.61
6.	Fish and meat	,,	1,86,301	2131.67
7.	Ginger	,,	7,666	41.51
8.	Lemon grass Oil	Litre	1,15,720	51.72
9.	Pepper	Qtl.	1,77,749	918.67
10.	Tea	,,	4,15,572	2779.28
11.	Betel nuts			
12.	Cocoanut oil	Litre		
13.	Oil cake	M.T.	5,514	31.51
14.	Copra			
15.	Rubber (Raw)			
16.	Wood manufactures	Value		23.12
17.	Wood and Timber	,,		404.2
18.	Sundries	,,		1210.92
			Total	15973.17

5. Notes on Certain Crops in Kerala

1. Tea

India continues to be the biggest producer of tea in the world. Tea is one of the principal foreign exchange earners. Tea industry substantially contributes to the national exchequer and also provides employment to a large number of people. India accounts for nearly 46% of the world production of tea. India ranked first among the exporters of tea in the international market but of late Ceylon has wrested the first rank from India.

Climate.—A hot moist climate is most suitable for tea plantation, the temperature varying from 55°F to 95°F and an annual rainfall ranging between 100 to 130 inches. Tea is usually cultivated at altitudes ranging from 3000 feet to 5000 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 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 3000 plants per acre. "Hedge planting" i.e. planting in rows 5' apart with a spacing of 2 ft. between the bushes in a row, is also done in new estates. Before planting is done pits of 9" square and 18" 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 is several rounds. The period of one round varies according to the attitude of the land. In the high ranges the plucking rounds cover a period upto 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 gardens have 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 a 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 rolls 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 change in 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 is mainly divided into Orange Pekoe and Pekoe souchong, Broken Orange Pekoe, Broken Pekow, 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 introduced in India from Arabia. The production of Coffee in India is only 1% of the world production. There are two main species of coffee grown in India, namely, Arabica and Robusta. Robusta flourishes at lower levels and has more power 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 tropical plant. It is successfully cultivated in places where the altitude ranging between 1500 and 6000 feet, above mean sea level. The most suitable altitude is between 2500 ft. to 500 ft. 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 intermittend 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 plantation enquiry commission of coffee, 1956, Government of India).

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

Planting.—Coffee is grown from seed usually. It is also propagated through cuttings from mature trees or shoots. Propagation from seeds is usually done in January or February in well prepared nursery buds. It is essential that the nursery buds 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 plants are manured well and watered frequently.

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

Shade trees are provided in coffee plantation for protection of tree 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 superphosphate, ammonium sulphate, copper sulphate and urea.

Yield.—Under good climatic conditions a coffee plant yields ½ to 2 lbs. of green coffee in a season. Good yield 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) Chlorisis 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 24 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 2 to 3 weeks. When these 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. 94% of the total are under rubber is in the Kerala State. 92% of the total production of rubber in India is also from Kerala. Indian's place in the world acreage under rubber is comparatively very low. Indian's production comes to 2.2% of the total world output of natural rubber. Before a tyre factory was established in India in 1938 the raw rubber was exported to the foreign countries. Consumption of rubber in the country is on the increase and 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 1000 ft. 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" x 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 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 'Odium hevea' and 'Phytophera meadi' 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 diseases is the cessation of the 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 crape rubber coagulation is done by using acetic acid. For changing latex into sheet

rubber the latex after being bulked and diluted is put in to shadow pans. For removing water and for getting a definite shape the coagulam is pressed by hand. Then these 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 temperature of 115° to 120° F is allowed to circulate in the room. This is done for 15 days. The colour of the sheet will change into black from white. There are three important types of rubber, smoked sheet, late crape 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. Kerala ranks first as the largest producer of cardamom. 80% of the world out put of this valuable spice is produced in India. India's competitors are Ceylon Indo-China and Guatomala. 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 and annual rainfall of 60—80 inches. The best attitude for cardamom planting is between 2500 to 5000 ft.

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 2 ft. squares and one foot deep are dug, the distance between one pit and the next varying from 8 to 10 ft. 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 phyllanthess emblica. A mixture of caster cake, bone-meal and potassium chlorate is also considered to be a good manure.

Diseases.—The most important have affecting the cardamom plantations is the vines disease 'Katte' which is rampant in most cardamom plantations. The symptom of the diseases is the mottling or curling of the leaves and degeneration of the clumps. The remedy lies in the reguing of affected plants. Another menace is that caused by Thrips, mite etc. Dusting the plants with gamaxene is the remedy.

From the estate to the market.—The capsules of the cardamom are dried in the sun or specially built dry houses by using artificial heat. Usually 3—4 days are taken for drying the cardamom in the sun-light but at the same time 48 hours is only needed for artificial drying. The sub-dried produce retains the mucilaginous coating on the seeds and possesses characterstic sweet aroma. The dried capsules are then cleaned. The final product of green cardamom is 20—28% 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. The e are three important grades (i) green cardamom (2) white or bleached cardamom and (3) seeds. The quality of cardamom varies according to place and variety of the seed.

The middle-east and sweden absorb a large quantity of the exports of cardamom from India.

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-bed crop-grows best in tropical regions where there is an average rainfall of 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 attitude less than 3000 ft.

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 the vines. Jack and mango trees are commonly used as support for vines. Murukku trees are also used. On a plantation basis they are planted at a distance of 10 ft. apart. The vine is rarely allowed to grown beyond a height of 20 ft. lest the picking of the pepper berries become 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. Some times the skin of the ripe berries is removed before drying. This kind 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 ¼ lb. to 2 lb. of dried produce.

Life of the plant.—The life of the plant ranges between 25 to 30 years. But rarely some varieties have been found to live up to 60 years.

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

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

From garden to market.—The dried black pepper is graded and packed The pepper is generally packed in double gunny bags. Pepper is mainly exported to U. S. A. and U. K.

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 trained 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 (underground 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 of the rhizomes.

Manure.—Usually cattle manures are used.

Yield.—The yield is generally eight to ten times of the seed rate. Here in Kerala the average yield of ginger is about 1000 lbs. per acre.

Pests and diseases.—Ginger crop is usually affected by a disease known as (Soft root). The colour of the green plants are changed into pale yellow and the production goes down. Use of mercuric chloride (0.05%) for treating the rhizomes sorted as seed is advocated as a preventive measure. Another important disease is known as 'varmicularia'. The leaves become covered with yellowish and brourish sports and gradually dry up. Spraying and Bordezux mirture is suggested in such cases.

From garden to the Market.—Dry ginger as a market produce is prepared as follows:—Then they are seaked 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. The ginger is known as the 'rough' or 'unbleached 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 repeatedily. When they are finally cleaned they are put in a solution containing milk of lime for sometimes 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 & B) have two fingers and one finger respectively.

The B & C grades are exported to foreign market. The D grade being small pieces of ginger is 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, Flexrosus, stapf'. The important lemongrass growing areas are Ceylon, Java, West Indies, Malaya, Guatemala and India. Guatemala and India 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, Thaliparamba 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 lbs. of seeds are sown. The seeds are sown broadcast

The crop is also grown by transplanting of seedlings raised in separate nurseries. There are two varieties of lemongrass, red stem and white stem. The former variety given better quality of oil containing greater quantity of citral.

Harvesting.—Generally 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 cuttings are done at intervals of 30 to 45 days. Usually the harvesting seasons ends by December.

Life of the Plant.—The life of the lemongrass plant is 5 to 8 years.

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

1st year 1½ dozen bottles of 22 oz. each
2nd year 2½ " "
3rd year 2 " "
4th year 2 " "
5th year 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 (oil) receiver and wooden tube.

The raw grass and water are put in the boiler specially made for this purpose. The shape of the boilder is like a roteit apparatus. Then the boiler is heated with fire wood. After sometime 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 U. S. A. and U. K.

6. Classification of Soils in Kerala

District	*Type of soil*	*Detailes of Distribution*
(1)	(2)	(3)
Trivandrum	1. Fairly rich brown loam of laterite origion.	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.
Quilon	1. Sandy loam	Karunagappally and part of Quilon Taluk
	2. Laterite soil	Kottarakkara, Kunnathur and part of Quilon, Pathanapuram and Pathanamthitta Taluks.

District	*Type of soil*	*Detailes of Distribution*
(1)	(2)	(3)
	3. Hill and forest soil	Part of Pathanapuram and Pathanamthitta taluk.
Alleppey	1. Sandy loam	Karthigappally and Mavelikkara Taluk.
	2. Sandy soil	Sherthallai & Ambalapuzha Taluks.
	3. Clay loam with much of abidity	Kuttanad.
	4. Laterite soil	Chengannur and part of Mavelikkara.
Kottayam	1. Laterite soil	Peermade and part of Meenachil, Changanachery and Kottayam Taluks.
	2. Alluvial soil	Vaikom parts of Changanacherry and Kottayam, Deviculam and Udumbanchola.
Ernakulam	1. Laterite	Thodupuzha and Muvattupuzha and part of Kunnathunad.
	2. Sandy loam	Parur, Cochin and 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 Talappally.
	3. Granite	Northern part of Talappilly.
	4. Clay	Backwater area in Chowghat and Part of Mukundapuram.
	5. Alluvial soil	Portion of Chowghat and Kunnathunad Taluk
Palghat	1. Laterite	Interior regions of the District.
	2. Sandy	Along coastal and riverside areas.
	3. Black soil	North-Eastern portion of

(1)	(2)	(3)
Kozhikode	1. Laterite	Major part of the District barring coastal area
	2. Sandy	Coastal strip
Cannanore	1. Laterite	Major part of barring coastal area
	2. Sandy	Coastal area

7. CONVERSION RATIO BETWEEN THE RAW MATERIALS AND THE PROCESSED PRODUCT

Rice		
	Rice (cleaned) production	2/3 paddy production
Cotton		
	Cotton lint production	1/3 of kapas production
	Cotton seed production	2/3 of kapas production
		2 times of cotton lint production
Groundnut		
	Kernel to nuts in shell	70%
	Oil to nuts in shell	28%
	Oil to kernels crushed	60%
	Cake to kernels crushed	60%
Sesamum		
	Oil to seeds crushed	40%
	Cake to seeds crushed	60%
Caster seed		
	Oil to seeds crushed	37%
	Cake to seeds crushed	63%
Coconuts		
	Copra to nuts	one ton copra 6775 nuts
	Oil to copra crushed	62%
	Cake to copra crushed	38%
Neem seed		
	Oil to Kernel crushed	45 to 50%
	Cake to Kernels crushed	50 to 55%
Sugar		
	Gur from cane crushed	10%
	Crystal sugar from gur refined	62·40%
	Crystal sugar from cane crushed	9·97%
	Khandassari sugar from gur refined	37.5%
	Molasses from cane crushed	3.5%
Cashewnuts		25% of cashewnut
	Cashew kernels	6.3%
	Butter from mixed milk	5.3%
	Ghee from mixed milk	

8. AVERAGE ANALYSIS OF IMPORTANT FERTILISERS

Sl. No.	Name of Fertiliser	Nitrogen (N%)	Phosphatic (P205%)	Potash (K 20%)
1	2	3	4	5
1	Ammonium Sulphate Nitrade	26.0	..	..
2	Ammonium Sulphate	20.5	..	..
3	Ammonium Nitrate	33.5	..	..
4	Ammonium Phosphate	16.0	20.0	..
5	Calcium Ammonium Nitrate	20.5	..	..
6	Nitrate of Soda	16.5	..	..
7	Calcium Nitrate	15.3	..	..
8	Calcium Cyanamide	20.00	..	..
9	Urea	46.00	..	..
10	Super Phosphate—Single	..	18.00	..
11	Super Phosphate—Double	..	35.00	..
12	Super Phosphate—Trible	..	45.0	..
13	Rock Phosphate	..	28.3	..
14	Hyper Phosphate	..	27.3	..
15	Sulphate of Potash	..	..	48.00
16	Muriate of Potash	..	..	50.00
17	Groundnut Cake	7.00	1.5	1.3
18	Castor Cake	4.3	2.0	1.0
19	Mustard Cake	4.5	1.5	..
20	Muhua Cake	2.5	0.8	1.8
21	Neem Cake	5.2	1.0	1.4
22	Gingelly Cake	6.2	2.0	1.2
23	Coconut Cake	3.0	1.9	1.8
24	Poultry Manure	1.2–1.5	..	..
25	Sheep Manure	0.8- .6	..	..
26	Horse Manure	0.8- .6	..	..
27	Farm yard Manure	0.4	0.3	0.2
28	Fresh Cow Dung	1.57	0.25	0.18
29	Compost	0.5	0.25	0.5
30	Bone Meal	3.5	21.0	..
31	Fish Meal	4.10	3.0	0.3
32	Blood (dried)	11.5	1.5	0.6
33	Meat Meal	11.0	..	0.6
34	White Fish Meal	10.0	10.0	1.0

9. INSECT PEST AFFECTING PADDY CROPS, THEIR DISTRIBUTION AND SOME PRACTICAL METHODS OF CONTROL

Sl. No.	Name of Post	Nature of damage	Control of measures
(1)	(2)	(3)	(4)
1	Paddy Rice Swarming Caterpillar	Defoliation plants reduced to stumps nursery & early growing stages attached	Spray DDT at 1.5 Kg. a. i. per Ha or endrin at 250 g.m a. i. per Ha.
	Spodoptera Mauritia	Cater pillar bores into stem causing 'dead hearts' and 'white ear heads'	Set light traps in the field to catch and destroy moths. Collect egg masses from nursery plants and destroy them spray endrin or parathion at 250 gm. a. i. per Ha at intervals of 15—20 days starting from 15th day after sowing and upto flowering
2	Rice stem borer Cryporysa (Schoenobius) incertulas	All stages of plants suspectible to attack	
3	Rice bug Leptocorisa acuta	Sucks 'milk' of tender grains leaving them chaffy	Dust BHC or spray endrin or parathion at doses given above.
4	Rice Hispa Dicladispa (Hispa) armigera	Adults feed on green matter of leaves and grubs mine leaves	Spray DDT, endrin or parathion at above doses
5	Rices case worm Nymphula depunctalis	Cater pillar in lead-case defoliates	.. .. ..
6	Paddy gall fly pacy ciplosis or Y3ae	Maggot bores into central shoot and induces information of elongated hallce gall called 'silver shoot'	Spray endrin or parathion at 250 gm. a. i. per Ha 4 times at weekly intervals, fiom 15th day after transplantation. Set up light traps.
7	Paddy mealy bug	Lives within leaf-sheaths in colonies sucking sap causing stunting of crop	Spray parathion at 250 gm. a. i. per Ha Phosphamidon (Dimecron 100%) solun at 100 Ml, per Ha or Dimethoate (Rogar at 312 ml. per Ha)
8	Paddy leaf hoppers and Jassids.	Cause weakening of crop by desapping in colonies	Dust BHC
9	Paddy leaf roller Onaphalocrocis medinalis	Cater pillar flods leaves and feeds on green matter. Attacked fields show white patches	Dust BHC or spray DDT at doses given above.

10. List of Centres Selected for Recording Meteorological Information in Kerala During 1968-69

Trivandrum District

1. Ponmudi
2. Varkala
3. Attingal
4. Nedumangad
5. Trivandrum-b
6. Neyyattinkara
7. Parassala
8. Trivandrum (Aerodrome-b)

Quilon District

1. Pathanamthitta
2. Konni
3. Adoor
4. Kayunagappally
5. Punalur
6. Kottarakkara
7. Aryankavu
8. Quilon
9. Nilamel
10. Paravoor
11. Kayamkulam (A.M.)

Alleppey District

1. Arukutty
2. Sherthallai
3. Alleppey-b
4. Ambalapuzha
5. Thiruvalla
6. Chengannur
7. Haripad
8. Mavelikara
9. Kayamkulam

Kottayam District

1. Chinnar
2. Marayur
3. Munnar
4. Devikulam
5. Vandammedu
6. Vaikom
7. Palai
8. Ettumannor
9. Kumili
10. Kottayam
11. Peerumade (Taluk)
12. ,, (Residency)
13. Kanjirappally
14. Changanacherry
15. Veloor

Ernakulam District

1. Malayattur
2. Parur
3. Perumbavoor
4. Alwaye
5. Muvattupuzha
6. Neriamangalam
7. Karikode
8. Ernakulam
9. Cochin-b
10. Port of Cochin-b

Trichur District

1. Cranganore
2. Mukundapuram
3. Trichur
4. Thalappally
5. Ollukkara (A.M)
6. Peechi (A.M)

Palghat District

1. Alathur
2. Palghat-b
3. Parali
4. Ottappalam
5. Cherplasserry
6. Mannarghat
7. Perinthalmanna
8. Ponnani
9. Chittoor
10. Pattambi (A.M.)

Kozhikode District

1. Manjeri
2. Thriurangadi

3. Kozhikode-b
4. Nilambur
5. Vythiri
6. Quilandy
7 Badagara
8. Kuttiadi

CANNANORE DISTRICT

1. Kasargode
2. Thaliparamba
3. Cannanore
4. Hosdurg
5. Tellicherry
6. Irikkur
7. Payyannur
8. Mananthodi
9. Mahe
10. Kasargode (A.M)

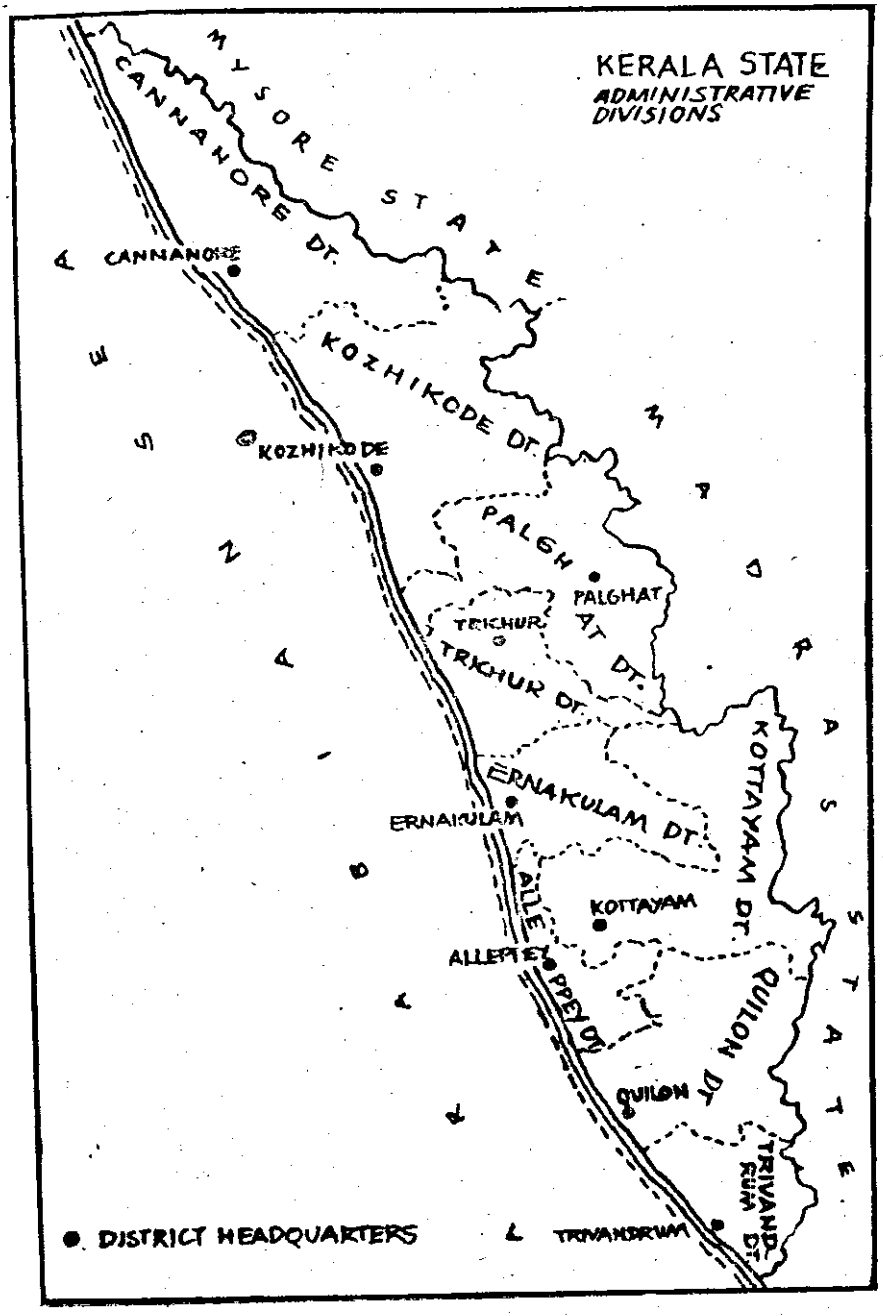
11. Glossary of English, Botanical and Malayalam Names of Crops

Sl. No.	*English Name*	*Malayalam Name*	*Botanical Name*
(1)	(2)	(3)	(4)
		CEREALS	
1	Paddy	Nellu	Oryza Sativa
2	Ragi	Koovaraku	Eleusine Coracana
3	Jowar	Cholam	Sorghum Valgare
4	Bajra	Kambu	Pennist um Typhodeum
5	Kodamillet	Vargu	Paspalum Scrobiculatum
6	Chama	Chama	Panicum Miliare
7	Wheat	Gothampu	Triticum Vulgare
8	Barley	Barley	Hordeum Vulgare
9	Maize	Mokka Cholam	Zea mays
		PULSES	
1	Blackgram	Uzhunnu	Phaseolus mungo
2	Greengram	Cherupayar	Phaseolus aureus
3	Horsegram	Muthira	Dolichos Biflorus
4	Redgram	Thuvara	Cajanus Cajan
5	Cowpea	Perumpayar	Vigna Sinensis
		SUGAR	
1	Sugarcane	Karimbu	Saccharum Officinarum
2	Palmyrah	Karimpana	Borassus flabellifar
		CONDIMENTS & SPICES	
1	Chilly	Mulagu	Capsium Spp
2	Turmeric	Manjal	Curcuma longa
3	Cardamom	Elam	Elatteria Cardamo m

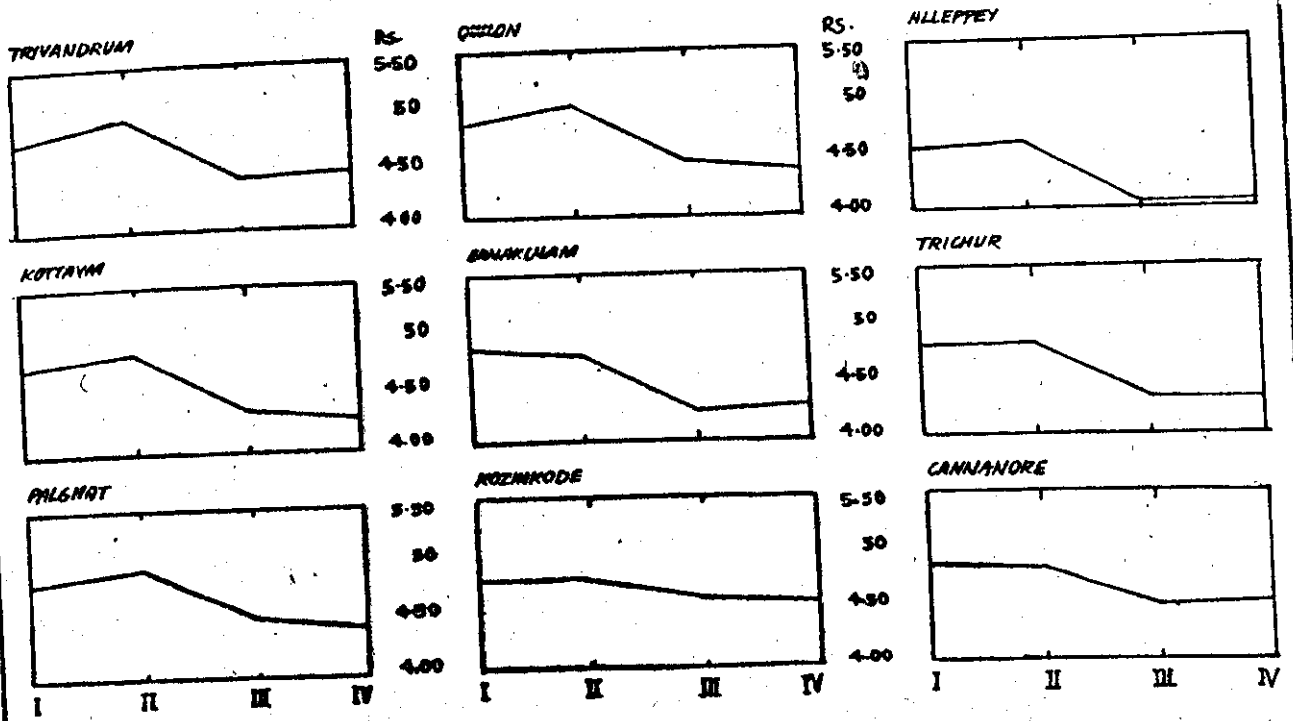
(1)	(2)	(3)	(4)
4	Coriander	Kothamalli	Coriandrum Sativum
5	Mustard	Kadugu	Brassica Spp
6	Pepper	Kurumulagu	Piper Nigrum
7	Cumin	Jeerakam	Cuminumoymium
8	Garlic	Veluthulli	Allium Sativum
9	Long pepper	Thippilli	Piperlongum
10	Ginger	Inchi	Zingiber Officinale
11	Nutmeg	Jathi	Myristica Fragrans
12	Cinnamon	Karukapatta	Cinnamomum Zeylanica
13	Clove	Grampu	Eugenia Caryophyllata
14	Cinchona	Cinchona	Cinchona Officiralis
15	Arecanut	Adacka	Areca Catechu
		FRUITS	
1	Banana	Vazha	Musa Paradisiaca
2	Plantain	Vazha	Musasepientum
3	Bread fruit	Seemaplavu	Artocarpusincisa
4	Bullacks heart	Malamumthiri	Anonareticulata
5	Cashew	Kasumavu	Anacardium Occidentale
6	Grape vine	Munthiri	Vitis Vinifera
7	Custardapple	Seetha Pazham	Anona Squamosa
8	Guava	Pera	Psidium Guajava
9	Jujube	Elantha	Ziz yphus Jujuba
10	Jack fruit	Plavu	Artocarpus Integrifolia
11	Lemon	Naranga	Citrus lemo i
12	Lime	Naranga	Citrus Aura itifolia
13	Mango	Mavu	Mangifera in lica
14	Papaya	Pappaka	Carica Papaya
15	Pineapple	Kaithachakka	Ananas Sativa
16	Pomegramate	Mathalam	Punica Granatum
17	Sapota	Sapota	Achras Sapota
18	Pomello	Bamplimus	Citrus Maxima
19	Orange	Orange	Citrus retiaulata
20	Mangoesteen	Manoesteen	Garcimia mangosteena
		VEGETABLES	
1	Tapioca	Maracheeni	Manihot Utilissima
2	Elephantear	Chembu	Colocasiaantiquorum
3	Elephant foot	Cheona	Amorphophallus Campanulatus
4	Potato	Uralakizhangu	Solanumtuberbosum
5	Sweet Potato	Cheenikizhangu	Ipomoca batatas
6	Radish	Mullangi	Raphanus sativus
7	Yam	Kachil	Dioscarea Spp

(1)	(2)	(3)	(4)
8	Turnip	Seema Mullangi	Brassica Campestris Varsapa
9	Carrot	Carrot	Daucus Carota
10	Red pumpkin	Vellarimathan	Cucurbita Maxima
11	Brinjal	Vazh-uthana	Solanum Mal ngena
12	Tomato	Thakkali	Lycoperseum esculentum
13	Amaranthus	Cheera	Amaranthus Spp
14	Lady's finger	Venda	Abelmoschus esaulenlus
15	Bitter gourd	Pavakka	Mamordica Charantia
16	Bottle gourd	Churakka	Lagenaria Siceraria
17	Snake gourd	Padavalanga	Trichosanthes anguina
18	Ridge gourd	Peechanga	Luffaacutangulata
19	Smooth gourd	Chorakka	Luffa Cylindrica
20	Ash gourd	Kumbalanga	Benincasa
21	Little gourd	Kowva	Coccinia cordifolia
22	Cluster bean	Kothavara	Cyamposis psoralodes
23	Sword bean	Vellaringa	Canavalia ensiformis
24	Frenchbean	Beans	Phaseolus vulgaris
25	Karileaf	Karivappila	Murraya Zoonigari
26	Beet root	Beet root	Beta Vulgaris
27	Cabbage	Muttakose	Brassica Oleracca
28	Gauliflower	Cauliflower	Brassica Cleracca
29	Cucumber	Vellarikka	Cucumis Sativus
30	Musk Melon	Thaikumbalam	Cucumis melo
31	Pumpkin	Mathanga	Cucurbitapepo
32	Indian Bean	Amara	Dolichos lablab
33	Drum stick	Muringa	Moringa Pterigosperma
34	Onion	Ulli	Allium Cepa
35	Roseapple	Jampa	Engenia Jamos
		OIL SEEDS	
1	Cocoanut	Thengu (Nalikeram)	Cocos nucifera
2	Sesamum	Ellu	Sesamum Spp
3	Groundnut	Nilakkadala	Arachis Hypogea
4	Mustard	Kadugu	Brassica Spp
5	Castor	Avanakku	Ricinus communis
		FIBRES	
1	Cotton	Paruthi	Gossypiam Spp
2	Jute	Chanam	Corechoreus capsularis
3	Sunhemp	Kattuchanam	Crotalaria juncea
4	Sisal hemp	Kallarvazha	Agave Spp

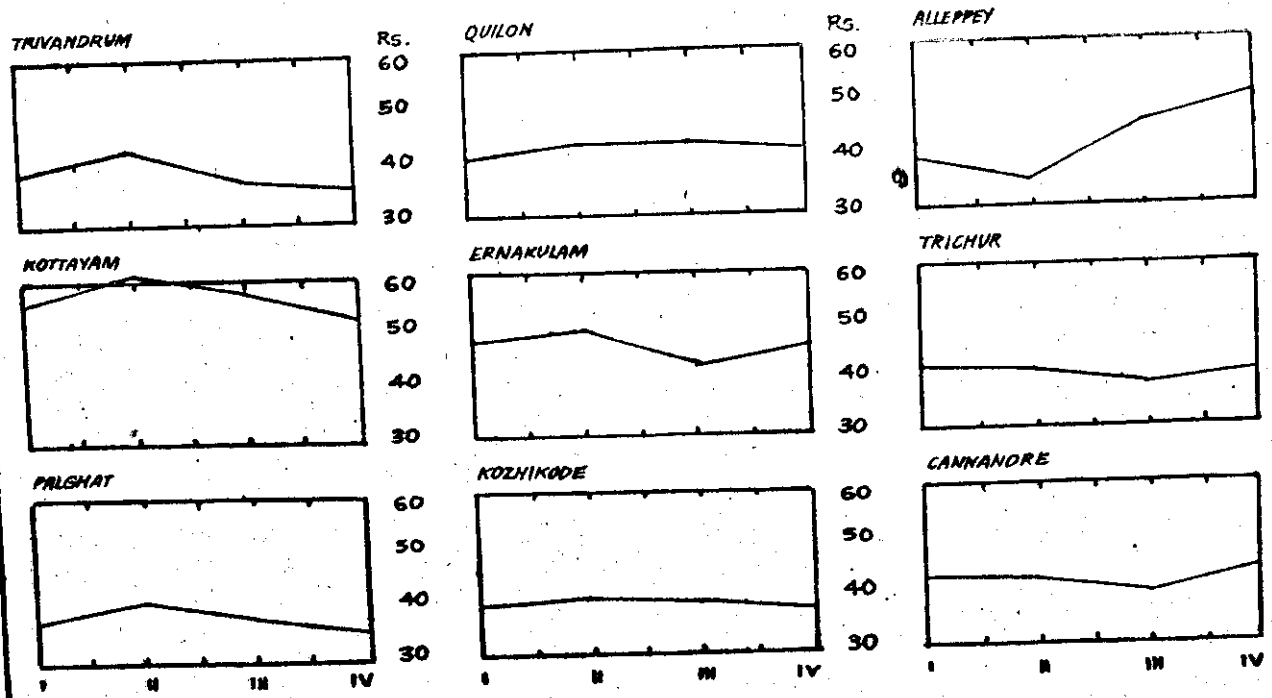
(1)	(2)	(3)	(4)
		Drugs	
1	Tobacco	Pukayila	Nicotiana tabaccum
2	Opium	Karuppu	Palayar somniferum
3	Cocoa	Cocca	Theobrema cocoa
		Plantation Crops	
1	Tea	Thevila	Camellia thea
2	Coffee	Coffee	Coffea arabica
3	Rubber	Rubber	Hevea brasiliensis
		Fodders	
1	Bermuda grass	Karuka pullu	Cynodom declylom
2	Guinea Grass	Kuthirapullu	Panicum maximum
		Timber	
1	Teak	Thekku	Tectoma grandis
2	Ebony	Karimaram	Diosphyros assimills
3	Jungle Jack	Anjili	Artocarpus hirsuta
4	Poonspar	Kattupunna	Cabophyplum tomentose
5	Cotton tree	Elavu	Bombax malabaricum
6	Perumaram	Peru maram	Ailanthus excelsa
7	Karimaruthu	Karimaruthu	Calophyslum tomentosam
8	Maruthu	Maruthu	T. paniculata
9	Chula maruthu	..	T. travancorensis
10	Karanjili	..	Dip terocarpus indices
11	Indian mahogam	Mahagani	Cedrella toona
12	Mangotree	Mavu	Magifera indica
13	Kulamavu	Kulamavu	Buchanania latifoli
14	Iron wood tree	Kadamuram	Xylia dolabrief ormis
15	Puli	Puli	Albizzia oderatima
16	The write sitis tree	Karimthakara	Albizzia procera
17	Sitis tree	Vaga	Lebbek spp
18	Venteak	Ven thekku	Lagerstroenia lanceo lata
19	Manja Kadambu	Manja Kadambu	Adina cordifolla
20	Pala	Pala	Alstonia scholaris
21	Kumbil	Kumbil	Gmelina arborea
22	Mull vengai	Mullu venga	Bridelia retush
23	Manogana	Mahogany	Saietenia mahogani
24	Bombay bag rose wood	Eitti	Dalbergia latifolia
25	Jack tree	Plavu	Artecarpus integrifolia
26	Majadi	Manjadi	Adennathera pavonina


KERALA STATE
ADMINISTRATIVE DIVISIONS
MYSORE STATE
CANNANORE DT.
CANNANORE
KOZHIKODE DT.
KOZHIKODE
PALGHAT DT.
PALGHAT
TRICHUR
TRICHUR DT.
ERNAKULAM DT.
ERNAKULAM
KOTTAYAM DT.
KOTTAYAM
ALLEPPEY
ALLEPPEY DT.
QUILON DT.
QUILON
TRIVANDRUM DT.
TRIVANDRUM
MADRAS STATE
ARABIAN SEA
DISTRICT HEADQUARTERS

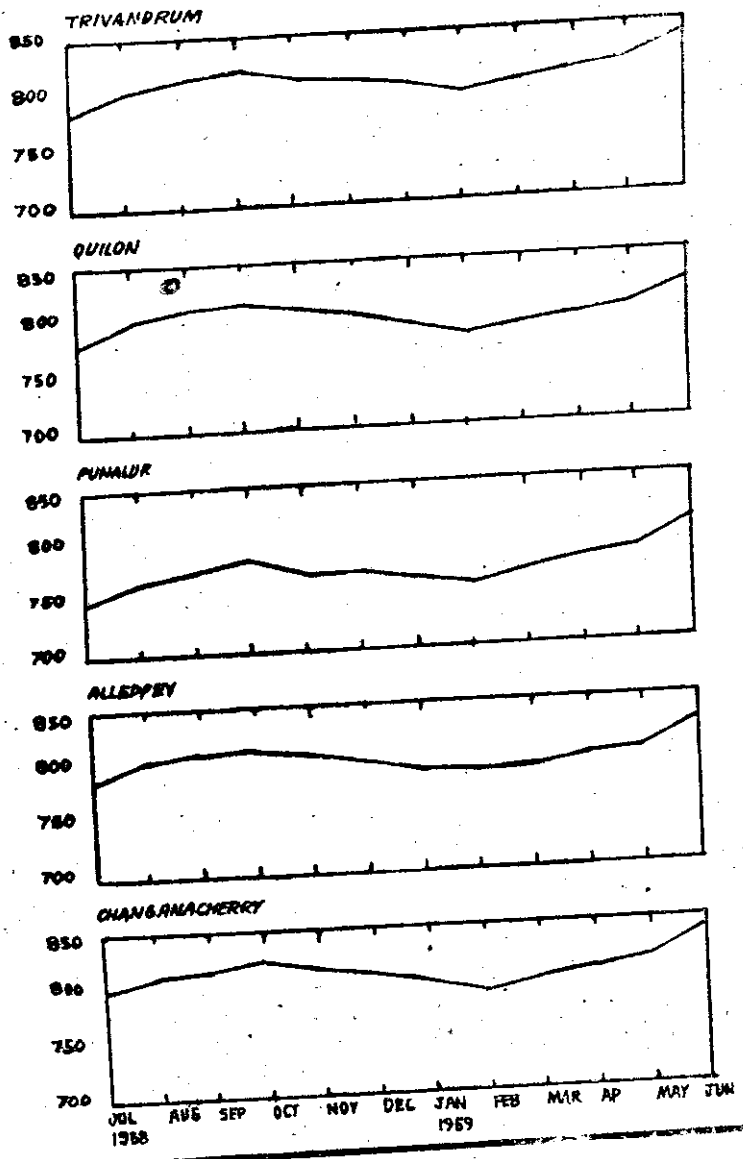
QUARTERLY AVERAGE RETAIL PRICES OF COCONUT OIL (Ltr.) 1968-1969.



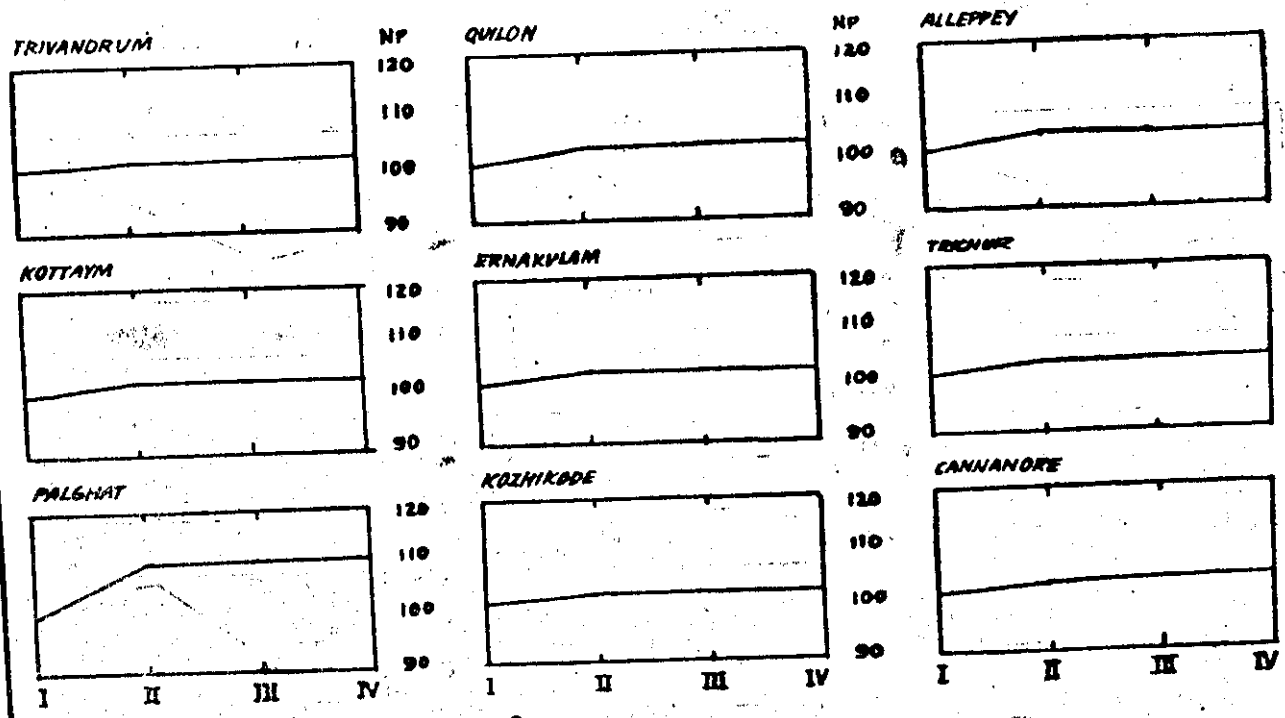
QUARTERLY AVERAGE RETAIL PRICES OF COCONUT (100 Nos.) 1968-'69.



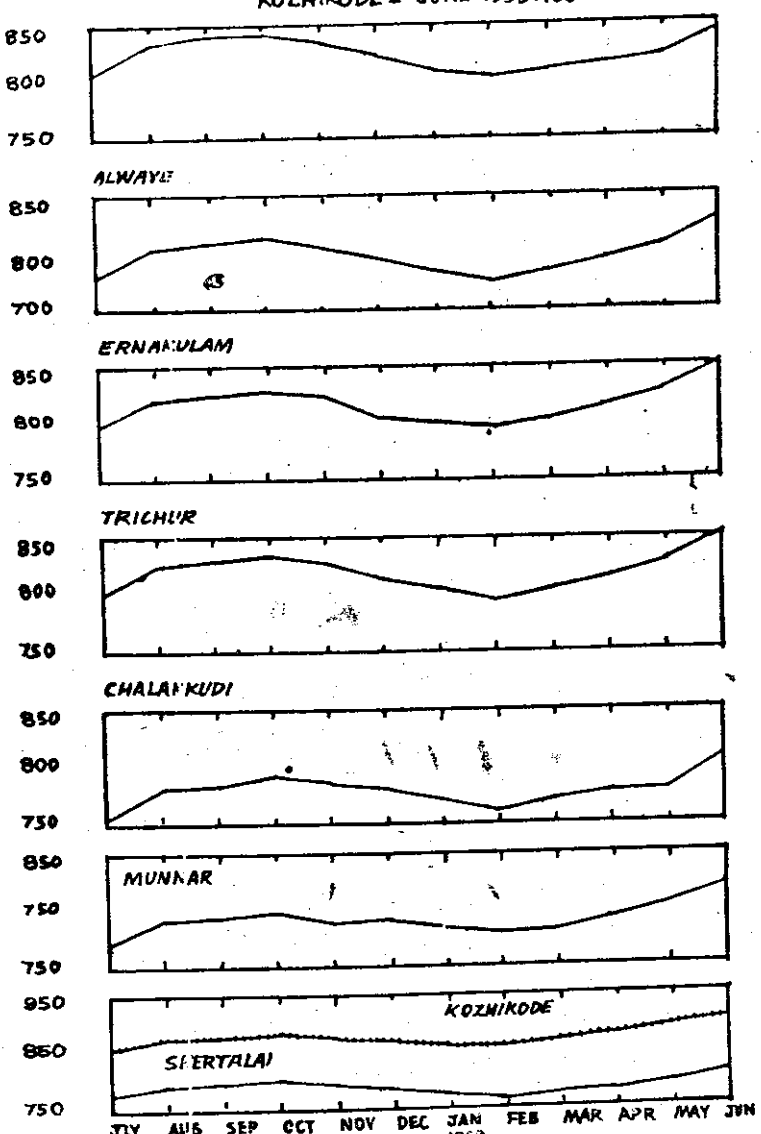
WORKING CLASS CONSUMER PRICE INDEX NUMBERS, THE YEAR 1968-'69 (base=Aug'36=100)



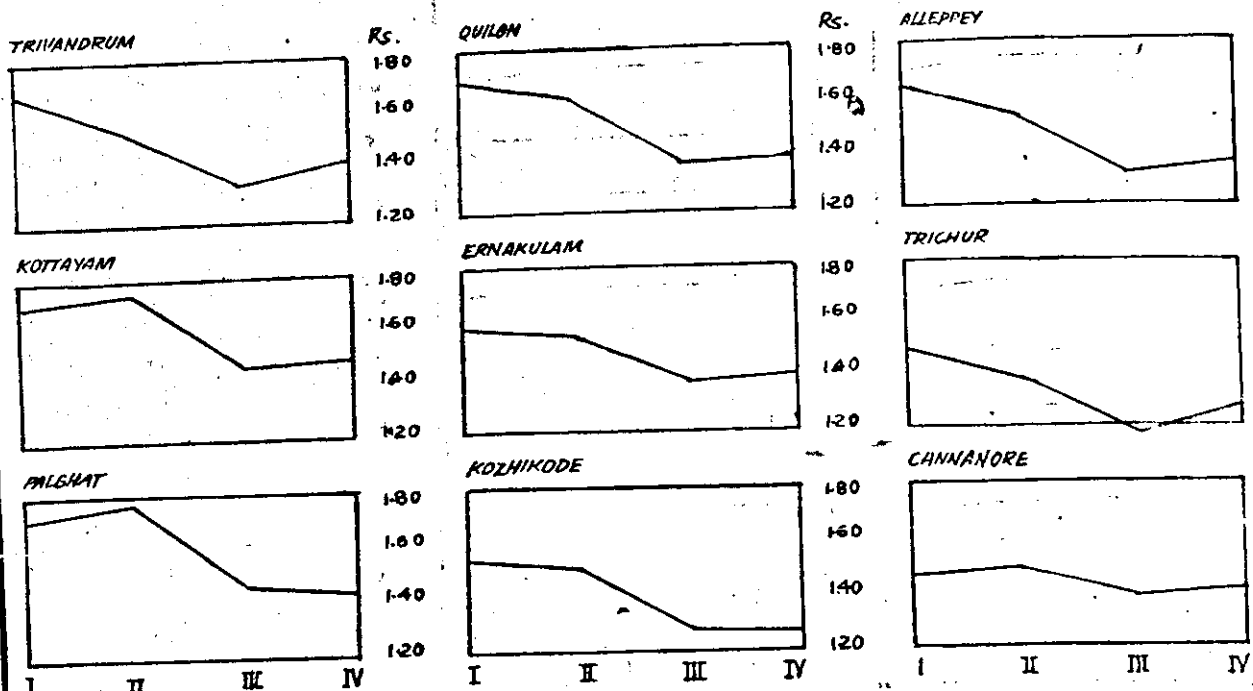
QUARTERLY AVERAGE RETAIL PRICES OF RICE (F.P) 1968-'69



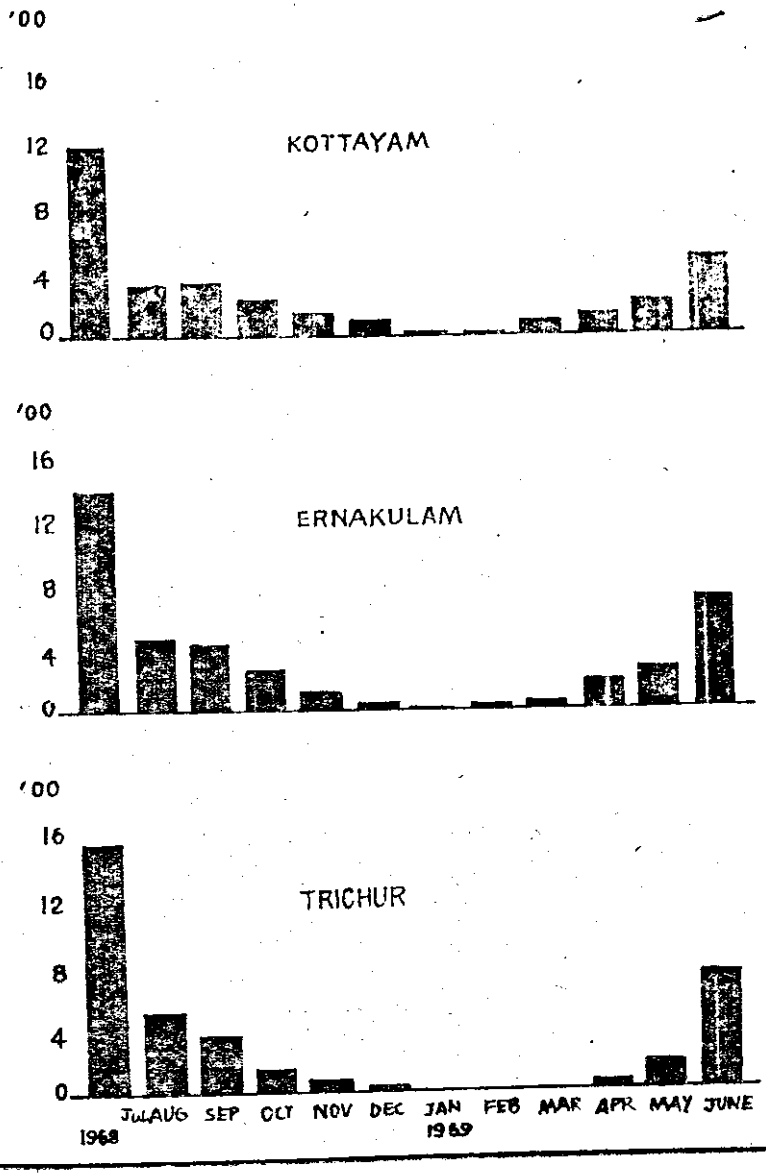
WORKING CLASS CONSUMER PRICE INDEX NUMBERS, THE YEAR 1968-'69 (BASE=AUG'36=100



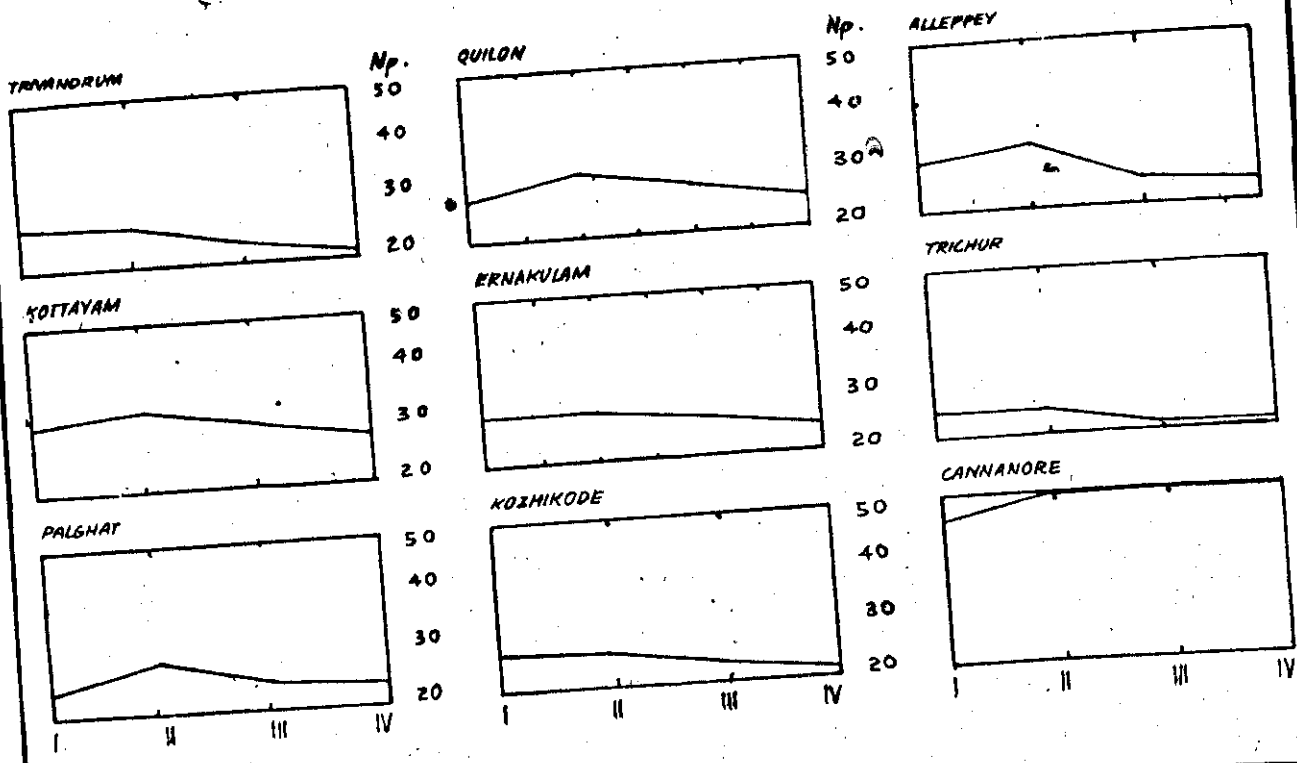
QUARTERLY AVERAGE RETAIL PRICES OF BLACKGRAM (Kg.) 1968-'69



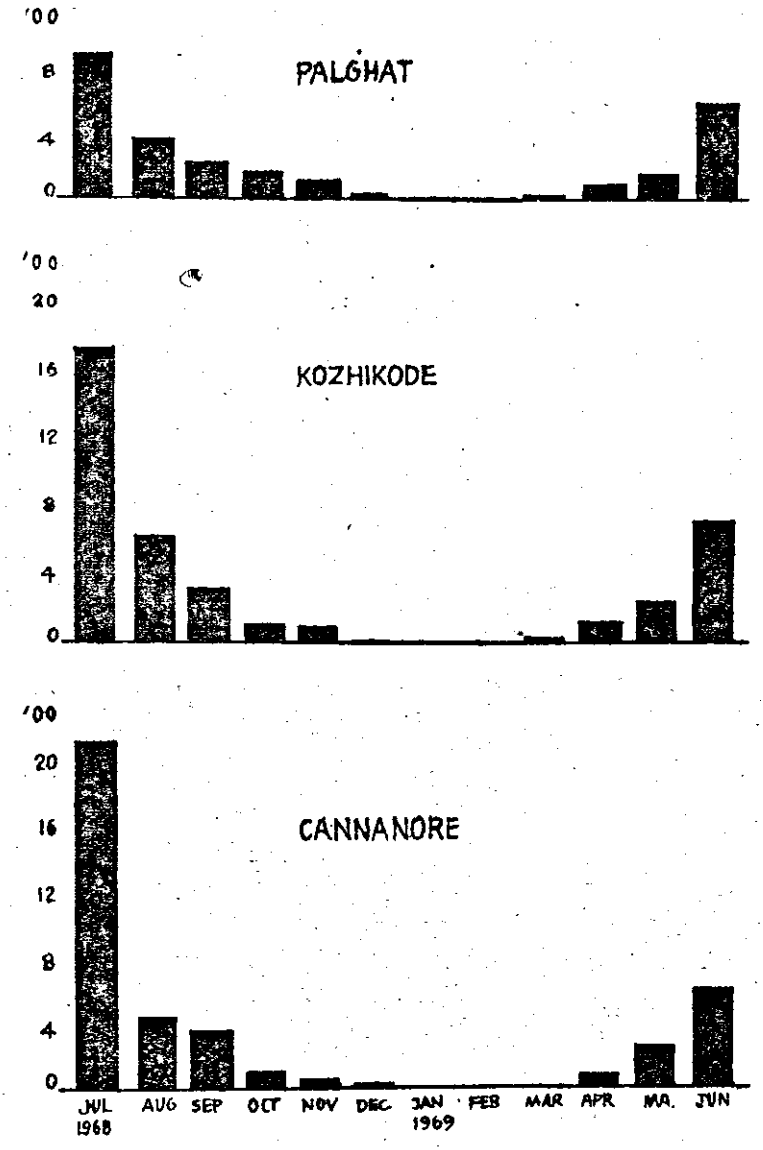
AVERAGE MONTHLY RAINFALL 1968-'69

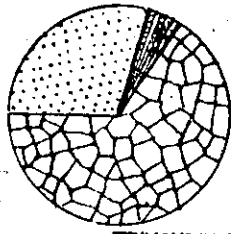


QUARTERLY AVERAGE RETAIL PRICES OF TAPIOCA (Kg.) 1968-1969



AVERAGE MONTHLY RAINFALL 1968-'69





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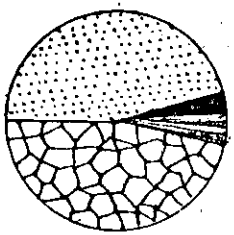
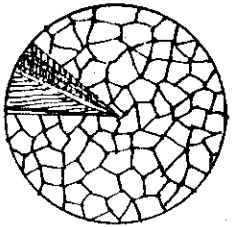
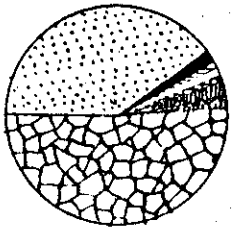


QUILON

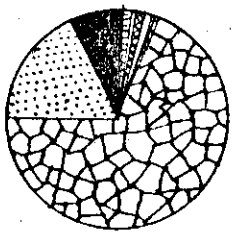


ALLEPPEY

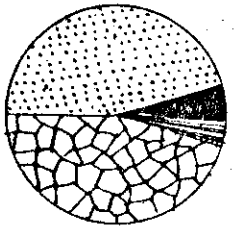
CLASSIFICATION OF AREA 1968-'69



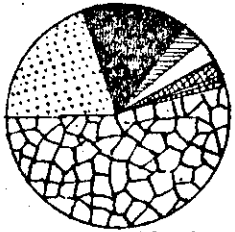
KOTTAYAM



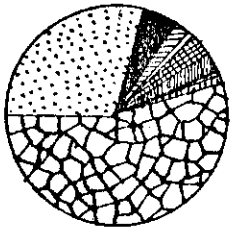
ERNAKULAM



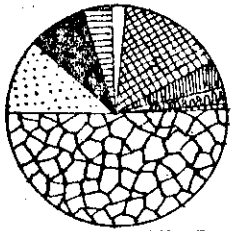
TRICHUR



PALGHAT



KOZHIKODE



CANNANORE

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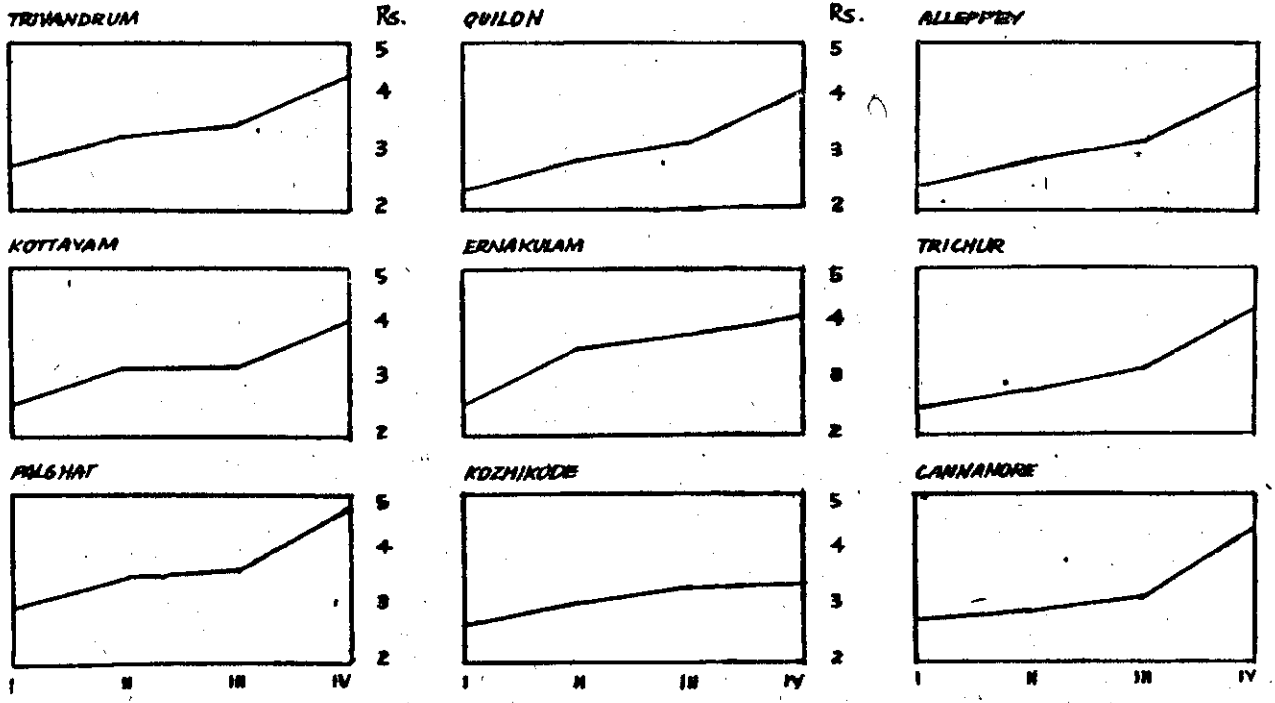
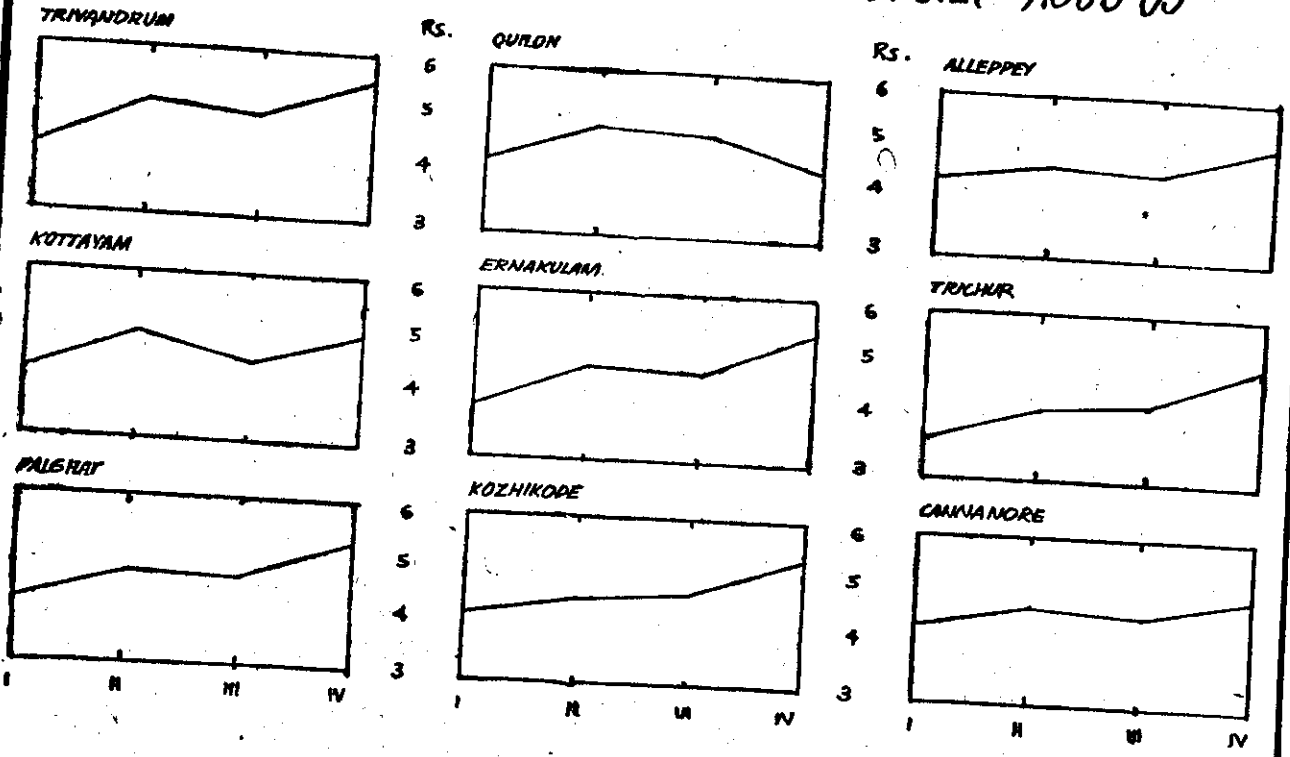
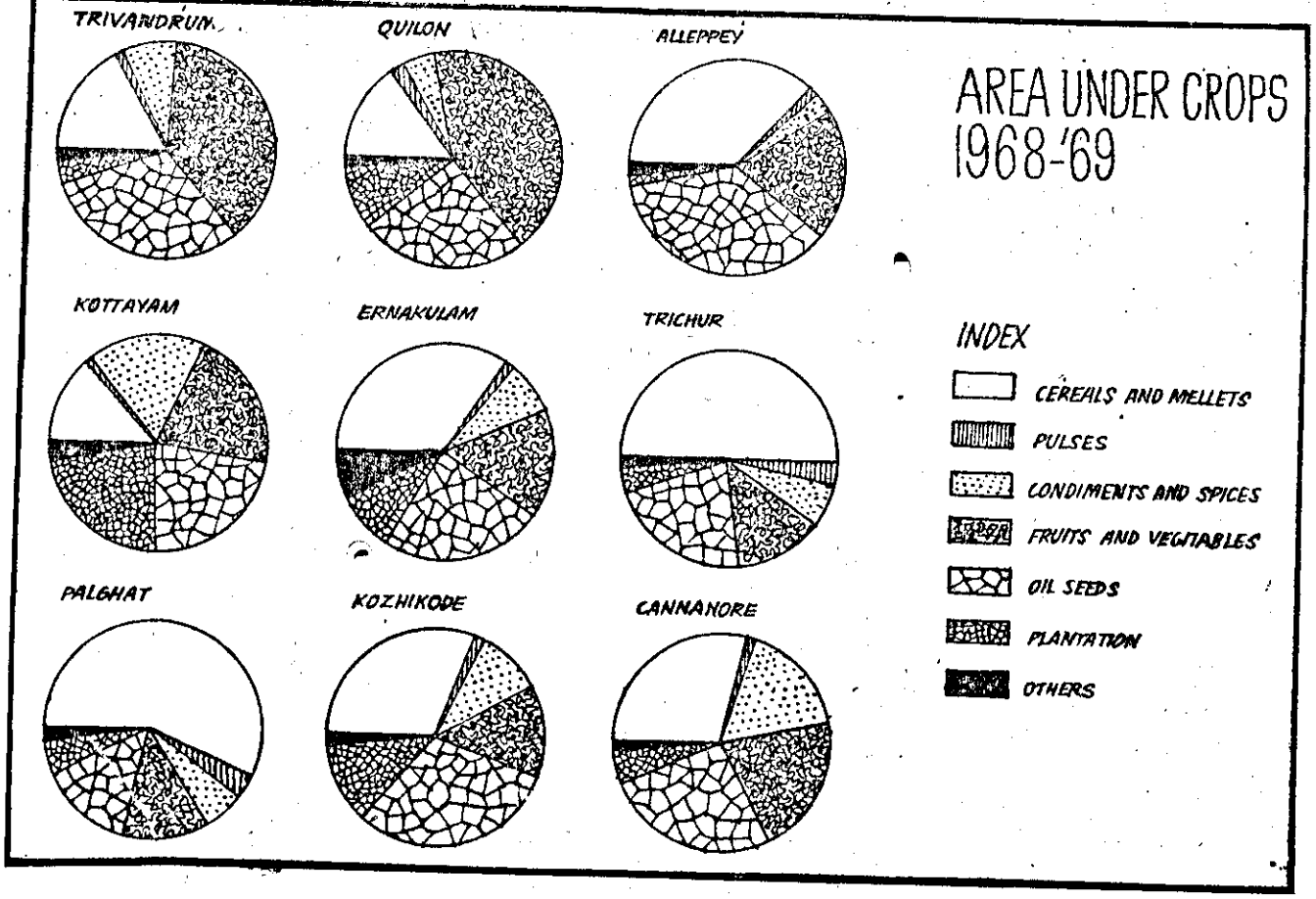
- CULTIVABLE WASTE
- OTHER FALLOW LANDS
- CURRENT FALLOW
- NET AREA SOWN

QUARTERLY AVERAGE RETAIL PRICES OF CHILLIES (Kg.) 1968-1969



QUARTERLY RETAIL PRICES OF GINGELLY OIL (LITRE) 1968-'69




TRIVANDRUM
QUILON
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ERNAKULAM
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PALGHAT
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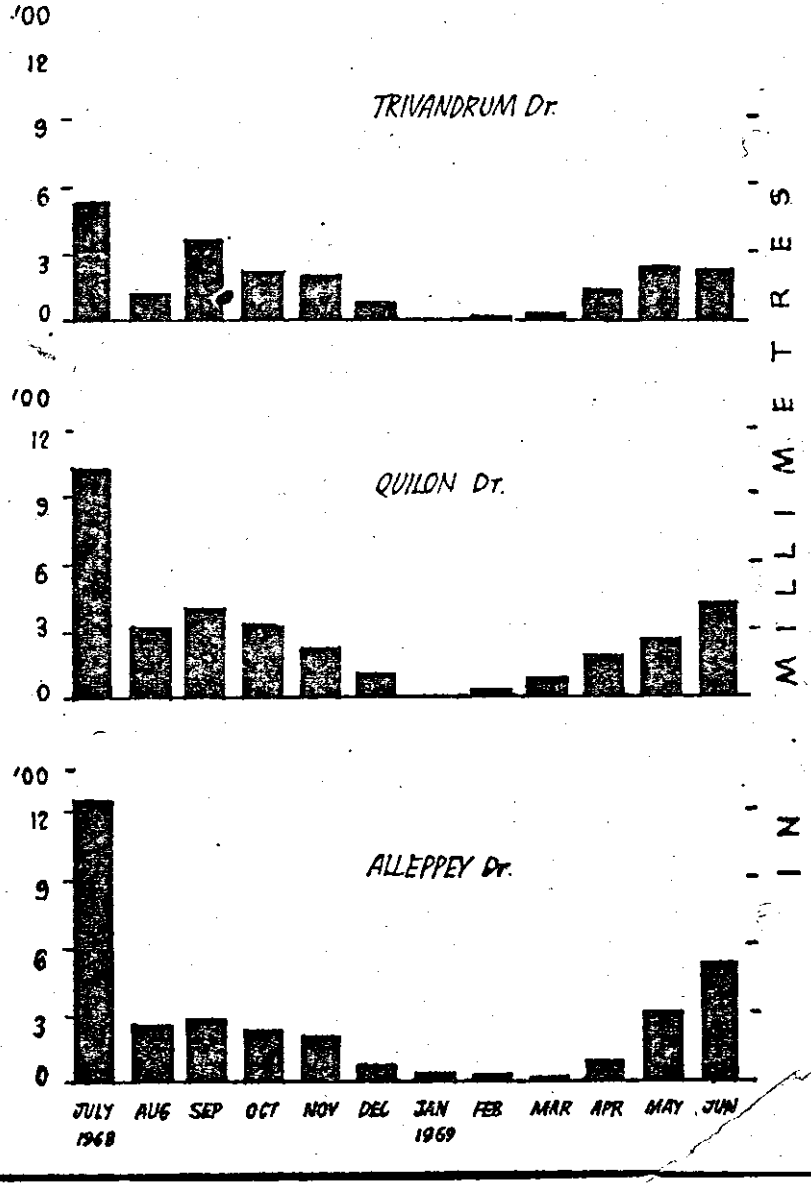
AVERAGE MONTHLY RAINFALL 1968-'69



QUARTERLY AVERAGE RETAIL PRICES OF SUGAR (F.P) 1968-1969