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GOVERNMENT OF KERALA

SEASON AND CROP REPORT

FOR

KERALA STATE

1972-73

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GOVERNMENT OF KERALA

1975

BUREAU OF ECONOMICS AND STATISTICS

TRIVANDRUM

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SEASON AND CROP REPORT

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KERALA STATE

1972-73

BUREAU OF ECONOMICS AND STATISTICS

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FOR

KERALA STATE

1975-73

BOARD OF ECONOMICS AND STATISTICS

TRIVANDRUM

SEASON AND CROP REPORT 1972-73

FOREWORD

This report is the 14th in the series of season and crop reports relating to Kerala State. It deals with the different aspects of the agricultural economy of the State pertaining to the year 1972-73. 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,
1-9-1974.

N. GOPALAKRISHNAN NAIR,
Director.

STATION AND ROY REPORT - 1913

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This report is the first of the series of reports on the
geology of the State of New York. It contains a
description of the geology of the State and a
list of the localities where the rocks were
collected.

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State of New York

1913

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PART—I

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SEASON AND CROP REPORT FOR KERALA STATE 1972-73

1. Introduction

Kerala is a small State occupying only 1.2% of the total area of the country. The State has a geographical area of 38585 Sq. KM. and its coastal line runs into 580 KM. It lies in the South West corner of India between 8° 18' and 12° 48' north latitudes and 74° 52' and 77° 22' east longitudes its width varies between 130 KM. in the middle to 32 KM. in the extremities.

The undulating topography has created three district natural divisions in the State. They are the low land, the midland, and the highland. The low land extends over the sea and the high land includes the forests of the Westernghats. The area lying in between the two regions is the midland. These natural divisions of the State have been mainly responsible for its diversity in plant growth.

The high land is the most suited region for the cultivation of plantation crops whereas paddy and cocoanut are abundant in the low land. Numerous crops are cultivated in the midland region in varying scales. The important among them are paddy, tapioca, cocoanut, arecanut, pepper, ginger and sugarcane.

The State has a normal rainfall of about 3000 mm. per annum. Both the South-West and North-East monsoon give good rain to the State. There are 44 rivers in the State. Of these 41 are West flowing and three are east flowing. The backwaters of the State with their connecting canals provide immense facilities of inland navigation.

The State is divided into 11 districts and 57 taluks. The districts are Trivandrum, Quilon, Alleppey, Kottayam, Idikki, Ernakulam, Trichur, Palghat Malappuram, Kozhikode and Cannanore.

Agriculture is the main occupation of the people. The distinctive feature of the states agriculture is the diversity of crops grown and the heterogeneity in cultivation. Paddy is the most important crop of the State. Three crops of paddy are raised in a year. They are Autumn (Virippu) Winter (Mundakan) and Summer (Punja). Other seasonal crops cultivated in the State are tapioca, sugarcane, banana, pulses, sesamum, ragi, groundnut, ginger, turmeric and cotton. Perennial and semo-perennial crops like cocoanut, arecanut, cashew, pepper and plantation crops like rubber, tea, coffee and cardamom are also grown abundantly in the State.

2. Population :

The population of the State as per 1971 census is 213.47 lakhs and the density of population is 549 per Sq. km. The estimated population as on 1st March 1973 is 223 lakhs. The following table gives the details of 1971 census population.

DISTRICT-WISE POPULATION AND DENSITY

| District | Population | Density/Sq. km. |
|----------------|------------|-----------------|
| | (in lakhs) | |
| | 1971 | 1971 |
| KERALA | 213.47 | 549 |
| 1. Cannanore | 23.65 | 415 |
| 2. Kozhikode | 21.06 | 565 |
| 3. Malappuram | 18.56 | 510 |
| 4. Palghat | 16.85 | 383 |
| 5. Trichur | 21.29 | 702 |
| 6. Ernakulam | 21.64 | 914 |
| 7. Kottayam | 15.39 | 697 |
| 8. Idikki | 7.65 | 149 |
| 9. Alleppey | 21.26 | 1128 |
| 10. Quilon | 24.13 | 522 |
| 11. Trivandrum | 21.99 | 1003 |

The per capita land available for cultivation in the State is 0.12 hectare whereas the per capita cultivated land is 0.11 hectare.

Kerala has the highest % of literacy among the Indian states. According to the 1971 census the literacy rate in Kerala (60.16%) is more than double the rate in All India (29.32%). The census figures also reveal that male literacy has gone up from 54.97% in 1961 to 66.54% in 1971 and female literacy has shown a more remarkable increase from 38.83% in 1961 to 53.90% in 1971.

3. Rainfall

The normal rainfall in the State varies from 2001 mm. in Trivandrum District to 3796 mm. in Kozhikode District. The normal and actual rainfall during 1972-73 are furnished below:-

Rainfall

TABLE II

| District | Normal rainfall (mm) | Actual rainfall (mm) 1972-73 |
|------------|-------------------------|---------------------------------|
| Trivandrum | 2001 | 2374 |
| Quilon | 2760 | 2555 |
| Alleppey | 3012 | 2633 |
| Kottayam | 3083 | 2355 |
| Idikki | .. | 2861 |
| Ernakulam | 3578 | 3128 |
| Trichur | 3177 | 2637 |

| District | Normal rainfall (mm) | Actual rainfall (mm) 1972-73 |
|------------|-------------------------|---------------------------------|
| Palghat | 2398 | 2328 |
| Malappuram | 2900 | 2667 |
| Kozhikode | 3796 | 3419 |
| Cannanore | 3438 | 2786 |
| STATE | 3014 | 2704 |

Information on district wise details of normal and average rainfall has been furnished in tables 1.1 and 1.2 of Part III.

4. Soil

Different types of soil are seen in the State. They can be classified as shown below:—

1. Hilly and forest soil seen all along the eastern portion of the State.
2. The sandy soil seen all along the coastal belt.
3. The laterite soil seen in the midland.
4. The black soil which occurs as patches seen in the eastern border of the Palghat District.
5. The peat or kari soil seen in Alleppey District.
6. The alluvial soil seen all along the southern and eastern parts of Vembanad lake and in small patches in Trivandrum district.
7. The red soil found in the extreme tip of Trivandrum taluk.

Statement showing detailed classification of soil is given in appendix 6 of Part IV.

5. Communication facilities

The transport and communication of the State is a well developed one. There is net work of roads connecting the different parts of the State. Eventhough there is a rail link connecting Kasargode in the north to Trivandrum in the south, the interior parts of the State are not served by railways. Further, the change from broadgauge to metre-gauge at Ernakulam creates inconvenience due to the transhipmen involved. The proposed conversion of the Ernakulam-Trivandrum section of the metre-gauge line into broad-gauge is expected to obviate this difficulty. The water transport system of the state is a unique feature highly significant in the economy of the State. There are 2 aerodromes in the State at Cochin and Trivandrum.

6. Land Utilisation.

The Land Utilisation particulars of the State relating to 1972-73 have been furnished in Table A of the summary tables and district-wise details for 1972-73 are given in table 2.1 of the detailed tables. Details of areas under different types of use are given below:—

1. *Total area of the State.*—The total area of the state according to village papers is 3,858,523 hectares. The district-wise break-up of this area is furnished below:—

Table III

| District | Area in hectares | Percentage | Area as per 1971 census |
|------------|------------------|------------|-------------------------|
| Trivandrum | 216095 | 5.6 | 219200 |
| Quilon | 469051 | 12.2 | 462300 |
| Alleppey | 186790 | 4.8 | 188400 |
| Kottayam | 2,5695 | 5.6 | 219600 |
| Idukki | 506775 | 13.1 | 508700 |
| Ernakulam | 221183 | 5.7 | 237700 |
| Trichur | 299149 | 7.8 | 303200 |
| Palghat | 437087 | 11.3 | 440000 |
| Malappuram | 363045 | 9.4 | 363800 |
| Kozhikode | 366991 | 9.5 | 372900 |
| Cannanore | 576661 | 15.0 | 570600 |
| STATE | 3858523 | 100.0 | 3886400 |

2. *Forest*—The area under forest during 1972-73 is 1054854 hectares. The district-wise area during 1971-72 and 1972-73 is furnished in the following table,

Table IV

| District | Area under forest in Hectares | |
|------------|-------------------------------|---------|
| | 1971-72 | 1972-73 |
| Trivandrum | 43849 | 43849 |
| Quilon | 210651 | 210651 |
| Alleppey | 513 | 513 |
| Kottayam | 252919 | 6398 |
| Idukki | | 299221 |
| Ernakulam | 55212 | 2512 |
| Trichur | 132369 | 132369 |
| Palghat | 67185 | 67185 |
| Malappuram | 97627 | 97627 |
| Kozhikode | 128607 | 128607 |
| Cannanore | 65932 | 65932 |
| TOTAL | 1054864 | 1054864 |

3. *Land put to non-agricultural uses.*—The land put to non-agricultural uses during the year is 275726 hectares, whereas the corresponding figure for the previous year is 276592 hectares. The district-wise break-up is furnished in the following table.

TABLE No. V

| District | Area under non-agricultural uses (Hectares) | |
|------------|---------------------------------------------|---------|
| | 1971-72 | 1972-73 |
| Trivandrum | 15507 | 15845 |
| Quilon | 15500 | 14983 |
| Alleppey | 12981 | 12500 |
| Kottayam | 17989 | 12113 |
| Idukki | .. | 13704 |
| Ernakulam | 25828 | 20857 |
| Trichur | 16577 | 17191 |
| Palghat | 46911 | 48787 |
| Malappuram | 13219 | 13184 |
| Kozhikode | 49390 | 45126 |
| Cannanore | 62690 | 61436 |
| STATE | 276592 | 275726 |

4. *Barren and uncultivable land.*—The area under this category during the year is 67731 hectares as against 68655 hectares in the previous year.

5. *Permanent pastures and grazing land:*—The area under this category of land is 27800 hectares.

6. *Land under miscellaneous tree crops.*—The land under this category during the year is 115007 hectares whereas the estimate for the previous year is 121312 hectares.

7. *Cultivable waste land.*—The area under the above category is estimated to be 74010 hectares during the year as against the corresponding estimate of 77618 hectares in the previous year. The district-wise estimates of area are furnished in the following table.

TABLE No. VI

| District | Cultivable waste land (hectares) | |
|------------|----------------------------------|---------|
| | 1971-72 | 1972-73 |
| (1) | (2) | (3) |
| Trivandrum | 566 | 433 |
| Quilon | 1997 | 2157 |
| Alleppey | 861 | 775 |
| Kottayam | 15705 | 1658 |

| (1) | (2) | (3) |
|------------|-------|-------|
| Idukki | .. | 13401 |
| Ernakulam | 1849 | 1805 |
| Trichur | 1799 | 1871 |
| Palghat | 4158 | 4096 |
| Malappuram | 23460 | 22639 |
| Kozhikode | 3119 | 8359 |
| Cannanore | 18104 | 16816 |
| STATE | 77618 | 74010 |

The area of cultivable waste land is minimum in Trivandrum District and maximum in Malappuram District.

8. *Fallow land other than current fallow*,—An area of 20732 hectares is estimated to be under the above category during the period. The corresponding estimate for the previous year is 21274 hectares.

9. *Current fallow*.—The land under this category is estimated to be 25664 hectares during the year as compared to 23379 hectares for the previous year. The district-wise estimates are given in the following table.

TABLE No. VII

| District | Current fallow (Hectares) | |
|------------|---------------------------|---------|
| | 1971-72 | 1972-73 |
| Trivandrum | 263 | 239 |
| Quilon | 434 | 399 |
| Alleppey | 528 | 594 |
| Kottayam | 3381 | 2257 |
| Idukki | .. | 3490 |
| Ernakulam | 3189 | 3691 |
| Trichur | 1765 | 1554 |
| Palghat | 2422 | 2277 |
| Malappuram | 4462 | 4057 |
| Kozhikode | 2585 | 2350 |
| Cannanore | 4350 | 4756 |
| STATE | 23379 | 25664 |

10. *Net area sown*:—The net area sown during the year is 2196989 hectares as against 2187029 hectares during the previous year. District-wise area is given in the following table.

TABLE No. VIII

| District | Net area sown (hectares) | |
|------------|--------------------------|---------|
| | 1971-72 | 1972-73 |
| Trivandrum | 153409 | 153245 |
| Quilon | 230013 | 230723 |
| Alleppey | 163846 | 164454 |
| Kottayam | 221077 | 183554 |
| Idukki | .. | 165644 |
| Ernakulam | 222530 | 186160 |
| Trichur | 138179 | 139560 |
| Palghat | 287149 | 289091 |
| Malappuram | 210138 | 212239 |
| Kozhikode | 157765 | 163579 |
| Cannanore | 302923 | 308740 |
| STATE | 2187029 | 2196989 |

11. *Area sown more than once*.—Area sown more than once has increased from 771327 hectares to 789489 hectares during the year. The table showing district-wise details is given below:—

TABLE No. IX

| District | Area sown more than once (hectares) | |
|------------|-------------------------------------|---------|
| | 1971-72 | 1972-73 |
| Trivandrum | 96045 | 95778 |
| Quilon | 126296 | 128558 |
| Alleppey | 69321 | 72549 |
| Kottayam | 45885 | 86810 |
| Idukki | .. | 2576 |
| Ernakulam | 62231 | 35471 |
| Trichur | 107118 | 104222 |
| Palghat | 50225 | 51025 |
| Malappuram | 46168 | 45326 |
| Kozhikode | 112278 | 112062 |
| Cannanore | 55760 | 55112 |
| STATE | 771327 | 789489 |

It is seen from the above table that the area under multiple cropping is the maximum in Quilon District and the minimum in Idukki District.

12. *Total cropped area.*—The total cropped area in the State during the year is 2986478 hectares as against 2958356 hectares in the previous year. A consistently increasing trend is noticed in the total cropped area for the past few years.

The district-wise details of both net area sown and total cropped area are furnished in the following table.

TABLE No. X

| District | Net area sown 1972-73 | Total cropped area 1972-73 | % of total cropped area to net area sown |
|--------------|-----------------------------|----------------------------------|------------------------------------------------------|
| Trivandrum | 153245 | 249023 | 162 |
| Quilon | 230723 | 359281 | 156 |
| Alleppey | 164454 | 237003 | 144 |
| Kottayam | 183554 | 270364 | 147 |
| Idukki | 165644 | 168220 | 102 |
| Ernakulam | 186160 | 221631 | 119 |
| Trichur | 139560 | 243782 | 175 |
| Palghat | 289091 | 340116 | 118 |
| Malappuram | 212239 | 257565 | 121 |
| Kozhikode | 163579 | 275641 | 169 |
| Cannanore | 308740 | 363852 | 118 |
| STATE | 2196989 | 2986478 | 136 |

7. *Area under crops.*—Details of area under food and non-food crops in the State are given in Table C of the summary tables and the district-wise area is given in Table 3.1 of the detailed tables.

A. *Food crops.*—The area under food crops during the year is 1849896 hectares whereas the corresponding figure for the previous year is 1846993 hectares. The area under food crops accounts for 61.9% of the total cropped area.

The district-wise area under food crops and its percentage to total cropped area are furnished in the table given below.—

TABLE No. XI

| District | Total cropped area | Area under food crops | Percentage of area under food crops to total covered by each district | Area under food crops as % to total cropped area |
|------------|--------------------|-----------------------|-----------------------------------------------------------------------|--------------------------------------------------|
| Trivandrum | 249023 | 161321 | 8.4 | 64.8 |
| Quilon | 359281 | 210849 | 12.0 | 58.7 |
| Alleppey | 237003 | 147594 | 7.9 | 62.3 |
| Kottayam | 270364 | 138872 | 9.1 | 51.4 |
| Idukki | 168220 | 80950 | 5.6 | 48.1 |
| Ernakulam | 221631 | 137235 | 7.4 | 61.9 |
| Trichur | 243782 | 170008 | 8.2 | 69.7 |
| Palghat | 340116 | 283079 | 11.4 | 77.3 |
| Malappuram | 257565 | 163011 | 8.6 | 63.3 |
| Kozhikode | 275641 | 135132 | 9.2 | 49.0 |
| Cannanore | 363852 | 241845 | 12.2 | 66.5 |
| STATE | 2986478 | 1849896 | 100.0 | 61.9 |

The relative importance of some of the principal crops in the overall picture of the state's food crops is discussed in the following paragraphs.

1. *Paddy*.—The area under paddy during the year is 873704 hectares as against 875157 hectares in the previous year. The district-wise area under the crop for the year in comparison with that of the previous year is given in the following table.

TABLE No. XII

| District | Area under paddy (hectares) | |
|------------|-----------------------------|---------|
| | 1971-72 | 1972-73 |
| (1) | (2) | (3) |
| Trivandrum | 39496 | 39486 |
| Quilon | 51729 | 51155 |
| Alleppey | 85162 | 91131 |
| Kottayam | 50034 | 44477 |
| Idukki | . | 13648 |
| Ernakulam | 93691 | 86130 |

| (1) | (2) | (3) |
|------------|--------|--------|
| Trichur | 115267 | 110492 |
| Palghat | 182597 | 182231 |
| Malappuram | 92892 | 92449 |
| Kozhikode | 65587 | 64549 |
| Cannanore | 98702 | 97957 |
| STATE | 873704 | 873704 |

The extent of paddy cultivation is the highest in Palghat district and the lowest in Idukki district.

The district-wise percentage distribution of area under paddy and the percentage of area under paddy to the total cropped area have been furnished in the following table.

TABLE No. XIII

| District | Area under paddy (hect.) | Percentage to total | Percentage of area under paddy to the total cropped area |
|------------|--------------------------|---------------------|----------------------------------------------------------|
| Trivandrum | 39486 | 4.5 | 25.8 |
| Quilon | 51155 | 5.9 | 22.2 |
| Alleppey | 91131 | 10.4 | 55.4 |
| Kottayam | 44477 | 5.1 | 24.2 |
| Idukki | 13648 | 1.6 | 8.2 |
| Ernakulam | 86130 | 9.9 | 46.3 |
| Trichur | 110492 | 12.6 | 79.2 |
| Palghat | 182231 | 20.8 | 63.0 |
| Malappuram | 92449 | 10.6 | 43.6 |
| Kozhikode | 64548 | 7.4 | 39.5 |
| Cannanore | 97957 | 11.2 | 31.7 |
| STATE | 873704 | 100.0 | 39.8 |

2. *Other cereals and millets.*—The area under other cereals and millets during the year is 5177 hectares. Besides this jowar and ragi were also cultivated in area of 1519 hectares and 4994 hectares respectively.

3. *Pulses.*—The estimate of area under this crop is 37557 hectares as against 37679 during the previous year. About one-third of the total area under this crop is in Palghat District.

4. *Sugarcane.*—The Sugarcane was cultivated during the year in an area of 7765 hectares. The corresponding area for the previous year is 7579 hectares. Alleppey is the leading Sugarcane growing district in the State.

5. *Pepper.*—The area under pepper during the year is 116343 hectares whereas it was, 116343 hectares in the previous year. Cannanore and Kozhikode are the leading districts in the cultivation of this crop.

6. *Chillies*.—The estimate of area under the crop for the year is 3205 hectares. The crop is cultivated mainly in Cannanore district of the State.

7. *Ginger*.—During the year the area under the crop is estimated to be a 11802 hectares as against 11873 in the previous year. Kottayam and Kozhikode are the major ginger-growing districts of the State.

8. *Turmeric*.—The area under the crop is 4185 hectares.

9. *Cardamom*.—The area under Cardamom during the year is 47490 hectares. The cultivation of the crop is almost entirely confined to Idukki District.

10. *Arecanut*.—Arecanut accounts for an area of 88633 hectares during the year. The corresponding estimate for the previous year is 86659 hectares. Cannanore, Malappuram and Trichur are the leading districts in arecanut cultivation.

11. *Mangoes*.—The area under mango cultivation during the year is 57123 hectares as against 56162 hectares in the previous year.

12. *Banana*.—The area under the crop during the year 9148 hectares whereas it was 9207 hectares in the previous year.

13. *Other plantains*.—The area under other plantains decreased from 38681 hectares to 38139 hectares during the year.

14. *Cashew*.—During the year the area under the crop is 101493 hectares as against 100661 hectares in the previous year. Cannanore is the leading district in Cashew cultivation.

15. *Tapioca*.—Tapioca is an important food crop cultivated in the State most extensively. Quilon is the leading district in respect of Tapioca cultivation. It is closely followed by Trivandrum. The total area under the crop during the year is 304828 hectares, as against 303262 hectares during the previous year.

B. *Non-Food Crops*:—

1. *Groundnut*.—This crop is cultivated only in Palghat District. The area under the crop during the year is 16044 hectares as against 14692 hectares in the previous year.

2. *Sesamum*.—During the year this crop is estimated to be cultivated in an area of 11780 hectares as against 11781 in the previous year. The maximum area under the crop is in Alleppey District.

3. *Cocoanut*.—Cocoanut is one of the major crops of the State. It is cultivated extensively in all the districts of the State. The total area under the crop during the year is 745429 hectares as against 730260 hectares in the previous year. Quilon is the leading district in Cocoanut cultivation.

4. *Cotton*.—It is a localised crop cultivated only in Palghat District. The area under the crop during the year is 7476 hectares.

5. *Tobacco*.—Tobacco is cultivated only in Cannanore Districts of the State. The area has decreased from 804 hectares in 1971-72 to 675 hectares in 1972-73.

6. *Tea*.—The area under the crop is 38377 hectares as against 37083 hectares in the previous year. Idikki District accounts for the major part of the area under the crop.

7. *Coffee*.—Kozhikode is the leading district in coffee cultivation. The total area under the crop during the year is 34651 hectares as compared to 32855 hectares in the previous year.

8. *Rubber*.—Rubber is one of the important plantation crops of the State. It is cultivated in an area of 195608 hectares. Kottayam, Quilon, Ernakulam and Cannanore are the major Rubber growing districts of the State.

8. Irrigation

The net area irrigated in the State during the year is 446338 hectares as compared to 438857 hectares in the previous year. Government canals are the major source of irrigation in the State. The percentage of net area irrigated to net area sown is 20.30.

The gross area irrigated is 622509 hectares. The percentage of gross area irrigated to total cropped area is 20.86. The source-wise and crop-wise irrigated area in the State is given in tables B-1 and B-2 of the summary tables respectively.

9. Weather and Crop Conditions

Trivandrum District.—There was adequate and timely rainfall during the khariff season and the conditions were favourable for the growth of crops. In the rabi season there was excessive rain and consequent crop drainage in parts of Trivandrum and Neyyattinkara taluks. Summer paddy was drought affected during the months of March and April. Yield from summer paddy was poor.

Quilon District.—During the khariff season there was heavy rainfall. There was minor losses in the case of crop like paddy, tapioca, banana, sugarcane etc., in various parts of Pathanamthitta, Karunagappally and Kottarakara taluks. In the rabi season inadequate rain and drought were experienced in different parts of the district. There was no rain at all for the three months from January 1973. Winter paddy was little affected by the weather conditions. The yield rate of coconut and arecanut was also normal.

Alleppey District.—There was very heavy rain flood in low lying lands during the khariff season. Paddy crop was slightly damaged during the season. During the rabi season untimely rain and drought affected crops like paddy, coconut, arecanut, sugarcane etc. Pest attack was also prevalent all over the district. The loss caused is not heavy, thanks to timely preventive measures taken by the concerned authorities.

Kottayam District.—The rainfall was adequate and timely during the khariff season only in Vaikom taluk the paddy crop was affected due to excessive rain. The damage caused was negligible. The rainfall and weather conditions were good during rabi season. In Kottayam and Meenachil taluks also paddy crops was damaged to varying extents due to pest attack. Other crops which sustained minor losses were plantation, tapioca, cocoanut, etc. The estimated quantity of loss is negligible.

Idikki District—The rainfall and weather conditions in this district were quite normal. The crops grown in the district are predominantly plantation crops. Vagaries of nature do not usually affect them.

Ernakulam District.—Rainfall was adequate and good. There was no damage to crops during the khariff season. The only factor affecting the yield rate of crops was the inadequate supply of chemical fertilisers. In rabi season however, drought conditions prevailed in parts of the district. This affected crops grown in unirrigated regions. However pest attack and consequent damage to crops were common in the district.

Trichur District.—There was heavy rain and flood in parts of the district during khariff season. Trichur, Talappilly and Kodungallur taluks got flooded and suffered crop damages in varying degrees. Untimely rain and drought affected crops in some parts of the district during the rabi season. Cultivation of summer paddy was delayed in almost all parts of the district for want of timely rainfall. Rainfall conditions were favourable for the growth of other crops such as cocoanut, arecanut, pepper etc.

Palghat District.—There was adequate quantity of rainfall. But the belated start of monsoon adversely affected khariff paddy in Mannarthal taluk. In the rabi season, paddy crop was uniformly good. There was pest attack in several parts of the district. This caused damage to crop in varying measures. The predominately cultivated crop in this district was paddy. Groundnut, Cocoanut, Sugarcane, etc. are the minor crops. These crops were good in the year.

Malappuram.—During the khariff season, rainfall was adequate and timely. But in the rabi season there was prolonged dry spell. Winter crop of paddy was slightly affected for want of adequate rainfall. Paddy, tapioca, Cocoanut, Arecanut, and cashew are the important crops of the district. In addition to these, Vegetables are also cultivated on a large scale.

Kozhikode District.—The monsoon came late and gave untimely showers in the coastal taluks of the district. This affected crops like paddy, pulses, tapioca, etc. Several parts in Kozhikode, Quilandy and Badagara were thus affected by untimely rain and flood in the khariff season. In the rabi season, severe drought conditions prevailed especially towards the end of the season. This affected badly the late sowing crops. The amount of damage caused to crops was not heavy. In S.Wynad taluk the predominant crops cultivated were rubber, coffee, tapioca, ginger, etc. These crops were not considerably affected by the vagaries of weather.

Cannanore District —The rainfall conditions were normal and favourable for the growth of the crops in Tellicherry, Caliparamba and North wynad taluks during the khariff season. In other parts of the district heavy rain and flood caused minor damages to crops such as coconut, arecanut, paddy and banana. In rabi season there was acute shortage of rainfall and the drought affected the standing crops of the season. The estimated damage was not however above the normal level.

10. Production of important crops:

The production estimates of important crops in the State for the last few years is given in table D of the summary tables. The district-wise details of production are given in table 4 of the detailed tables. The position of some of the principal crops is indicated below.

1 Paddy.—The total production of rice in the State during the year is 1376367 tonnes as against 1351738 tonnes during the previous year. Palghat is the major rice producing district in the state. The district-wise details of production are furnished in the following table.

TABLE NO. XIV

| District | Production of rice (tonnes) | |
|------------|-----------------------------|---------|
| | 1971-72 | 1972-73 |
| Trivandrum | 64182 | 61614 |
| Quilon | 75430 | 72638 |
| Alleppey | 144249 | 139268 |
| Kottayam | 93649 | 80491 |
| Idukki | .. | 21327 |
| Ernakulam | 121145 | 123011 |
| Trichur | 157522 | 157834 |
| Palghat | 366466 | 353897 |
| Malappuram | 145932 | 169601 |
| Kozhikode | 73356 | 71100 |
| Cannanore | 109807 | 125533 |
| STATE | 1351738 | 1376367 |

The season wise rice production for 1972-73 as compared to 1971-72 is as follows:

TABLE NO. XV

| Season | Rice Production (tonnes) | |
|--------|--------------------------|---------|
| | 1971-72 | 1972-73 |
| Autumn | 552246 | 576192 |
| Winter | 596803 | 609234 |
| Summer | 202684 | 190941 |
| STATE | 1351738 | 1376367 |

The rice production increased by 1.80% during the year.

2. *Pulses*.—The production of pulses during the year is 13321 tonnes as against 13011 tonnes in the previous year.

3. *Sugarcane*.—During the year the production of gur is estimated to be 40019 tonnes where as the corresponding estimate for the previous year is 39110 tonnes.

4. *Black pepper*.—The quantity produced during the year 25150 tonnes as against 25097 tonnes in the previous year.

5. *Dry ginger*.—It is estimated that a quantity of 23487 tonnes dry ginger was produced during the year as against 23313 tonnes in the previous year. Kozhikode is leading district in ginger production.

6. *Turmeric (cured)*.—The production of cured turmeric during the year is 4424 tonnes where as it was 4394 tonnes in the previous year.

7. *Cardamom*.—The newly created Idikki district is the leading district in Cardamom production. The quantity produced during the year is 1250 tonnes as compared to 1519 tonnes in the preceding year.

8. *Betelnuts*.—During the year the betelnuts production is estimated to be 13136 million nuts as against 12832 million nuts in the previous year.

9. *Banana*.—During the year banana production decreased to 66653 tonnes from 66900 tonnes in the previous year.

10. *Other plantains*.—The production of other plantains during the year is 291230 tonnes as compared to 295367 tonnes in the preceding year.

11. *Cashewnut*.—The total cashewnut production during the year is 113876 tonnes as against 112943 tonnes in the previous year. Cannanore district tops the list in Cashewnut production.

12. *Tapioca*.—The tapioca production during the year is 5692355 tonnes as against 5429281 tonnes in the previous year. The district-wise yield rate of Tapioca is given below.

TABLE No. XVI

| District | Yield rate of tapioca (tonnes/hect.) 72-73 |
|------------|-----------------------------------------------|
| Trivandrum | 13.11 |
| Quilon | 21.25 |
| Alleppey | 18.05 |
| Kottayam | 21.37 |
| Idikki | 23.23 |
| Ernakulam | 23.63 |
| Trichur | 19.68 |
| Palghat | 21.24 |
| Malappuram | 18.28 |
| Kozhikode | 14.60 |
| Cannanore | 22.67 |
| State | 18.67 |

13. *Groundnut*.—This crop is cultivated only in Palghat District. The quantity produced during the year is 16461 tonnes as against 16769 tonnes during the previous year.

14. *Sesamum*.—The production of sesamum has decreasing from 3746 tonnes to 3420 tonnes during the year.

15. *Cocoanut*.—Quilon is the leading district in Coconut production. The total production during the year is 3921 million nuts as against 4054 million nuts in the previous year.

16. *Cotton*.—Cotton cultivation is confined to Palghat district of the State. The quantity produced during the year is 8428 bales (180 Kg. each) as against 7850 bales in the preceding year.

17. *Tobacco*.—Cannanore is the only tobacco producing district in the State. The quantity of tobacco produced during the year 1459 tonnes as against 1713 tonnes in the previous year.

18. *Tea*.—Tea production during the year is 43677 tonnes as compared to 42802 tonnes in 1971-72. Idikki is the leading district in tea production.

19. *Coffee*.—During the year Coffee production has increased from 14106 tonnes to 14916 tonnes. Kozhikode District accounts for the major part coffee production in the State.

20. *Rubber*.—Rubber production has increased during the year from 88929 tonnes to 91948 tonnes. Kottayam and Quilon are the major rubber producing districts of the State.

21. *Lemongrass Oil*.—The total production during the year is 1602 tonnes.

11 Farm prices of Certain commodities

The average farm prices of certain commodities are given in table F of the summary tables and table 5.1 of the detailed tables.

12 Agricultural Wages

District-wise and class-wise details of agricultural wages are given in table 6.1.

13 Livestock, Poultry and Agricultural implements

The details relating to this have been furnished in table G of the summary tables and table 7.1 of the detailed tables.

14 Sowing, Harvesting and Peak Marketing periods

The information on these topics has been furnished in Table H of the summary tables.

PART II

Summary Tables

- A. Classification of Area
 - B1. Sources of Irrigation
 - B2. Area under crops irrigated
 - C. Area under crops
 - D. Production of important crops
 - E. Average yield per hectare of certain crops
 - F. Average price and value of production
 - G. Livestock, Poultry and Agricultural Machinery
 - H. Sowing, Harvesting and Peak Marketing Season
-

TABLE—A

Classification of Area (in hectares) in Kerala State

| Sl. No. | Head of Classification | 1972-73 | |
|---------|-------------------------------------------|---------|------------|
| | | Area | Percentage |
| 1. | Total area by village papers | 3858523 | 100.00 |
| 2. | Forests | 1054864 | 27.34 |
| 3. | Land put to non-Agrl. uses | 275726 | 7.15 |
| 4. | Barren and uncultivable land | 67731 | 1.76 |
| 5. | Permanent pastures and other grazing land | 27800 | 0.71 |
| 6. | Land under miscellaneous tree crops | 115007 | 2.97 |
| 7. | Cultivable waste | 74010 | 1.92 |
| 8. | Current fallow | 25664 | 0.67 |
| 9. | Other fallows | 20732 | 0.54 |
| 10. | Net area sown | 2196989 | 56.94 |
| 11. | Total cropped area | 2986478 | 77.40 |
| 12. | Area sown more than once | 789489 | 20.46 |

TABLE—B1

Source of Water Supply and Net area irrigated in Kerala (Hects.)

| Sl. No. | Net area irrigated by | 1972-73 |
|---------|----------------------------------------------------------|---------|
| | | |
| 1. | Government canals | 213462 |
| 2. | Private canals | 10160 |
| 3. | Tanks | 75041 |
| 4. | Wells | 5460 |
| 5. | Other sources | 142215 |
| 6. | Total | 446338 |
| 7. | Percentage of net area irrigated to net area sown | 20.30 |
| 8. | Area irrigated more than once in an year | 176171 |
| 9. | Total irrigated area | 622509 |
| 10. | Percentage of total irrigated area to total cropped area | 20.86 |

TABLE—B2
Gross area irrigated in Kerala (Hect.)

| Name of crop | 1972-73 | |
|----------------------|---------|-------|
| | Area | % |
| Paddy | 509759 | 81.9 |
| Sugarcane | 4290 | 0.7 |
| Other food crops | 55690 | 8.9 |
| Total food crops | 569739 | 91.5 |
| Total non-food crops | 52770 | 8.5 |
| All crops | 622509 | 100.0 |

TABLE—C
Area under crops in Kerala (Hectares)

| Name of crop (1) | 1972-73 |
|-----------------------------|-------------|
| | Area (2) |
| Paddy | 873704 |
| Jowar | 1519 |
| Ragi | 4994 |
| Other cereals and millets | 5177 |
| Total cereals and millets | 885394 |
| Tur | 4861 |
| Other pulses | 32696 |
| Total pulses | 37557 |
| Sugarcane | 7765 |
| Palmyrah (others) | 8510 |
| Total sugarcane | 16275 |
| Pepper | 116343 |
| Chillies | 3205 |
| Ginger | 11802 |
| Turmeric | 4185 |
| Cardamom | 47492 |
| Arecanut | 88633 |
| Other condiments and spices | 19379 |
| Total condiments and spices | 291039 |
| Mangoes | 57123 |
| Citrus fruits | 1959 |
| Banana | 9148 |
| Plantains | 38139 |
| Other fresh fruits | 68425 |

| (1) | (2) |
|----------------------------------|---------|
| Cashewnut | 101493 |
| Total fruits | 276287 |
| Tapioca | 304828 |
| Sweet potatoes | 5325 |
| Other vegetables | 32988 |
| Total vegetables | 343344 |
| Total food crops | 1349896 |
| Groundnut | 16044 |
| Castor | 343 |
| Sesamum | 11780 |
| Cocoanut | 745429 |
| Other oil seeds | 8866 |
| Total oil seeds | 782462 |
| Cotton | 7476 |
| Tobacco | 675 |
| Tea | 38377 |
| Coffee | 34651 |
| Rubber | 195603 |
| Other drugs and plantation crops | 1406 |
| Total drugs and plantation crops | 270712 |
| Fodder crops | 527 |
| Green manure crops | 18689 |
| Lemongrass | 24036 |
| Other non-food crops | 56716 |
| Total non-food crops | 1136582 |
| Total area under all crops | 2986478 |
| Area sown more than once | 789489 |
| Net area sown | 2196989 |

TABLE D

Production of important crops in Kerala 1972-73

| Name of crop | Unit | Quantity |
|-----------------|-------------|----------|
| (1) | (2) | (3) |
| Rice | '000 tonnes | 1376 |
| Paddy | " | 2094 |
| Jowar | Tonnes | 612 |
| Ragi | " | 4382 |
| Tur | " | 365 |
| Other pulses | " | 12456 |
| Sugarcane (Gur) | " | 40019 |
| Pepper (Black) | " | 25150 |

| (1) | (2) | (3) |
|----------------------|------------------|--------|
| Chillies (Dry) | Tonnes | 2756 |
| Ginger (Dry) | " | 23487 |
| Turmeric (cured) | " | 4424 |
| Cardamom (Processed) | " | 1250 |
| Arecanut (Betelnut) | Million nuts | 13136 |
| Benana | Tonne | 66653 |
| Other plantains | " | 291230 |
| Cashewnut | " | 113876 |
| Tapioca (raw) | '000 tonnes | 5692 |
| Sweet potatoes | Tonnes | 23964 |
| Groundnut | " | 16461 |
| Sesamum | " | 3420 |
| Coconut | Million nuts | 3921 |
| Cotton | Bales of 180 kg. | 8428 |
| Tobacco | Tonne | 1450 |
| Tea | " | 43677 |
| Coffee | " | 14916 |
| Rubber | " | 91948 |
| Lemongrass Oil | " | 1602 |

TABLE E

Average yield per hectare of certain crops

| Name of crop | Unit | 1972-73 | 1971-72 |
|-------------------------|------------|---------|---------|
| 1. Paddy | Kg./Hect | 2398 | 2351 |
| 2. Jowar | " | 403 | 514 |
| 3. Ragi | " | 877 | 954 |
| 4. Sugarcane (Gur) | " | 5154 | 5160 |
| 5. Pepper (Black) | " | 216 | 216 |
| 6. Ginger (Dry) | " | 1990 | 1964 |
| 7. Turmeric (cured) | " | 1057 | 1050 |
| 8. Cardamom (Processed) | " | 26 | 32 |
| 9. Arecanut | Nuts/Hect. | 148207 | 148074 |
| 10. Benana | Kg./Hect. | 7286 | 7266 |
| 11. Other plantain | " | 7636 | 7636 |
| 12. Cashewnuts | " | 1122 | 1122 |
| 13. Tapioca (Raw) | " | 18674 | 17902 |
| 14. Groundnut | " | 1026 | 1141 |
| 15. Sesamum | " | 290 | 318 |
| 16. Cocoanut | Nuts/Hect. | 5260 | 5551 |
| 17. Cotton | Kg./Hect. | 203 | 189 |
| 18. Tea | " | 1138 | 1154 |
| 19. Coffee | " | 430 | 429 |
| 20. Rubber | " | 470 | 471 |

TABLE F
Average price and total value of production 1972-73

| Name of crop | Unit | Average farm price (Rs.) | Value of production (Rs. in lakhs) |
|------------------------|-----------|--------------------------|------------------------------------|
| (1) | (2) | (3) | (4) |
| 1. Paddy | Tonnes | 1189.82 | 24924.74 |
| 2. Coconut (with husk) | 1000 nuts | 527.90 | 20698.96 |
| 3. Arecanut (ripe) | " | 24.30 | 3192.05 |
| 4. Tapioca (raw) | Tonne | 254.30 | 14475.66 |
| 5. Cashewnut | " | 2189.90 | 2493.77 |
| 6. Banana | 1000 Nos. | 196.50 | 720.40 |
| 7. Pepper (black) | Tonnes | 5248.50 | 1320.00 |
| 8. Ginger (dry) | " | 3017.20 | 708.65 |
| 9. Sugarcane | " | 89.32 | 357.40 |

TABLE G
Number of Livestock, Poultry and Agricultural Machinery

| Sl. No. | | | | 1961 census | 1966 census | 1972 census |
|---------|-----------|---------------------|------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------------|--------------------------------------------|
| (1) | (2) | (3) | | (4) | (5) | (6) |
| 1. | Cattle | Male over 3 years | (a) Breeding (b) Working (c) Others | 29319 515241 21471 | 19387 491281 8855 | 4800 371972 14822 |
| | | | Total | 566031 | 519523 | 391594 |
| | | Female over 3 years | (a) Breeding 1. in milk 2. dry 3. not calved (b) Working (c) Others | 428194 502935 207277 11274 12306 | 483419 592972 133999 3605 5247 | 606192 578827 101849 7646 5657 |
| | | | Total | 1161986 | 1219242 | 1300171 |
| | | | Young stock | 1025148 | 1117962 | 1164555 |
| | | | Total cattle | 2753165 | 2856727 | 2856320 |
| 2. | Buffaloes | Males over 3 years | (a) Breeding (b) Working (c) Others | 10627 267871 6614 | 6106 241048 6696 | 2185 211467 12077 |
| | | | Total | 285112 | 253850 | 225729 |

| (1) | (2) | (3) | (4) | (5) | (6) |
|-----|--------------------|---------------------|------------------------|---------|---------|
| | | Female over 3 years | (a) Breeding | | |
| | | | 1. in milk | 59542 | 66705 |
| | | | 2. dry | 49341 | 52777 |
| | | | 3. not calved | 16846 | 9119 |
| | | | (b) Working | 7266 | 4589 |
| | | | (c) Others | 2188 | 1580 |
| | | | Total | 135113 | 134770 |
| | | | Young stock | 64864 | 82615 |
| | | | Total Buffaloes | 485089 | 471235 |
| 3. | Sheep | | (a) One year and above | 18949 | 7920 |
| | | | (b) Below one year | 5292 | 3599 |
| | | | Total | 24241 | 11519 |
| 4. | Goats | | (a) One year and above | 869414 | 757766 |
| | | | (b) Below one year | 442848 | 431452 |
| | | | Total | 1312262 | 1189218 |
| 5. | Horses and Ponies | | (a) 3 years and above | 366 | 372 |
| | | | (b) Below 3 years | 42 | 54 |
| | | | Total | 408 | 526 |
| 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 | (3) | (4) | (5) | (6) |
|---------|--------------------------|----------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------|
| (1) | (2) | (3) | (4) | (5) | (6) |
| 1. | Rice | Autumn 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. | Redgram | 1st crop 2nd crop 3rd crop | May—June August—October February | August—September November—January April | September—October January April |
| 5. | Horsegram | 1st crop 2nd crop | August—October February—March | November—January April—May | January—February May—June |
| 6. | Greengram | 1st crop 2nd crop | May—June May—June October—November | August—September August—October January—February | September—October October February |
| 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 |

TABLE H.—(Contd.)

| (1) | (2) | (3) | (4) | (5) | (6) |
|-----|----------------|----------|-------------------|-------------------|-------------------|
| 11. | Pepper | | August—September | November—January | December—January |
| 12. | Cotton | | August—October | February—March | February—March |
| 13. | Sesamum | 1st crop | December—January | December—January | December—January |
| | | 2nd crop | February—March | March—April | April—May |
| | | 3rd crop | June—July | June—July | July—August |
| 14. | Sweet potatoes | 1st crop | September—October | September—October | September—October |
| | | 2nd crop | November—December | December—January | December—January |
| | | 3rd crop | April—May | February—March | February—March |
| 15. | Turmeric | | | December—January | January—February |
| 16. | Lemongrass | | | June—September | September |
| 17. | Tapioca | 1st crop | October—November | August—September | August—September |
| | | 2nd crop | March—May | November—January | December—January |
| | | 3rd crop | July—September | May—July | June—July |

PART III

- 1.1 Normal Rainfall
- 1.2 Average Monthly Rainfall
- 2.1 Classification of area in each district
- 2.2 Classification of area as percentage to total area according to village papers
- 3.1 Area under crops in each District
- 3.2 Percentage of area under crops to total cropped area in each District
- 4.1 Out-turn of important crops in each District
- 5.1 Average farm price of certain commodities
- 6.1 Agricultural Wages
- 7.1 Number of live-stock, poultry and agricultural machinery and implements

37/712/B

1. The first part of the report is devoted to a general survey of the progress of the work during the year. It shows that the amount of work done has been very large, and that the results have been very satisfactory. The second part of the report is devoted to a detailed account of the work done in each of the several departments. It shows that the work has been done in a very systematic and thorough manner, and that the results have been very valuable. The third part of the report is devoted to a summary of the work done during the year, and to a statement of the conclusions reached. It shows that the work has been done in a very successful manner, and that the results have been very valuable. The fourth part of the report is devoted to a list of the names of the persons who have been employed during the year, and to a statement of the amount of money which has been expended. It shows that the work has been done in a very economical manner, and that the results have been very valuable.

TABLE 1.1
Normal Rainfall in Kerala 1972-73 (in mms.)

| District | July | August | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | March | April | May | June | Total |
|---------------|--------|--------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|--------|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1. Trivandrum | 257.4 | 204.5 | 168.9 | 280.2 | 210.2 | 270.1 | 21.2 | 18.0 | 48.0 | 118.1 | 213.9 | 391.1 | 2001.4 |
| 2. Quilon | 449.6 | 318.1 | 226.1 | 344.9 | 242.9 | 64.8 | 24.1 | 32.1 | 83.6 | 166.3 | 260.3 | 547.4 | 2760.2 |
| 3. Alleppey | 552.3 | 370.3 | 272.7 | 330.2 | 219.4 | 64.1 | 25.9 | 29.3 | 59.0 | 133.5 | 291.5 | 663.8 | 3012.0 |
| 4. Kottayam | 652.9 | 429.5 | 273.2 | 330.6 | 212.8 | 71.7 | 30.3 | 26.3 | 59.8 | 141.3 | 244.9 | 609.3 | 3082.6 |
| 5. Idukki* | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 6. 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 |
| 7. Trichur | 761.4 | 458.6 | 250.3 | 307.5 | 158.3 | 30.3 | 9.3 | 8.8 | 28.6 | 86.6 | 274.3 | 803.4 | 3177.4 |
| 8. Palghat | 649.9 | 363.0 | 169.5 | 257.2 | 140.9 | 29.7 | 9.8 | 9.3 | 27.0 | 79.6 | 158.4 | 503.4 | 2397.7 |
| 9. Malappuram | 787.0 | 405.0 | 198.8 | 290.0 | 163.8 | 30.9 | 6.7 | 6.5 | 19.3 | 78.7 | 211.0 | 702.4 | 2900.1 |
| 10. Kozhikode | 1117.4 | 599.2 | 262.4 | 290.2 | 163.7 | 34.2 | 10.4 | 7.6 | 20.0 | 92.4 | 254.0 | 944.5 | 3796.0 |
| 11. Cannanore | 1063.5 | 584.8 | 239.4 | 218.0 | 106.0 | 22.8 | 5.3 | 4.8 | 11.1 | 58.6 | 200.6 | 923.0 | 3437.9 |
| State Average | 707.7 | 425.7 | 235.8 | 301.5 | 183.5 | 47.3 | 16.1 | 16.6 | 41.1 | 109.1 | 241.9 | 688.0 | 3014.3 |

* The normal rainfall for Idukki District is not available.

TABLE 1.2
Average Monthly Rainfall totals for the year 1972-73 (in mms.)

| District | 1972 | | | | | | | | | | | | Total |
|---------------|--------|--------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|--------|
| | July | August | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | March | April | May | June | |
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1. Trivandrum | 305.9 | 120.9 | 222.2 | 432.0 | 174.5 | 114.8 | Nil | Nil | 16.3 | 256.6 | 174.7 | 556.2 | 2374.1 |
| 2. Quilon | 491.2 | 184.7 | 265.9 | 403.9 | 190.6 | 123.6 | Nil | Nil | 29.7 | 217.7 | 141.9 | 505.9 | 2555.1 |
| 3. Alleppey | 622.6 | 233.3 | 266.9 | 390.5 | 122.3 | 144.8 | Nil | Nil | 20.9 | 167.2 | 117.9 | 547.0 | 2633.4 |
| 4. Kottayam | 605.2 | 208.4 | 211.6 | 285.5 | 152.2 | 123.9 | Nil | Nil | 13.8 | 207.3 | 81.9 | 470.6 | 2355.4 |
| 5. Idukki | 734.2 | 364.6 | 259.9 | 285.3 | 189.5 | 124.6 | Nil | 1.4 | 25.3 | 135.1 | 122.4 | 618.7 | 2861.0 |
| 6. Ernakulam | 736.2 | 364.8 | 250.5 | 476.6 | 187.3 | 197.9 | Nil | Nil | 3.4 | 119.7 | 130.4 | 661.4 | 3128.2 |
| 7. Trichur | 668.2 | 365.4 | 180.4 | 346.5 | 90.6 | 230.4 | Nil | Nil | 2.2 | 64.2 | 132.4 | 557.1 | 2637.4 |
| 8. Palghat | 682.8 | 257.7 | 111.1 | 325.6 | 115.9 | 108.8 | Nil | Nil | 13.0 | 78.6 | 107.5 | 526.9 | 2327.9 |
| 9. Malappuram | 779.0 | 314.9 | 145.1 | 366.0 | 156.3 | 51.4 | Nil | Nil | Nil | 89.3 | 117.1 | 647.9 | 2667.0 |
| 10. Kozhikode | 1117.2 | 354.2 | 123.7 | 436.1 | 144.0 | 61.5 | Nil | Nil | 1.6 | 53.2 | 152.8 | 974.9 | 3419.2 |
| 11. Cannanore | 930.0 | 389.3 | 96.0 | 310.8 | 62.5 | 44.9 | Nil | Nil | Nil | 32.5 | 180.5 | 739.6 | 2786.1 |
| State Average | 697.5 | 286.7 | 193.9 | 369.0 | 144.2 | 120.6 | Nil | 0.1 | 11.5 | 129.2 | 132.7 | 618.7 | 2704.1 |

TABLE 2.1

Classification of Area in each District during 1972-73

| District | Classification | | | | | | | | | | | | |
|---------------|-----------------------------------------------------|---------|----------------------------------|--------------------------|-----------------------------------------|-------------------------------------------------------------------|------------------|---------------------------------------|----------------|---------------|--------------------------|--------------------|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| | Total geographical area according to village papers | Forest | Land put to non-agricultural use | 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 | Area sown more than once | Total cropped area | |
| 1. Trivandrum | 216096 | 43849 | 15845 | 574 | 550 | 643 | 433 | 718 | 239 | 153245 | 95778 | 249023 | |
| 2. Quilon | 469051 | 210651 | 14983 | 7321 | 1300 | 749 | 2157 | 768 | 399 | 230723 | 128558 | 359281 | |
| 3. Alleppey | 186790 | 513 | 12500 | 653 | 250 | 6150 | 775 | 901 | 594 | 164454 | 72549 | 237003 | |
| 4. Kottayam | 215695 | 6398 | 12113 | 1521 | 2513 | 4343 | 1658 | 1338 | 2257 | 183554 | 86810 | 270364 | |
| 5. Idukki | 506775 | 299221 | 13704 | 7671 | 1388 | 1948 | 13401 | 308 | 3490 | 165644 | 2576 | 168220 | |
| 6. Ernakulam | 221183 | 2512 | 20857 | 1489 | 1599 | 505 | 1805 | 2565 | 3691 | 186160 | 35471 | 221631 | |
| 7. Trichur | 299149 | 132369 | 17191 | 2043 | 500 | 3631 | 1871 | 430 | 1554 | 139560 | 104222 | 243782 | |
| 8. Palghat | 437087 | 67185 | 48787 | 10682 | 2810 | 9363 | 4096 | 2796 | 2277 | 289091 | 51025 | 340116 | |
| 9. Malappuram | 363045 | 97627 | 13184 | 5081 | 2369 | 5359 | 22639 | 490 | 4057 | 212239 | 45326 | 257565 | |
| 10. Kozhikode | 366991 | 128607 | 45126 | 10186 | 2521 | 3338 | 8359 | 2925 | 2350 | 163579 | 112062 | 275641 | |
| 11. Cannanore | 576661 | 65932 | 61436 | 20510 | 12000 | 78978 | 16816 | 7493 | 4756 | 308740 | 55112 | 363852 | |
| STATE | 3858523 | 1054864 | 275726 | 67731 | 27800 | 115007 | 74010 | 20732 | 25664 | 2196989 | 789489 | 2986478 | |

Classification of area as percentage to total area according to village papers 1972-73

| District | Area according to village papers | Classification of Area | | | | | | | | | | | Total cropped area |
|------------|----------------------------------|------------------------|-------|------|------|-------|------|------|------|-------|-------|--------|--------------------|
| | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | |
| | 100.00 | 20.29 | 7.33 | 0.27 | 0.25 | 0.30 | 0.20 | 0.33 | 0.11 | 70.92 | 44.32 | 115.24 | |
| Trivandrum | " | 44.91 | 3.19 | 1.56 | 0.28 | 0.16 | 0.46 | 0.16 | 0.09 | 49.19 | 27.41 | 76.60 | |
| Quilon | " | 0.28 | 6.69 | 0.35 | 0.13 | 3.29 | 0.42 | 0.48 | 0.32 | 88.04 | 38.84 | 126.88 | |
| Alleppey | " | 2.97 | 5.61 | 0.71 | 1.16 | 2.01 | 0.77 | .62 | 1.05 | 85.10 | 40.25 | 125.35 | |
| Kottayam | " | 59.04 | 2.70 | 1.51 | 0.27 | 0.38 | 2.68 | 0.06 | 0.68 | 32.68 | 0.52 | 33.20 | |
| Idukki | " | 1.14 | 9.43 | 0.67 | 0.72 | 0.23 | 0.82 | 1.16 | 1.67 | 84.16 | 16.04 | 100.20 | |
| Ernakulam | " | 44.25 | 5.75 | 0.68 | 0.17 | 1.21 | 0.63 | 0.14 | 0.52 | 46.65 | 34.84 | 81.49 | |
| Trichur | " | 15.37 | 11.16 | 2.44 | 0.65 | 2.14 | 0.93 | 0.64 | 0.52 | 66.14 | 11.67 | 77.81 | |
| Palghat | " | 26.89 | 3.63 | 1.40 | 0.65 | 1.48 | 6.24 | 0.13 | 1.12 | 58.46 | 12.49 | 70.95 | |
| Malappuram | " | 35.05 | 12.30 | 2.76 | 0.69 | 0.91 | 2.28 | 0.80 | 0.64 | 44.57 | 30.53 | 75.10 | |
| Kozhikode | " | 11.43 | 10.65 | 3.56 | 2.08 | 13.70 | 2.92 | 1.30 | 0.82 | 53.54 | 9.56 | 63.10 | |
| Cannanore | " | 27.34 | 7.15 | 1.76 | 0.71 | 2.97 | 1.92 | 0.54 | 0.67 | 56.94 | 20.46 | 77.40 | |
| STATE | " | | | | | | | | | | | | |

TABLE No. 3.1
Area under crops in each District of Kerala during the year 1972-73, year ending 30th June 1972 (area hectares)

| District | Food crops | | | | | | | | | |
|------------|------------------------------|--------|--------|--------|------|--------|------|-------------------------|-------------------------|-----|
| | Cereals | | | | | Pulses | | | | |
| | Rice (<i>Oryza Sativa</i>) | | | | | Jowar | Ragi | Other cereals & millets | Total cereals & millets | Tur |
| | Autumn | Winter | Summer | Total | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Trivandrum | 18355 | 20141 | 990 | 39486 | .. | .. | .. | 39486 | .. | |
| Quilon | 21185 | 28811 | 1159 | 51155 | .. | 459 | .. | 51614 | .. | |
| Alleppey | 26568 | 22937 | 41626 | 91131 | .. | .. | .. | 91131 | .. | |
| Kottayam | 7845 | 19291 | 17341 | 44477 | .. | .. | 594 | 45071 | .. | |
| Idukki | 4056 | 9540 | 52 | 13648 | .. | .. | .. | 13648 | .. | |
| Ernakulam | 37030 | 39009 | 10091 | 86130 | .. | 27 | .. | 86157 | .. | |
| Trichur | 34810 | 60871 | 14811 | 110492 | .. | 1212 | .. | 111704 | .. | |
| Palghat | 101042 | 79929 | 1260 | 182231 | 1519 | 832 | 4583 | 189165 | 4861 | |
| Malappuram | 50508 | 36464 | 5477 | 92449 | .. | .. | .. | 92449 | .. | |
| Kozhikode | 25342 | 35839 | 3367 | 64548 | .. | 1520 | .. | 66068 | .. | |
| Cannanore | 65159 | 29349 | 3449 | 97957 | .. | 944 | .. | 98901 | .. | |
| STATE | 391900 | 382181 | 99623 | 873704 | 1519 | 4994 | 5177 | 885394 | 4861 | |

TABLE 3.1—(Contd.)

| District | Food crops | | | | | | | | | | | | |
|------------|--------------|-------|-------|-------|-------------------|--------------|-------------------|------------|---------------------|-------|--------|----------|--------|
| | Other pulses | | | | Total food grains | Sugar crops | | | Condiments & Spices | | | | |
| | Kharif | | Rabi | | | Total pulses | Total food grains | Sugar-cane | Others (palmyrah) | Total | Pepper | Chillies | Ginger |
| | 11 | 12 | 13 | 14 | 15 | | | | | | | | |
| Trivandrum | 1169 | 1338 | 2507 | 2507 | 41993 | .. | 562 | 562 | 10233 | .. | .. | .. | 214 |
| Quilon | 4740 | 2724 | 7464 | 7464 | 59078 | 904 | 219 | 1123 | 5783 | .. | .. | .. | .. |
| Alleppey | .. | 546 | 546 | 546 | 91677 | 4197 | 48 | 4245 | 1504 | .. | .. | .. | .. |
| Kottayam | 159 | 72 | 231 | 231 | 45302 | 1038 | 538 | 1576 | 15479 | .. | .. | .. | 3332 |
| Idiakkulam | 156 | 98 | 254 | 254 | 13902 | 168 | 323 | 491 | 4306 | .. | .. | .. | 703 |
| Trichur | 542 | 1148 | 1690 | 1690 | 87847 | 125 | 291 | 416 | 4844 | .. | .. | .. | 838 |
| Palghat | 2328 | 5497 | 7825 | 7825 | 119529 | .. | 1272 | 1272 | 745 | .. | .. | .. | 76 |
| Malappuram | 3348 | 4289 | 7636 | 12498 | 201663 | 1000 | 4584 | 5584 | 1625 | 830 | 907 | 1855 | 3450 |
| Kozhikode | .. | 3286 | 3286 | 3286 | 69354 | .. | 332 | 332 | 3250 | 675 | 1855 | 3450 | 427 |
| Cannanore | .. | 1256 | 1256 | 1256 | 100157 | 333 | 174 | 174 | 18016 | .. | 1700 | .. | .. |
| STATE | 12442 | 20254 | 32696 | 37557 | 922951 | 7765 | 8510 | 16275 | 116343 | 3205 | 11802 | .. | .. |

TABLE 3.1—(Contd.)

| | Food Crops | | | | | | | | | | | |
|------------|---------------------|----------|-----------|--------|--------|---------|---------------|--------|--------------|--------|--------|--|
| | Condiments & Spices | | | | | | Fresh Fruits | | | | | |
| | Turmeric | Cardamom | Betelnuts | Others | Total | Mangoes | Citrus fruits | Banana | Other plants | Others | Total | |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | | |
| Trivandrum | .. | .. | 4621 | 4261 | 19115 | 6980 | .. | 649 | 3478 | 7069 | 18176 | |
| Quilon | .. | .. | 8676 | 3560 | 18233 | 9680 | .. | 1510 | 4045 | 5797 | 21032 | |
| Alleppey | .. | .. | 4959 | 1122 | 7585 | 4470 | .. | 592 | 2866 | 9108 | 17036 | |
| Kottayam | 1084 | .. | 5110 | 2351 | 27356 | 6018 | .. | 1215 | 3495 | 5549 | 16277 | |
| Idukki | 155 | 43093 | 1704 | 666 | 50627 | 1446 | .. | 139 | 1756 | 6330 | 9671 | |
| Ernakulam | 244 | 1042 | 7663 | 1466 | 16097 | 4742 | .. | 761 | 2371 | 7167 | 15041 | |
| Trichur | .. | .. | 14116 | 1896 | 16833 | 4839 | .. | 1075 | 4225 | 4639 | 14778 | |
| Palghat | 1233 | 1886 | 3623 | 2894 | 12998 | 6121 | .. | 285 | 4631 | 6180 | 17217 | |
| Malappuram | .. | .. | 14700 | 60 | 20540 | 3574 | .. | 531 | 2084 | 4588 | 10777 | |
| Kozhikode | 1236 | 1079 | 8051 | 902 | 32734 | 4655 | 96 | 973 | 3938 | 4756 | 14418 | |
| Cannanore | 233 | 392 | 15410 | 201 | 68921 | 4598 | 1863 | 1418 | 5250 | 7242 | 20371 | |
| STATE | 4185 | 47492 | 88633 | 19379 | 291039 | 57123 | 1959 | 9148 | 38139 | 68425 | 174794 | |

TABLE 3.1—(Contd.)

| District | Food Crops | | | | | | | | | | Vegetables | | | | |
|------------|--------------|--------|--------|--------------|---------|----------------|--------|--------|--------|------------------------|------------|-----------------|--|--|--|
| | Dried Fruits | | | | | Food Crops | | | | | Vegetables | | | | |
| | Cashew-nuts | Others | Total | Total Fruits | Tapioca | Sweet potatoes | Onions | Others | Total | Total Fruits & Veggies | Total | Total fod crops | | | |
| | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | | | | |
| Trivandrum | 4394 | .. | 4394 | 22570 | 76111 | 57 | 10 | 903 | 77081 | 99651 | 161321 | | | | |
| Quilon | 8480 | .. | 8480 | 29512 | 94745 | 99 | 22 | 8037 | 102903 | 132415 | 210849 | | | | |
| Alleppey | 3932 | .. | 3932 | 20968 | 19124 | 112 | 5 | 3878 | 23119 | 44087 | 147594 | | | | |
| Kottayam | 1334 | .. | 1334 | 17611 | 38040 | 810 | 17 | 8160 | 47027 | 64638 | 138872 | | | | |
| Idukki | 1938 | .. | 1938 | 11609 | 3062 | 67 | 25 | 1167 | 4321 | 15930 | 80950 | 36 | | | |
| Ernakulam | 3974 | .. | 3974 | 19015 | 11931 | 61 | 15 | 1853 | 13860 | 32875 | 137235 | | | | |
| Trichur | 7251 | .. | 7251 | 22029 | 8345 | 168 | 6 | 1826 | 10345 | 32374 | 170008 | | | | |
| Palghat | 8728 | .. | 8728 | 25945 | 12247 | 2426 | 68 | 2148 | 16889 | 42834 | 263079 | | | | |
| Malappuram | 13379 | .. | 13379 | 24156 | 22959 | 630 | 20 | 1925 | 25534 | 49690 | 163011 | | | | |
| Kozhikode | 5655 | .. | 5655 | 20073 | 10920 | 46 | 8 | 1823 | 12797 | 32870 | 135132 | | | | |
| Cannanore | 42428 | .. | 42428 | 62799 | 7344 | 849 | 7 | 1268 | 9468 | 72267 | 241845 | | | | |
| STATE | 101493 | .. | 101493 | 276287 | 304828 | 5325 | 203 | 32988 | 343344 | 619631 | 1849896 | | | | |

TABLE 3.1—(Contd.)

| District | Non-Food crops | | | | | | | | | | | | |
|------------|----------------|--------|---------|---------|--------|--------|--------|--------|-------|---------|-------|----|----|
| | Oil Seeds | | | | | | Fibres | | | Drugs | | | |
| | Ground nut | Castor | Sesamum | Coconut | Others | Total | Cotton | Others | Total | Tobacco | Tea | | |
| 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | | | |
| Trivandrum | .. | 6 | 31 | 76194 | 987 | 77218 | .. | .. | .. | .. | 1065 | .. | .. |
| Quilon | .. | 37 | 3588 | 106798 | 98 | 110521 | .. | .. | .. | .. | 2366 | .. | .. |
| Alleppey | .. | 29 | 3683 | 79941 | 422 | 84075 | .. | .. | .. | .. | .. | .. | .. |
| Kottayam | .. | 110 | 51 | 69899 | 3380 | 73340 | .. | .. | .. | .. | 285 | .. | .. |
| Idukki | .. | 149 | 33 | 23040 | 521 | 23743 | .. | .. | .. | .. | 28188 | .. | .. |
| Ernakulam | .. | 17 | 857 | 52678 | 1341 | 54893 | .. | .. | .. | .. | .. | .. | .. |
| Trichur | .. | 7 | 1160 | 56869 | 1584 | 59620 | .. | .. | .. | .. | 436 | .. | .. |
| Palghat | 16044 | 63 | 662 | 23451 | 357 | 40577 | 7476 | .. | 7476 | .. | 635 | .. | .. |
| Malappuram | .. | .. | 1135 | 69383 | 22 | 70540 | .. | .. | .. | .. | 174 | .. | .. |
| Kozhikode | .. | 9 | 270 | 95953 | 50 | 96282 | .. | .. | .. | .. | 3872 | .. | .. |
| Cannanore | .. | 16 | 310 | 91223 | 104 | 91653 | .. | .. | .. | 675 | 1356 | .. | .. |
| STATE | 16044 | 343 | 11780 | 745429 | 8866 | 782462 | 7476 | .. | 7476 | 675 | 38377 | .. | .. |

TABLE 3.1—(Contd.)

| District | Non food crops | | | | | | | | | | Net area sown |
|------------|----------------|--------|--------|--------|--------------|--------------------|----------------------|----------------------|---------------------------------|--------------------------|---------------|
| | Coffee | Rubber | Others | Total | Fodder crops | Green manure crops | Other non-food crops | Total non-food crops | Total area sown under all crops | Area sown more than once | |
| | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 |
| Trivandrum | 45 | 7620 | .. | 8730 | 17 | 746 | 991 | 87702 | 249023 | 95778 | 153245 |
| Quilon | 267 | 32163 | .. | 34796 | 100 | 261 | 2754 | 148432 | 359281 | 128558 | 230723 |
| Alleppey | .. | 3797 | .. | 3797 | 136 | 622 | 779 | 89409 | 237003 | 72549 | 164454 |
| Kottayam | 1400 | 48488 | .. | 50173 | 8 | 3370 | 4601 | 131492 | 270364 | 86810 | 183554 |
| Idukki | 832 | 15312 | .. | 44332 | 31 | 770 | 18394 | 87270 | 168220 | 2576 | 165644 |
| Ernakulam | 143 | 21266 | .. | 21409 | 175 | 3322 | 4597 | 84396 | 221631 | 35471 | 186160 |
| Trichur | .. | 9762 | .. | 10198 | 23 | 460 | 3473 | 73774 | 243782 | 104222 | 139560 |
| Palghat | 4148 | 7562 | 372 | 12717 | 22 | 5696 | 10549 | 77037 | 340116 | 51025 | 289091 |
| Malappuram | .. | 17565 | .. | 17739 | .. | 2133 | 4142 | 94554 | 257565 | 45326 | 212239 |
| Kozhikode | 22858 | 15908 | 1034 | 43672 | 7 | 236 | 312 | 140509 | 275641 | 112062 | 163579 |
| Cannanore | 4958 | 16160 | .. | 23149 | 8 | 1073 | 6124 | 122007 | 363852 | 55112 | 308740 |
| STATE | 34651 | 195603 | 1406 | 270712 | 527 | 18689 | 56716 | 1136582 | 2986478 | 789489 | 2196989 |

TABLE 3.2

Percentage of area under crops to the total cropped area in each district during 1972-73

| District | Total cropped area | Total food crops | Total non food crops | Net area sown | Area sown more than once | Cereals and Millets | | | | | | Total food grains | Sugar |
|------------|--------------------|------------------|----------------------|---------------|--------------------------|---------------------|--------|-------|--------------|-------------------|-------|-------------------|-------|
| | | | | | | Rice | Others | Total | Total pulses | Total food grains | Sugar | | |
| | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | |
| Trivandrum | 100 | 64.78 | 35.22 | 61.54 | 38.46 | 15.86 | .. | 15.86 | 1.00 | 16.86 | .. | 0.25 | |
| Quilon | 100 | 58.69 | 41.31 | 64.22 | 35.78 | 14.24 | 0.13 | 14.37 | 2.07 | 16.44 | .. | 0.18 | |
| Alleppey | 100 | 62.28 | 37.72 | 69.39 | 30.61 | 38.45 | .. | 38.45 | 0.23 | 38.68 | .. | 0.38 | |
| Kottayam | 100 | 51.36 | 48.64 | 67.19 | 32.11 | 16.45 | 0.22 | 16.66 | 0.10 | 16.76 | .. | 0.99 | |
| Idukki | 100 | 48.12 | 51.88 | 98.47 | 1.53 | 8.11 | .. | 8.11 | 0.15 | 8.26 | .. | 0.56 | |
| Ernakulam | 100 | 61.92 | 38.08 | 84.00 | 16.00 | 32.86 | 0.01 | 38.87 | 0.76 | 39.63 | .. | 0.29 | |
| Trichur | 100 | 69.74 | 30.26 | 57.25 | 42.75 | 45.32 | 0.50 | 45.82 | 3.21 | 49.03 | .. | 0.92 | |
| Palghat | 100 | 77.35 | 22.65 | 85.00 | 15.00 | 53.58 | 2.04 | 55.62 | 3.67 | 59.29 | .. | 0.26 | |
| Malappuram | 100 | 63.29 | 36.71 | 82.40 | 17.60 | 35.89 | .. | 35.89 | .. | 35.89 | .. | 0.92 | |
| Kozhikode | 100 | 49.02 | 50.97 | 59.34 | 40.66 | 23.41 | 0.55 | 23.96 | 1.19 | 25.15 | .. | 0.26 | |
| Cannanore | 100 | 66.47 | 33.53 | 84.85 | 15.15 | 26.92 | 0.26 | 27.18 | 0.35 | 27.53 | .. | 0.26 | |
| STATE | 100 | 61.94 | 38.06 | 73.56 | 26.44 | 29.26 | 0.39 | 29.65 | 1.26 | 30.91 | .. | 0.26 | |

TABLE 3.2 (Contd.)

| District | Condiments and spices | | | | | | | Fresh fruits | | | | Dried fruits cashewnuts | Total fruits | Vegetables | | |
|------------|-----------------------|----------|--------------|--------|-------|---------|---------------------------------|--------------|-------|-------|-------|----------------------------|--------------|------------|----|----|
| | Pepper | Cardamom | Betel nut | Others | Total | Mangoes | Banana including plantain | Others | Total | 22 | 23 | | | 24 | 25 | 26 |
| | | | | | | | | | | | | | | | | |
| Trivandrum | 4.11 | .. | 1.85 | 1.71 | 7.67 | 2.80 | 1.66 | 2.84 | 7.30 | 1.76 | 9.06 | 30.56 | 0.39 | 30.95 | | |
| Quilon | 1.61 | .. | 2.41 | 1.05 | 5.07 | 2.69 | 1.55 | 1.61 | 5.85 | 2.36 | 8.21 | 26.37 | 2.27 | 28.64 | | |
| Alleppey | 0.64 | .. | 2.09 | 0.47 | 3.20 | 1.89 | 1.46 | 3.84 | 7.19 | 1.66 | 8.85 | 8.07 | 1.69 | 9.76 | | |
| Kottayam | 5.73 | .. | 1.89 | 2.50 | 10.12 | 2.23 | 1.74 | 2.05 | 6.02 | 0.49 | 6.51 | 14.07 | 3.32 | 17.39 | | |
| Idukki | 2.56 | 25.62 | 1.01 | 0.91 | 30.10 | 0.86 | 1.13 | 3.76 | 5.75 | 1.15 | 6.90 | 1.82 | 0.75 | 2.57 | | |
| Ernakulam | 2.19 | 0.47 | 3.45 | 1.15 | 7.26 | 2.14 | 1.41 | 3.23 | 6.78 | 1.79 | 8.57 | 5.38 | 0.87 | 6.25 | | |
| Trichur | 0.30 | .. | 5.79 | 0.81 | 6.90 | 1.98 | 2.18 | 1.90 | 6.06 | 2.98 | 9.04 | 3.42 | 0.82 | 4.24 | | |
| Palghat | 0.48 | 5.55 | 1.07 | 1.72 | 3.82 | 1.80 | 1.45 | 1.81 | 5.06 | 2.57 | 7.63 | 3.60 | 1.36 | 4.96 | | |
| Malappuram | 1.26 | .. | 5.71 | 1.00 | 7.97 | 1.38 | 1.02 | 1.78 | 4.18 | 5.20 | 9.38 | 8.91 | 1.00 | 9.91 | | |
| Kozhikode | 6.54 | 0.39 | 2.92 | 2.03 | 11.88 | 1.68 | 1.82 | 1.73 | 5.23 | 2.05 | 7.28 | 3.96 | 0.68 | 4.64 | | |
| Cannonore | 13.89 | 0.11 | 4.24 | 0.70 | 18.94 | 1.26 | 2.34 | 2.00 | 5.60 | 11.66 | 17.26 | 2.02 | 0.58 | 2.60 | | |
| STATE | 3.90 | 1.59 | 2.97 | 1.29 | 7.95 | 1.91 | 1.65 | 2.29 | 5.85 | 3.40 | 9.25 | 10.21 | 1.29 | 11.50 | | |

TABLE 3.2 (Contd.)

| District | Total fruits & vegetables | | Oil seeds | | | | | Fibre's (cotton) | Drugs narcotics & plantation Crops | | | | | Other non-food crops | Total non-food crops | | | |
|------------|---------------------------|-------|-----------|-------|------|------|-------|------------------|------------------------------------|------|-------|------|-------|----------------------|----------------------|----|----|----|
| | 27 | 28 | 29 | 30 | 31 | 32 | 33 | | 34 | 35 | 36 | 37 | 38 | | | 39 | 40 | 41 |
| | | | | | | | | | | | | | | | | | | |
| Trivandrum | 40.02 | 64.78 | 0.01 | 30.60 | .. | 0.40 | 31.01 | .. | 0.43 | 0.02 | 3.06 | .. | 3.51 | 0.70 | 35.22 | | | |
| Quilon | 36.85 | 58.69 | 1.00 | 29.73 | .. | 0.03 | 30.76 | .. | 0.66 | 0.07 | 8.95 | .. | 9.68 | 0.87 | 41.31 | | | |
| Alleppey | 18.60 | 62.28 | 1.55 | 33.73 | .. | 0.18 | 35.46 | .. | .. | .. | 1.60 | .. | 1.60 | 0.66 | 37.72 | | | |
| Kottayam | 23.91 | 51.36 | 0.02 | 25.85 | .. | 1.25 | 27.12 | .. | 0.11 | 0.52 | 17.93 | .. | 18.56 | 2.96 | 48.64 | | | |
| Idikki | 9.47 | 48.12 | 0.01 | 13.70 | .. | 0.40 | 14.11 | .. | 16.76 | 0.49 | 9.10 | .. | 26.35 | 11.41 | 51.88 | | | |
| Ernakulam | 14.83 | 61.90 | 0.39 | 23.77 | .. | 0.61 | 24.77 | .. | .. | 0.06 | 9.60 | .. | 9.66 | 3.65 | 38.08 | | | |
| Trichur | 13.28 | 69.74 | 0.48 | 23.33 | .. | 0.65 | 24.46 | .. | 0.18 | .. | 4.00 | .. | 4.18 | 1.62 | 30.26 | | | |
| Palghat | 12.59 | 77.35 | 0.19 | 6.90 | 4.72 | 0.12 | 11.93 | 2.20 | 0.19 | 1.22 | 2.22 | 0.11 | 3.74 | 4.78 | 22.65 | | | |
| Malappuram | 19.29 | 63.29 | 0.44 | 26.94 | .. | 0.01 | 27.39 | .. | 0.67 | .. | 6.82 | .. | 6.89 | 2.43 | 36.71 | | | |
| Kozhikode | 11.92 | 49.02 | 0.09 | 34.82 | .. | 0.02 | 34.93 | .. | 1.40 | 8.29 | 5.77 | 0.38 | 15.84 | 0.20 | 50.97 | | | |
| Cannanore | 19.86 | 66.47 | 0.08 | 25.07 | .. | 0.03 | 25.18 | .. | 0.37 | 1.36 | 4.44 | 0.19 | 6.36 | 1.99 | 33.53 | | | |
| STATE | 9.25 | 61.94 | 0.40 | 24.96 | 0.54 | 0.30 | 26.20 | 0.26 | 1.29 | 1.16 | 6.55 | 0.06 | 9.06 | 2.54 | 38.06 | | | |

TABLE No.4.1
Out turn of important crops in each district 1972-73.

| District | Rice (tonnes) | | | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|------------|---------------|--------|--------|---------|--------------|---------------|----------------------------------|------------|---------------------|------------------------|
| | 2 | 3 | 4 | | | | | | | |
| | Autumn | Winter | Summer | Total | Jowar tonnes | Ragi (tonnes) | other cereals & millets (tonnes) | Tur tonnes | other pulses tonnes | Sugarcane (Gur) tonnes |
| Trivandrum | 28097 | 32742 | 775 | 61614 | .. | .. | .. | .. | 911 | .. |
| Quilon | 23998 | 47293 | 1397 | 72688 | .. | 567 | .. | .. | 2328 | 4468 |
| Alleppey | 30214 | 30154 | 78900 | 139268 | .. | .. | .. | .. | 215 | 19503 |
| Kottayam | 11992 | 30318 | 38184 | 80494 | .. | .. | 168 | .. | 121 | 5157 |
| Idikki | 5576 | 15687 | 64 | 21327 | .. | .. | .. | .. | 94 | 747 |
| Ernakulam | 58516 | 52191 | 12304 | 123011 | .. | 17 | .. | .. | 851 | 556 |
| Trichur | 37961 | 92075 | 27798 | 157834 | .. | 652 | .. | .. | 2796 | .. |
| Palghat | 205858 | 146302 | 1737 | 353897 | 612 | 699 | 2942 | 365 | 3153 | 8394 |
| Malappuram | 72663 | 77163 | 19775 | 169601 | .. | .. | .. | .. | .. | .. |
| Kozhikode | 18973 | 46871 | 5256 | 71100 | .. | 1047 | .. | .. | 1212 | .. |
| Cannanore | 82344 | 38438 | 4751 | 125533 | .. | 1400 | .. | .. | 775 | 1194 |
| STATE | 576192 | 609234 | 190941 | 1376367 | 612 | 4382 | 3110 | 365 | 12456 | 40019 |

TABLE 4.1 (Contd.:

| District | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|------------|--------------------------|--------------------------|------------------------|----------------------------|----------------------------------|----------------------------|--------------------|----------------------------|---------------------------|--------------------|
| | Black pepper (Tonnes) | Dry chillies (Tonnes) | Dry Ginger (Tonnes) | Cured Turmeric (Tonnes) | Processed card- amom (Tonnes) | Betelnut million (nuts) | Banana (Tonnes) | Other plantain (Tonnes) | Cashewnut raw (Tonnes) | Tapoca (Tonnes) |
| Trivandrum | 3970 | .. | .. | .. | .. | 718 | 4729 | 26558 | 4930 | 997815 |
| Quilon | 2571 | .. | 481 | .. | .. | 1747 | 11002 | 30888 | 9515 | 2013331 |
| Alleppey | 478 | .. | .. | .. | .. | 772 | 4313 | 21885 | 4412 | 345188 |
| Kottayam | 4303 | .. | 7358 | 1035 | .. | 512 | 8852 | 26688 | 1497 | 813023 |
| Idukki | 1164 | .. | 1560 | 153 | 1002 | 206 | 1013 | 13409 | 2174 | 71118 |
| Ernakulam | 1298 | .. | 1783 | 241 | 46 | 925 | 5545 | 18105 | 4459 | 281913 |
| Trichur | 477 | .. | 62 | .. | .. | 2100 | 7832 | 32262 | 8136 | 164230 |
| Palghat | 283 | 762 | 1491 | 811 | 114 | 458 | 2077 | 35362 | 9793 | 260126 |
| Malappuram | 566 | 612 | 2813 | .. | .. | 2285 | 3869 | 15913 | 15011 | 419691 |
| Kozhikode | 2745 | .. | 6921 | 1639 | 66 | 1486 | 7089 | 30071 | 6345 | 159432 |
| Cannanore | 7295 | 1382 | 1018 | 545 | 22 | 1927 | 10332 | 40089 | 47604 | 166488 |
| STATE | 25150 | 2756 | 23487 | 4424 | 1250 | 13136 | 66653 | 291230 | 113876 | 5692355 |

TABLE 4.1 (Contd.)

| District | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|------------|-------------------------|--------------------|------------------|------------------------|----------------------------|------------------|--------------|-----------------|-----------------|-------------------------|
| | Sweet potatoes (Tonnes) | Groundnut (Tonnes) | Sesamum (Tonnes) | Coconut (Million nuts) | Cotton (Bales of 180 kgs.) | Tobacco (Tonnes) | Tea (Tonnes) | Coffee (Tonnes) | Rubber (Tonnes) | Lemongrass oil (Tonnes) |
| Trivandrum | 257 | .. | 15 | 440 | .. | .. | 1073 | 30 | 3877 | 1 |
| Quilon | 446 | .. | 1044 | 607 | .. | .. | 2346 | 34 | 16813 | 3 |
| Alleppey | 504 | .. | 858 | 510 | .. | .. | .. | .. | 1814 | 1 |
| Kottayam | 3645 | .. | 21 | 325 | .. | .. | 310 | 611 | 22982 | 107 |
| Idukki | 302 | .. | 11 | 116 | .. | .. | 30731 | 362 | 7257 | .. |
| Ernakulam | 275 | .. | 275 | 288 | .. | .. | .. | 62 | 10080 | 783 |
| Trichur | 756 | .. | 546 | 346 | .. | .. | 674 | .. | 6623 | 43 |
| Palghat | 10907 | 16461 | 179 | 80 | 8428 | .. | 975 | 2461 | 1472 | 9 |
| Malappuram | 2835 | .. | 311 | 318 | .. | .. | 138 | .. | 7124 | 171 |
| Kozhikode | 207 | .. | 80 | 556 | .. | .. | 5933 | 9317 | 8278 | 172 |
| Cannanore | 3820 | .. | 80 | 335 | .. | 1459 | 1407 | 2039 | 5628 | 312 |
| STATE | 23964 | 16461 | 3420 | 3921 | 8428 | 1459 | 43677 | 14916 | 91948 | 1602 |

TABLE No. 5.1
District-wise average farm prices in Rupees for certain commodities
for the year 1972-73

| Sl. No. | District | Paddy Std. para Rs. | Coconut 100 Nos. Rs. | Arecanut 100 Nos. Rs. | Tapioca Qtl. Rs. | Cashew-nut Qtl. Rs. | Benana 100 Nos. Rs. | Pepper Qtl. Rs. | Ginger Qtl. Rs. | Sugar-cane M. T. Rs. |
|---------|------------|---------------------|----------------------|-----------------------|------------------|---------------------|---------------------|-----------------|-----------------|----------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | Trivandrum | 10.19 | 48.09 | 2.42 | 26.20 | 207.00 | 22.46 | 478.13 | .. | .. |
| 2 | Quilon | 9.56 | 55.22 | 2.98 | 23.79 | 218.16 | 21.39 | 518.81 | .. | 83.83 |
| 3 | Alleppey | 8.98 | 55.44 | 2.73 | 31.62 | 218.44 | 20.10 | 581.25 | .. | .. |
| 4 | Kottayam | 9.20 | 57.45 | 2.48 | 27.22 | 220.42 | 21.21 | 521.44 | .. | .. |
| 5 | Idukki | 9.66 | 59.83 | 2.71 | 24.48 | .. | .. | 523.06 | .. | .. |
| 6 | Ernakulam | 9.45 | 55.14 | 2.73 | 24.87 | 235.00 | 16.39 | .. | .. | .. |
| 7 | Trichur | 8.71 | 53.85 | 3.28 | 25.80 | 215.00 | 20.09 | .. | .. | .. |
| 8 | Palghat | 8.22 | 49.92 | 2.23 | 21.26 | 205.83 | 18.43 | 534.22 | .. | .. |
| 9 | Malappuram | 7.43 | 47.86 | 2.14 | .. | .. | .. | 526.96 | .. | 94.38 |
| 10 | Kozhikode | 8.80 | 49.53 | 1.53 | 20.52 | 204.25 | 16.31 | .. | .. | .. |
| 11 | Cannanore | 8.05 | 51.11 | 1.75 | 31.93 | 224.38 | 18.92 | 537.00 | .. | .. |
| | Wt. Av. | 8.65 | 52.79 | 2.43 | 25.43 | 318.99 | 19.65 | 524.85 | 301.72 | 89.32 |

TABLE No. 6.1

District-wise daily average wages from July 1972 to June 1973

CARPENTER

| District | July 72 | Aug. 72 | Sept 72 | Oct. 72 | Nov. 72 | Dec. 72 | Jan. 73 | Feb. 73 | March 73 | April 73 | May 73 | June 73 |
|------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|--------|---------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Trivandrum | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 |
| Quilon | 7.56 | 7.56 | 7.56 | 7.56 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.50 |
| Alleppey | 9.00 | 9.00 | 9.00 | 9.00 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 10.00 |
| Kottayam | 9.00 | 9.00 | 9.00 | 9.00 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 |
| Ernakulam | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.20 |
| Trichur | 8.45 | 8.45 | 8.45 | 8.45 | 9.00 | 9.00 | 9.00 | 9.00 | 9.50 | 9.50 | 9.50 | 9.50 |
| Palghat | 6.50 | 6.50 | 7.25 | 7.25 | 7.50 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.50 | 9.05 |
| Kozhikode | 7.73 | 7.73 | 8.07 | 8.07 | 8.07 | 8.07 | 8.07 | 8.07 | 8.07 | 8.23 | 8.65 | 8.98 |
| Cannanore | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 |

Table No. 6.1—(Contd.)

MASON

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Trivandrum | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 |
| Quilon | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 |
| Alleppey | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 10.00 |
| Kottayam | 9.00 | 9.00 | 9.00 | 9.00 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 |
| Ernakulam | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 |
| Trichur | 7.90 | 7.90 | 7.90 | 7.90 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |
| Palghat | 6.50 | 6.75 | 7.50 | 7.50 | 7.75 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 |
| Kozhikode | 8.23 | 8.23 | 8.57 | 8.57 | 8.57 | 8.57 | 8.57 | 8.57 | 8.57 | 8.57 | 8.82 | 8.98 |
| Cannanore | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 | 7.75 |

Table No. 6.1 (Contd.)

PADDY FIELD LABOUR (MEN)

| I | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Trivandrum | 4.75 | 4.75 | 5.00 | 5.00 | 5.00 | 5.25 | 5.25 | 5.25 | 5.25 | 5.25 | 5.25 | 5.25 |
| Quilon | 4.47 | 4.47 | 4.47 | 4.47 | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 | 5.00 | 5.25 |
| Alleppey | 5.70 | 5.70 | 5.70 | 5.70 | 6.10 | 6.10 | 6.10 | 6.10 | 6.10 | 6.10 | 6.10 | 6.10 |
| Kottayam | 6.75 | 6.75 | 6.75 | 6.75 | 6.75 | 6.75 | 6.75 | 6.75 | 6.75 | 6.75 | 6.75 | 6.75 |
| Ernakulam | 7.00 | 7.00 | 7.00 | 7.00 | 6.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 |
| Trichur | 5.95 | 5.95 | 5.95 | 5.95 | 5.95 | 5.95 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |
| Palghat | 4.65 | 4.65 | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 | 5.36 |
| Kozhikode | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 | 5.05 | 5.22 |
| Canmanore | 6.85 | 6.85 | 6.85 | 6.85 | 6.85 | 6.85 | 6.85 | 6.85 | 6.85 | 6.85 | 7.35 | 7.35 |

TABLE 7.1

Number of Livestock, Poultry and Agricultural Machinery and Implements in Kerala (1972 Census)

| District | Cattle | | | | | | | | | | | |
|------------|------------------------|---------|--------|--------|---------|-------------------|--------------------------|---------|--------|---------|----------------|---------|
| | Males over three years | | | | | | Females over three years | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | Breeding | Working | Others | Total | In milk | Breeding (dry) | Not calved | Working | Others | Total | Young stock | Total |
| Trivandrum | 150 | 12971 | 891 | 14012 | 43775 | 32622 | 4972 | 272 | 270 | 81911 | 70670 | 166593 |
| Quilon | 525 | 33296 | 1638 | 35459 | 76751 | 85409 | 15344 | 178 | 700 | 178382 | 167776 | 381617 |
| Alleppey | 265 | 10704 | 811 | 11780 | 81839 | 82041 | 12420 | 120 | 828 | 177248 | 146962 | 335990 |
| Kottayam | 408 | 11786 | 758 | 12952 | 58768 | 61575 | 11561 | 458 | 225 | 132587 | 123858 | 269397 |
| Idukki | 721 | 10776 | 626 | 12123 | 30568 | 30623 | 3931 | 174 | 269 | 65565 | 58443 | 136131 |
| Ernakulam | 459 | 53237 | 1588 | 55284 | 51113 | 43544 | 7887 | 438 | 427 | 103409 | 105731 | 264424 |
| Trichur | 534 | 46032 | 828 | 47394 | 44579 | 34351 | 5170 | 727 | 262 | 85089 | 90198 | 222681 |
| Palghat | 378 | 57066 | 1746 | 59190 | 55536 | 51700 | 8517 | 2297 | 846 | 118896 | 101892 | 279978 |
| Malappuram | 277 | 45784 | 1575 | 47636 | 36127 | 30305 | 5239 | 1250 | 287 | 73208 | 58122 | 178966 |
| Kozhikode | 414 | 30971 | 965 | 32350 | 56680 | 51400 | 11330 | 1378 | 496 | 121284 | 94771 | 248405 |
| Cannanore | 669 | 59349 | 3396 | 63414 | 70456 | 75257 | 15478 | 354 | 1047 | 162592 | 146132 | 372138 |
| STATE | 4300 | 371972 | 14822 | 391594 | 606192 | 578827 | 101849 | 7646 | 5657 | 1300171 | 1164555 | 2856320 |

TABLE 7.1—(Contd.)

| District | Buffaloes | | | | | | | | | | | |
|------------|------------------------|---------|--------|--------|---------|----------|--------------------------|---------|--------|--------|-------------|--------|
| | Males over three years | | | | | | Females over three years | | | | | |
| | Breeding | Working | Others | Total | In milk | Breeding | Not calved | Working | Others | Total | Young stock | Total |
| | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Trivandrum | 242 | 12872 | 904 | 14018 | 11621 | 7306 | 1371 | 428 | 262 | 20988 | 9502 | 44508 |
| Quilon | 181 | 8880 | 352 | 9413 | 6762 | 5077 | 805 | 107 | 105 | 12856 | 6595 | 28864 |
| Alleppey | 87 | 5631 | 238 | 5956 | 2919 | 2272 | 449 | 75 | 21 | 5736 | 2200 | 13892 |
| Kottayam | 61 | 1606 | 283 | 1950 | 2707 | 1619 | 261 | 49 | 46 | 4682 | 1717 | 8349 |
| Idukki | 147 | 1456 | 275 | 1878 | 3771 | 2419 | 417 | 83 | 73 | 6763 | 3569 | 12210 |
| Ernakulam | 120 | 9723 | 639 | 10482 | 5738 | 1968 | 478 | 300 | 129 | 8613 | 3711 | 22806 |
| Trichur | 252 | 30721 | 1278 | 30528 | 11676 | 6110 | 1130 | 247 | 774 | 19937 | 13564 | 64029 |
| Palghat | 565 | 84499 | 5077 | 90141 | 13816 | 11389 | 2106 | 2322 | 366 | 29999 | 24765 | 144905 |
| Malappuram | 158 | 31215 | 1513 | 32886 | 9492 | 5774 | 1507 | 1863 | 266 | 18902 | 11382 | 63170 |
| Kozhikode | 160 | 10671 | 646 | 11477 | 6036 | 3530 | 663 | 357 | 109 | 10695 | 4844 | 27016 |
| Cannanore | 212 | 15916 | 874 | 17000 | 8650 | 6207 | 1308 | 235 | 209 | 16609 | 8389 | 41998 |
| STATE | 2185 | 211467 | 12077 | 225729 | 83188 | 53671 | 10495 | 6066 | 2360 | 155780 | 90238 | 471747 |

PART IV

Appendices

1. Working Class Cost of Living Indices
 2. Parity Index
 3. Quarterly Retail Prices
 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 Soil 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 metrological information
 11. Glossary of English, Botanical and Malayalam names.
-

1843
1844

1845
1846
1847
1848

1849
1850
1851
1852

1853
1854
1855
1856

1857
1858
1859
1860

1. Working Class cost of Living Indices

The average consumer price index numbers in 13 selected centres of the state during the year 1971-72 and 1972-73 are furnished in the following table:—

TABLE I

| Centre | Average cost of living indices | |
|----------------|--------------------------------|---------|
| | 1971-72 | 1972-73 |
| Trivandrum | 891 | 988 |
| Quilon | 869 | 965 |
| Punalur | 851 | 946 |
| Alleppey | 870 | 961 |
| Changanacherry | 869 | 967 |
| Shertallay | 891 | 992 |
| Kottayam | 878 | 930 |
| Munnar | 900 | 997 |
| Alwaye | 893 | 989 |
| Earnakulam | 889 | 986 |
| Trichur | 849 | 947 |
| Chalakydy | 859 | 941 |
| Kozhikode | 981 | 1082 |

The monthwise details have been furnished in Table 1 of the appendix.

2. Parity Index

The index of parity between prices received and paid by the farmers during each month is given below for the years 1971-72 and 1972-73.

TABLE II
Index of Parity

| Months | 1971-72 | 1972-73 |
|-----------|---------|---------|
| July | 94 | 91 |
| August | 93 | 88 |
| September | 89 | 85 |
| October | 86 | 84 |
| November | 80 | 84 |
| December | 81 | 83 |
| January | 82 | 85 |
| February | 83 | 89 |
| March | 84 | 93 |
| April | 85 | 98 |
| May | 84 | 102 |
| June | 87 | 101 |
| Average | 86 | 90 |

Quarterly Retail prices.

The trend of quarterly retail prices of 12 important commodities is discussed in the following paragraphs. Districtwise quarterly retail prices have been given in table 111.

1. *Rice (F.P.)*.—The fair price of rice increased from Rs. 1.08 to Rs. 1.19 during the second quarter of the year.

2. *Chillies*.—The price varied from Rs. 3.31 to Rs. 5.25. The maximum price was reported from Palghat, district.

3. *Tapioca*.—The price per kg. of raw tapioca fluctuated between 26ps. to 65 ps. The lowest and highest prices were reported from Palghat and Kozhikode respectively.

4. *Blackgram*.—The price of blackgram was highest at Rs. 3.30/kg. during the last quarter of the year. It was reported from Cannanore. The lowest price of Rs. 2.40/kg. prevailed in the third quarter of the year in Trichur District.

5. *Tea*.—The price fluctuated between Rs. 6.95 and Rs. 13.20.

6. *Coffee*.—The maximum and minimum prices of this commodity are Rs. 12.92 and Rs. 7.78 per kg. respectively.

7. *Sugar*.—The open market price of sugar showed no wide fluctuation during the year. The price varied from Rs. 3.30 to Rs. 3.78/kg.

8. *Coconut Oil*.—The price fluctuated between Rs. 5.37 and Rs. 7.59 per kg. The price ruled highest in the last quarter of the year.

9. *Gingelly Oil*.—The price was uniformly at its lowest during the first quarter of the year. The price gradually increased from Rs. 5.67 in the first quarter to Rs. 8.78 in the last quarter.

10. *Coconut*.—The highest price of 81.31 is reported from Kottayam District whereas the lowest price ruled in Trivandrum District in the first quarter of the year.

11. *Tobacco Jaffna*.—This has no market in the three northern most districts of the state. The price fluctuated between Rs. 14.85 in Trichur District to Rs. 6.50 in Palghat district.

12. *Tobacco (ordinary)*.—The price was below Rs. 8 per kg. in Quilon and Alleppey districts. In all other districts of the state the price exceeded Rs. 8. The price fluctuated within the range of Rs. 6.25 and Rs. 9.90.

TABLE NO. 1.

**Statement showing the Consumer Price Index Numbers for selected centres
in the state from July 1972 to June 1973.**

| Centre | July 72 | August | September | October | November | December | January 73 | February | March | April | May | June |
|-------------------|---------|--------|-----------|---------|----------|----------|------------|----------|-------|-------|------|------|
| 1. Trivandrum | 943 | 947 | 942 | 946 | 962 | 983 | 978 | 975 | 992 | 1022 | 1053 | 1107 |
| 2. Quilon | 925 | 925 | 921 | 925 | 939 | 960 | 952 | 947 | 965 | 1000 | 1035 | 1090 |
| 3. Punalur | 901 | 901 | 894 | 900 | 917 | 940 | 934 | 930 | 949 | 986 | 1021 | 1078 |
| 4. Alleppey | 921 | 922 | 917 | 920 | 935 | 955 | 947 | 943 | 960 | 995 | 1030 | 1083 |
| 5. Changanacherry | 923 | 925 | 920 | 924 | 940 | 960 | 952 | 951 | 971 | 1006 | 1037 | 1094 |
| 6. Kottayam | 946 | 950 | 945 | 948 | 966 | 985 | 977 | 974 | 992 | 1030 | 1065 | 1121 |
| 7. Alwaye | 935 | 936 | 929 | 939 | 952 | 971 | 961 | 961 | 982 | 1021 | 1055 | 1117 |
| 8. Ernakulam | 956 | 958 | 949 | 951 | 965 | 986 | 977 | 978 | 999 | 1039 | 1072 | 1130 |
| 9. Trichur | 951 | 951 | 942 | 947 | 961 | 980 | 973 | 969 | 988 | 1026 | 1059 | 1117 |
| 10. Chalakudy | 948 | 948 | 939 | 944 | 958 | 978 | 969 | 966 | 986 | 1026 | 1059 | 1115 |
| 11. Munnar | 904 | 902 | 895 | 900 | 915 | 936 | 932 | 935 | 955 | 986 | 1022 | 1081 |
| 12. Sherthalai | 901 | 902 | 895 | 899 | 915 | 935 | 926 | 922 | 940 | 979 | 1010 | 1063 |
| 13. Kozhikode | 1044 | 1045 | 1036 | 1042 | 1060 | 1082 | 1072 | 1070 | 1092 | 1122 | 1163 | 1224 |
| * STATE AVERAGE | 930 | 931 | 924 | 929 | 944 | 964 | 957 | 954 | 973 | 1010 | 1043 | 1100 |
| | | | | | | | | | | | | 972 |

* State average for twelve centres excluding Kozhikode.

(Base: for Kozhikode year ended July 1936 = 100 for other centres August 1939 = 100)

TABLE II.

Index Numbers of parity between prices received and paid by farmers—1972—73.

| | July | August | September | October | November | December | January | February | March | April | May | June | Average |
|----------------------------|------|--------|-----------|---------|----------|----------|---------|----------|-------|-------|-----|------|---------|
| Prices received by farmers | 239 | 232 | 224 | 223 | 228 | 227 | 235 | 247 | 259 | 281 | 302 | 311 | 251 |
| Farm cultivation cost | 295 | 294 | 296 | 301 | 303 | 306 | 309 | 314 | 315 | 317 | 331 | 336 | 310 |
| Parity | 91 | 88 | 85 | 84 | 84 | 83 | 85 | 89 | 93 | 98 | 102 | 101 | 90 |

TABLE III
Quarterly District Average Retail Prices for 1972-1973

| Sl. No. | Name of Commodity | Unit | Quarter | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---------|-------------------------|------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. | Coconut (with-out husk) | 100 | I | 43.76 | 49.50 | 52.88 | 59.14 | 51.06 | 48.34 | 49.00 | 47.55 | 49.62 | 49.67 |
| | | | II | 49.94 | 53.78 | 54.99 | 65.02 | 52.66 | 55.73 | 58.56 | 49.42 | 54.27 | 50.08 |
| | | | III | 54.39 | 60.29 | 59.70 | 72.68 | 62.34 | 63.84 | 58.59 | 61.66 | 62.15 | 59.58 |
| | | | IV | 65.01 | 71.95 | 68.22 | 81.31 | 77.63 | 67.45 | 62.43 | 68.63 | 69.53 | 65.42 |
| 2. | Coconut Oil | Lit. | I | 5.52 | 5.55 | 5.39 | 5.37 | 5.40 | 5.55 | 5.58 | 5.41 | 5.47 | 5.47 |
| | | | II | 5.82 | 5.78 | 5.55 | 5.53 | 5.63 | 5.78 | 5.83 | 5.46 | 5.66 | 5.64 |
| | | | III | 6.36 | 6.33 | 5.91 | 6.10 | 6.14 | 6.37 | 6.35 | 5.99 | 6.13 | 6.01 |
| | | | IV | 7.48 | 7.46 | 7.15 | 7.32 | 7.39 | 7.59 | 7.49 | 7.13 | 7.30 | 7.09 |
| 3. | Rice (F.P.) | kg. | I | 1.08 | 1.08 | 1.19 | 1.08 | 1.08 | 1.08 | 1.19 | 1.08 | 1.08 | 1.19 |
| | | | II | 1.08 | 1.08 | 1.08 | 1.08 | 1.19 | 1.19 | 1.19 | 1.08 | 1.08 | 1.19 |
| | | | III | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 |
| | | | IV | 1.19 | 1.20 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 |
| 4. | Blackgram | kg. | I | 2.85 | 3.06 | 2.70 | 2.97 | 2.67 | 2.53 | 2.91 | 2.66 | 2.33 | .. |
| | | | II | 2.87 | 3.14 | 2.70 | 3.02 | 2.80 | 2.55 | 3.07 | 2.97 | 2.51 | .. |
| | | | III | 2.58 | 2.86 | 2.52 | 2.78 | 2.74 | 2.40 | 2.94 | 3.07 | 2.46 | 3.20 |
| | | | IV | 2.66 | 2.79 | 2.51 | 2.84 | 2.63 | 2.39 | 2.88 | 2.98 | 2.38 | 3.30 |
| 5. | Gingelly Oil | Lit. | I | 6.07 | 6.21 | 5.67 | 5.87 | 6.09 | 5.74 | 6.07 | 5.63 | 5.81 | 6.00 |
| | | | II | 6.59 | 6.80 | 6.09 | 6.24 | 6.34 | 6.01 | 6.40 | 6.02 | 6.22 | 6.30 |
| | | | III | 8.26 | 8.38 | 7.21 | 7.52 | 7.33 | 7.28 | 7.63 | 7.17 | 7.49 | 7.24 |
| | | | IV | 8.69 | 8.78 | 7.81 | 8.04 | 7.91 | 7.62 | 8.15 | 7.53 | 7.91 | 7.78 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|-----|-----------------------|-----|----------------------|----------------------------------|----------------------------------|------------------------------|------------------------------|----------------------------------|----------------------------------|------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 6. | Tapioca | kg. | I II III IV | 0.31 0.32 0.34 0.37 | 0.31 0.34 0.34 0.36 | 0.33 0.33 0.33 0.37 | 0.37 0.37 0.38 0.41 | 0.32 0.31 0.30 0.35 | 0.27 0.27 0.28 0.32 | 0.26 0.29 0.31 0.32 | 0.31 0.33 0.33 0.40 | 0.47 0.52 0.48 0.62 | 0.30 0.30 0.33 0.45 |
| 7. | Sugar | | I II III IV | 3.30 3.62 3.75 3.73 | 3.37 3.66 3.78 3.78 | 3.34 3.63 3.72 3.74 | 3.33 3.63 3.73 3.72 | 3.34 3.66 3.74 3.75 | 3.31 3.60 3.69 3.74 | 3.33 3.63 3.73 3.76 | 3.31 3.59 3.66 3.72 | 3.35 3.61 3.68 3.70 | 3.32 3.58 3.71 3.69 |
| 8. | Chillies | | I II III IV | 4.33 4.68 4.96 4.80 | 3.77 4.34 4.71 4.49 | 3.65 4.25 4.62 4.58 | 3.71 4.30 4.78 4.52 | 3.99 4.69 5.04 4.82 | 3.99 4.56 5.04 4.88 | 4.31 4.84 5.25 4.99 | 3.64 4.19 4.80 4.55 | 4.04 4.62 5.20 4.92 | 3.72 3.80 4.73 4.60 |
| 9. | Coffee Powder | | I II III IV | 12.92 12.92 12.92 12.92 | 10.00 10.00 10.00 10.09 | 8.57 8.57 8.57 8.57 | 9.47 9.63 9.83 9.80 | 7.78 7.82 7.87 8.02 | 9.00 9.00 9.00 9.00 | 9.57 9.75 9.75 9.75 | 8.75 8.75 8.75 8.75 | 10.49 10.50 10.50 10.50 | 11.00 11.00 11.00 11.00 |
| 10. | Tea | | I II III IV | 12.25 12.25 12.25 12.25 | 9.40 12.89 13.03 13.20 | 7.00 7.00 7.00 6.95 | 7.50 7.53 7.85 7.90 | 7.60 7.53 7.72 7.85 | 12.40 12.40 12.40 12.40 | 8.88 8.88 8.88 8.88 | 10.15 10.05 10.13 10.25 | 10.67 10.53 10.53 10.53 | 7.25 7.25 7.25 7.25 |
| 11. | Tobacco (J. fina) | | I II III IV | 9.00 9.00 9.00 9.00 | 9.28 8.97 8.52 8.50 | 9.00 8.69 8.84 8.74 | 9.17 9.00 8.88 8.88 | 10.83 10.83 10.83 10.94 | 14.8 14.85 14.85 14.85 | 6.50 6.50 6.50 6.69 | | | |
| 12. | Tobacco (Ordinary) | | I II III IV | 8.50 8.50 8.50 8.50 | 6.32 6.25 6.25 6.25 | 6.95 6.87 6.99 7.00 | 7.89 8.24 8.24 8.23 | 9.55 9.50 9.50 9.61 | 8.52 9.00 9.16 9.60 | 8.40 8.44 8.44 8.44 | 9.90 9.80 9.50 9.50 | 8.50 8.50 8.64 8.73 | 8.33 8.50 8.50 8.50 |

V—Variety change

TABLE IV

**Foreign exports from the ports of Kerala for the
Financial Year 1972-73**

| Sl. No. | Commodity | Unit | Quantity | Value (Rs. in lakhs) |
|---------|-------------------------------------|-------|-----------|----------------------|
| 1. | Cardamom | M. T. | 426 | 196.26 |
| 2. | Cashew Kernel | .. | 64,038 | 6,392.78 |
| 3. | Cashew shell oil | Litre | 41,92,751 | 48.88 |
| 4. | Coffee | M. T. | 22,681 | 1,515.32 |
| 5. | Coir and coir products | | 43,206 | 1,310.39 |
| 6. | Ginger | | 4,395 | 152.08 |
| 7. | Lemongrass oil | Litre | 2,71,980 | 95.54 |
| 8. | Marine products including frog legs | M. T. | 24,778 | 3,981.51 35.78 |
| 9. | Oil cake | .. | 5,204 | |
| 10. | Pepper | .. | 26,677 | 2,231.23 |
| 11. | Rubber manufactures | .. | .. | 18.89 |
| 12. | Tea | .. | 43,795 | 2,967.37 |
| 13. | Wood and Timber | .. | .. | 872.36 |
| 14. | Sundries | .. | .. | 1,304.83 |

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 on 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 those plants are removed from the nursery after 6 to 18 months with great care so that the tap root of the plant is not damaged and planted in the places fixed for the purpose.

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

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

Manure.—The important manures used are mixtures of nitrogen, phosphorus 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 60 to 80 years.

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 or hessian cloth rack 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 come out. Then the rolled leaves are taken from the rolls breakers and put in the fermentation rooms. Fermentation is a process of oxidation where the leaves undergo a chemical change. The green colour of tea leaves change into reddish hue of copper. The next process is known as drying. Hot air (200° to 230°) from the drier furnace is forced into the chamber where the leaves are dried.

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

Besides the black tea the manufacture of which has been described above, green tea is also manufactured in India in 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 a tropical plant. It is successfully cultivated in places where the altitude is ranging between 1500 and 6000 feet, above mean sea level. The most suitable altitude is between 2500 ft. to 5000 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°. A good dry spell from about December to March with a few intermittent

showers in March and April and heavy rainfall in July and August constitute ideal condition for the growth of the coffee plant (Report of the Plantation Enquiry Commission of Coffee, 1956 Government of India).

Soil.—Coffee requires sandy soils or clayloam 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 beds. It is essential that the nursery beds must have shades to protect the tender shoots. These plants are to be transplanted after four to six months in the nursery. When the plants are twenty inches in height they are finally transplanted. The spacing between each plant 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 beat down under the earth for at least four months so as to enable new roots to sprout up from these branches.

Shade trees are provided in coffee plantation for protection of 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 super-phosphate, ammonium sulphate, copper sulphate and urea.

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

Diseases.—The following diseases are prevalent in the coffee estates. They are (1) coffee stem borer, (2) Shot hole borer, (3) Leaf disease, (4) Root-rot (5) Die-back (6) Chlorosis and (7) Green bug.

From garden to the market.—There are two processes by which raw coffee is cured. They are known as 'dry' and 'wash' methods. By the first method the coffee cherries are washed and spread out on the cement floors in the open air for drying. When they are completely dried they are allowed to run through fanning and hulling machines.

The second process known as wash process is entirely different. The cherries are put in the pulping machine which breaks them the pulpy skin of the cherries are automatically removed. Then those 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 area under rubber is in the Kerala State. 92% of the total production of rubber in India is also from Kerala. India's place in the world acreage under rubber is comparatively very low. India'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. Owing to a record production of rubber on the one hand and the lower off-take by the industry on the other, rubber experienced a problem of surplus in the last one or two years. Consequently rubber growers in the country were confronted with a perceptible fall in rubber prices. Even State intervention by way of fixation of a floor price and the entry of the State Trading Corporation into the market could not solve the problem to any considerable extent.

Climate.—Rubber usually grows in the tropical belt lying within 15° N and 10° S of the equator and usually at an altitude of 100° 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 Phytophthora 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 Rot is prevalent in the trees which are used for frequent tapping. The symptom of the disease 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 into shadow pans. For removing water and for getting a definite shape the coagulum 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 output of this valuable spice is produced in India. India's competitors are Ceylon, Indo-China and Guatemala. 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 altitude 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 pottassium chlorate is also considered to be a good manure.

Diseases:—The most important disease affecting the cardamom plantations is the virus 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 menance is that caused by thrips, mite etc. Dusting the plants with gamaxone 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 characteristic sweet aroma. The dried capsules are then cleaned. The final product of green cardamom is 20 to 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. There are three important grades (1) green cardamom (2) white or bleached cardamom and (3) seeds. The quality of cardamom varies according to place and variety of the seed.

The middle-east and sweden absorbed 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 fed 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 altitude 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 grow beyond a height of 20 ft. lest the plucking of the pepper berries become difficult.

Plucking:—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 become black. Sometimes 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 $\frac{1}{4}$ lb. to 2 lb. of dried produce.

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

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

Diseases:—One of the major 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-Leons. 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 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 1.5 tonnes per hectare.

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 brownish spots and gradually dry up. Spraying and Bordezux mixture is suggested in such cases.

From garden to the Market.—Dry ginger as a market produce is prepared as follows:—Then they are soaked in water and kept over night. In the morning they are cleaned well. Then these rhizomes are allowed to dry for a week in the hot sun. They are again cleaned. 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 repeatedly. 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 & D) 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.

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 India, Malaya, 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, Mynad, 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 lb. 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 gives better quality of oil containing greater quantity of citral.

Harvesting: Generally harvesting will be 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 season 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 | 2½ " " |
| 3rd | 2 " " |
| 4th | 2 " " |
| 5th | 2 " " |

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

The raw grass and water are put in the boiler specially made for this purpose. The shape of the boiler is like a retort 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 | Details of distribution |
|------------|----------------------------------------------|------------------------------------|
| (1) | (2) | (3) |
| Trivandrum | 1. Fairly rich brown loam of laterite origin | Middle part of the District |
| | 2. Sandy loam | Western coastal region |
| | 3. Richest dark brown loam of granite origin | Eastern hilly part of the District |

| (1) | (2) | (3) |
|-----------|-----------------------------------|------------------------------------------------------------------------------------|
| Quilon | 1. Sandy loam | Karunagappally and part of Quilon Taluks |
| | 2. Laterite soil | Kottarakkara, Kunnathur and Part of Quilon Pathanapuram and Pathenamthitta Taluks. |
| | 3. Hill and forest soil | Part of Pathanapuram and Pathanamthitta taluks |
| Alleppey | 1. Sandy loam | Karthigappally and Mavelikara Taluks |
| | 2. Sandy soil | Sherthallai and Ambalapuzha Taluks |
| | 3. Clay loam with much of abidity | Kuttanad |
| | 4. Lateric soil | Chengannur and part of Mavelikkara. |
| Kottayam | 1. Laterite soil | Peermade and part of Meenachil Changanacherry and Kottayam Taluks. |
| | 2. Alluvial soil | Vaikom parts of Changanacherry and Kottayam, Devikulam and Udumbanchola. |
| Ernakulam | 1. Laterite | Thodupuzha and Muvattupuzha and part of Kunnathunad |
| | 2. Sandy loam | Parur, Cochin and Kanayanur |
| | 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 Talappally |
| | 4. Clay | Backwater area in Chowghat and part of Mukundapuram. |
| | 5. Alluvial soil | Portion of Chowghat and Kunnathunad Taluk. |

| (1) | (2) | (3) |
|-----------|---------------|-----------------------------------------|
| Palghat | 1. Laterite | Interior regions of the District |
| | 2. Sandy | Along coastal and reverside areas |
| | 3. Black soil | North-Eastern portion of Chittur Taluk. |
| Kozhikode | 1. Laterite | Major part of the District |
| | 2. Sandy | Barring coastal area 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 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: | Cashew kernels | 25 % of cashewnut |
| | Butter from mixed milk | 6.3% |
| | Ghee from mixed milk | 5.3% |

8. Average analysis and important fertilisers

| Sl. No. | Name of Fertiliser | Nitrogen (N%) | Phosphate (P ₂ O ₅ %) | Potash (K ₂ O%) |
|---------|---------------------------|---------------|---------------------------------------------|----------------------------|
| (1) | (2) | (3) | (4) | (5) |
| 1. | Ammonium Sulphate Nitrate | 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 | 20.0 | .. | .. |
| 9. | Urea | 46.0 | .. | .. |
| 10. | Super Phosphate—Single | .. | 18.0 | .. |
| 11. | Super Phosphate—Double | .. | 35.0 | .. |
| 12. | Super Phosphate | .. | 45.0 | .. |
| 13. | Rock Phosphate | .. | 28.3 | .. |
| 14. | Hyper Phosphate | .. | 27.3 | .. |
| 15. | Sulphate of Potash | .. | .. | 48.0 |
| 16. | Muriate of Potash | .. | .. | 50.0 |
| 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 pest | Nature of damage | Control of measures |
|---------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (1) | (2) | (3) | (4) |
| 1. | Paddy Rice Swarming Caterpillar <i>Spodepiara Mauritica</i> | Defoliation plants reduced to stumps nursery and early growing stages attached Caterpillar bores into stem causing 'dead hearts' 'white year heads' | Spray DDT. at 15 kg. per Ha. or Endrin at 250 gm. a.i. per Ha. 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 Dust BHC or spray Endrin or Parathion at doses given above. |
| 2. | Rice stem borer <i>Cryporysa (Schoenobius) Jucutulas</i> | All stages of plants susceptible to attack | " |
| 3. | Rice bug <i>leptocorisa acuta</i> | Sucks 'milk' of tender grains leaving them chaffy | " |
| 4. | Rice Hispa <i>Di cladispa (Hispa) armigera</i> | Adults feed on green matter of leaves and grubs mine leaves | Spray DDT, Endrin or Parathion at above doses. |
| 5. | Rices case worm <i>Nymphula depunctali</i> | Caterpillar in lead-case defoliates | " |
| 6. | Paddy gallfly <i>pacy diplosis or Y3ae</i> | Maggot bores into central shoot and induces formation of elongated halloe gall called 'silver sheet' | Spray endrin or Parathion at 250 gm. a.i. per Ha. 4 times at weekly intervals from 15th day after transplantation. Set up light traps. |

| (1) | (2) | (3) | (4) |
|-----|------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 7. | Paddy mealy bug | Lives within leaf-sheaths in colonies sucking sap causing stunting of crop | Spray paration at 250 gm. a.i. per Ha Phosphamidon (Dimecro 100%) solun at 100 MI, per Ha or Dimothocate (Rogor 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 <i>Onaphalocrocis mediualis</i> | Cater pillar floods 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 for the year 1971-72

TRIVANDRUM DISTRICT

- | | |
|-------------------|---------------------------|
| 1. Ponmudy | 6. Neyyattinkara |
| 2. Varkala | 7. Parassala |
| 3. Attingal | 8. Trivandrum (Aerodrome) |
| 4. Nedumangad | 9. Vellayani (AM) |
| 5. Trivandrum (b) | |

QUILON DISTRICT

- | | |
|-------------------|---------------------|
| 1. Pathanamthitta | 7. Aryankavu |
| 2. Konni | 8. Quilon |
| 3. Adoor | 9. Nilamel |
| 4. Karunagapally | 10. Paravur |
| 5. Punalur | 11. Kayamkulam (AM) |
| 6. Kottarakara | |

KOTTAYAM DISTRICT

- | | |
|--------------|----------------|
| 1. Chinar | 5. Vandanmattu |
| 2. Marayoor | 6. Vaikom |
| 3. Munnar | 7. Palai |
| 4. Devikulam | 8. Ettumannur |

9. Kumily
10. Kottayam
11. Peermade (Taluk)
12. Peermade (Residency)
13. Kanjirappally
14. Changanacherry
15. Velloor
16. Kottayam (AM)

ALLEPPEY DISTRICT

1. Arukutty
2. Sherthalai
3. Alleppey (b)
4. Ambalapuzha
5. Thiruvalla
6. Chenganoor
7. Haipad
8. Mavelikara
9. Kayamkulam

ERNAKULAM DISTRICT

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

TRICHUR DISTRICT

1. Cranganore
2. Mukundapuram
3. Trichur
4. Thalapilly

5. Ollukkara (AM)
6. Peechi (AM)

PALGHAT DISTRICT

1. Alathur
2. Palghat
3. Parali
4. Ottappalam
5. Cherplasserry
6. Mannarghat
7. Chittur
8. Pattambi (AM)

MALAPPURAM DISTRICT

1. Perinthalmanna
2. Ponnani
3. Manjeri
4. Thiruangadi
5. Nilambur

KOZHIKODE DISTRICT

1. Kozhikode
2. Vithiri
3. Quilandi
4. Badagara
5. Kuttiyadi

CANNANORE DISTRICT

1. Kasargod
2. Thaliparamba
3. Cannanore
4. Hosdrug
5. Tellicherry
6. Irrikkur
7. Payyannur
8. Mananthody
9. Mahe
10. Kasargod (AM)

Non-reporting rainguage stations schedule I**TRIVANDRUM DISTRICT**

1. Aruvikara
2. Vamanapuram
3. Nedumangad

QUILON DISTRICT

4. Kulathupuzha
5. Kottarakkara

KOTTAYAM DISTRICT

6. Kottayam
7. Pallom
8. Kumarakom

ALLEPPEY DISTRICT

9. Alleppey

ERNAKULAM DISTRICT

10. Puthencruz
11. Kuthattukulam
12. Kolani

TRICHUR DISTRICT

13. Pazhayannur

PALGHAT DISTRICT

14. Nemmara
15. Nelliampathy
16. Nattukal

KOZHIKODE DISTRICT

17. Kuttiadi
18. Ambalavayal

19. Kuppady
20. Muthunga
21. Lakkidi
22. Thagarappady

CANNANORE DISTRICT

23. Manjeswar
24. Vemom (Mananthody)
25. Thirunelli (Mananthody)
26. Konnath
27. Chandanathode
28. Peria
29. Chedloth Range
30. Taliparamba
31. Cannanore

Non-reporting railway rainguage stations

- | | |
|---------------|-----------------|
| 1. Kollengode | 6. Angadipuram |
| 2. Thenalai | 7. Calicut |
| 3. Quilon | 8. Panthalayani |
| 4. Trichur | 9. Olavakkot |
| 5. Alwaye | 10. Shoranur |
| | 11. Cannanore |

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 | Ponnistum Typhodem |
| 5. Kodamillet | Varagu | Paspalum Scrobiculatum |
| 6. Chama | Chama | Panicum Miliare |
| 7. Wheat | Gothampu | Triticum Vulgare |
| 8. Bareley | Barley | Hordeum Vulgare |
| 9. Meize | Mokke Cholam | Zea mays |

| (1) | (2) | (3) | (4) |
|-----|-----|-----|-----|
|-----|-----|-----|-----|

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 | Sacharum Officinarum |
| 2. | Palmyrah | Karimpana | Borassus flabellifar |

CONDIMENTS AND SPICES

| | | | |
|-----|-------------|--------------|-----------------------|
| 1 | Chilly | Mulagu | Capsium Spp |
| 2. | Turmeric | Manjal | Cureuma lena |
| 3. | Cardamom | Elom | Elatteria Cardamom |
| 4. | Coriander | Kothamalli | Ceriandrum 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. | Nutmug | Jathi | Myristica Fragens |
| 12. | Cinnamon | Karuk ppatta | Cinnamomum Zeylanica |
| 13 | Clove | Gramp i | Eugenia Caryophyllate |
| 14. | Cinchona | Cinchona | Cinchona officinalis |
| 15. | Arecanut | Adacka | Areca Catechu |

FRUITS

| | | | |
|-----|----------------|---------------|--------------------------|
| 1. | Banana | Vazha | Musa Paradisiaca |
| 2. | Plantain | Vazha | Mussepiantum |
| 3. | Brea fruit | Seemaplavu | Artocarpusincisa |
| 4. | Bullacks heart | Malamumthiri | Alon reticulate |
| 5 | Cashew | Kasumavu | Anacardium Occidentale |
| 6. | Gr pe vine | Munthiri | Vitis Vinifere |
| 7. | Gustardapple | Seetha Pazham | Anona Squamosa |
| 8. | Guava | Pera | Psidium Guajava |
| 9. | Jujibe | Elantha | Ziz yphus jujuba |
| 10. | Jack fruit | Flavu | Artocarpus Integrifolia] |
| 11. | Lemon | Naranga | Citrus Lemon |
| 12. | Lime | Naranga | Citrus Aurantifolia |
| 13. | Mango | M vu | Mangifera indica |
| 14. | Papaya | Pappaka | Carica Papaya |
| 15. | Pineapple | Kaithachakka | Ananas Sativa |
| 16. | Pemogramate | Mathalam | Punica Granatum |
| 17. | Sapota | Sapota | Achras Sapota |

| (1) | (2) | (3) | (4) |
|-----|-------------|-------------|----------------------|
| 18. | Pomello | Bamplimas | Citrus Maxima |
| 19. | Orange | Orange | Citrus retiaulate |
| 20. | Mangoesteen | Mangoesteen | Garcimia mangesteena |

VEGETABLES

| | | | |
|-----|---------------|----------------|------------------------|
| 1. | Tapioca | Maracheeni | Manihot Utilissima |
| 2. | Elephantear | Chembu | Celocasia antiquorum |
| 3. | Elephant foot | Chena | Amerphophallus |
| 4. | Potato | Uralakizhangu | Solanum tuberosum |
| 5. | Sweet Potato | Cheenikizhangu | Ipomoca batatas |
| 6. | Radish | Mullangi | Raphanus sativus |
| 7. | Yam | Kachil | Dioscorea Spp |
| 8. | Turnip | Seema Mullangi | Brassica Campestris |
| 9. | Carrot | Carrot | Daucus Carota |
| 10. | Bed pumpkin | Vellarimathan | Cucurbita Maxime |
| 11. | Brinjal | Vazhuthana | Solanum Malengena |
| 12. | Tomato | Thakkali | Lycopersum esculentum |
| 13. | Amaranthus | Cheera | Amaranthus Spp |
| 14. | Lady's finger | Venda | Abelmoschus esculentus |
| 15. | Bitter gourd | Pavakka | Mamordica Charantia |
| 16. | Bottle gourd | Churakka | Lagenaria Siceraria |
| 17. | Snake gourd | Padavalanga | Trichosanthes anguina |
| 18. | Ridge gourd | Peechanga | Luffa acutangulata |
| 19. | Smooth gourd | Chorakka | Luffe Cylindrica |
| 20. | Ash gourd | Kumbalanga | Ben measa |
| 21. | Little gourd | Kowva | Coccinia cordifolia |
| 22. | Cluster bean | Kothavara | Cyamopsis psoralodea |
| 23. | Sword bean | Vellaringa | Canavalia eusiformis |
| 24. | French bean | Beans | Phaseolus vulgaris |
| 25. | Karileaf | Karivappila | Murraya Zeenigari |
| 26. | Beet root | Beet root | Beta Vulgaris |
| 27. | Cabbage | Muttakose | Brassica Olderacca |
| 28. | Cauliflower | Cauliflower | Brassica Cloracca |
| 29. | Cucumber | Vellarikka | Cucumis Cloracca |
| 30. | Musk Melon | Thaikumbalam | Cucumis melo |

| (1) | (2) | (3) | (4) |
|-------------------------|--------------|-----------------------|---------------------------|
| 31. | Pumpkin | Mathanga | Cucurbi apepo |
| 32. | Indian bean | Am ra | Delichos lablab |
| 33. | Drum stick | Muringa | Moringa Pterigeape |
| 34. | Onion | Ulli | Allium Cepa |
| 35. | Rescapple | Jampa | Engenia Jamos |
| OIL SEEDS | | | |
| 1. | Coconut | Thengu (Nalikeram) | Cocos nucifera |
| 2. | Sesamum | Ellu | Sesamum Spp |
| 3. | Groundnut | Nelakadala | Arachishypogea |
| 4. | Mustard | Kadugu | Brassica Spp |
| 5. | Caster | Avanakku | Ricinus Communis |
| FIBRES | | | |
| 1. | Cotton | Paruthi | Gossypiam Spp |
| 2. | Jute | Chanam | Corechoreus capsularis |
| 3. | Sunhemp | Kattuchannam | Crotalaria Juncca |
| 4. | Sisal hemp | Kallarvazha | Agava Spp |
| DRUGS | | | |
| 1. | Tobacco | Pukayila | Nicottana tabaccum |
| 2. | Opium | Karuppu | Palayar somniforum |
| 3. | Cocoa | Cocoa | Theobrema cocoa |
| PLANTATION CROPS | | | |
| 1. | Tea | Theyila | Camellia thea |
| 2. | Coffee | Coffee | Coffee arabica |
| 3. | Rubber | Rubber | Hevea brasiliensis |
| FODDERS | | | |
| 1. | Bermudagrass | Karuka pullu | Cynodmideclylom |
| 2. | Guinea Grass | Kuthirappullu | Panicum maximum |
| TIMBER | | | |
| 1. | Teak | Thekku | Tectoma grandis |
| 2. | Ebony | Karimaram | Diesphyres assimills |
| 3. | Jungle jack | Anjili | Artecarpus hirsuta |
| 4. | Poonspar | Kattupunna | Cabophyplum tomentose |
| 5. | Cotton tree | Elavu | Bombax malabaricum |
| 6. | Perumaram | Perumaram | Ailanthus excelsa |
| 7. | Karimaruthu | Karimaruthu | Calophyslum tomentosam |

| (1) | (2) | (3) | (4) |
|-----|----------------------|---------------|---------------------------|
| 8. | Maruthu | Maruthu | T paniculata |
| 9. | Chula maruthu | Do. | T travancorensis |
| 10. | Karanjili | Do. | Dip terocarpus indices |
| 11. | Indian mahogam | Mahagani | Cedrella toona |
| 12. | Mangotree | Mavu | Magifera indica |
| 13. | Kulamavu | Kulamavu | Buchanania latifolia |
| 14. | Iron wood tree | Kadamuram | Xylia dolabrief ormie |
| 15. | Puli | Puli | Albizzia procem |
| 16. | The write sitis tree | Karimthakara | Albizzia oderatima |
| 17. | Siris tree | Vaga | lebbek spp |
| 18. | Venteak | Ven thekku | lagerstreenia lanceo lata |
| 19. | Manja kadambu | Manja kadambu | Adina cordifolla |
| 20. | Pala | Pala | Alsenia scholaris |
| 21. | Kumbil | Kumbil | Gmelina arborea |
| 22. | Mull vengai | Mullu venga | Bridelia retush |
| 23. | Manogana | Mahogany | Saietenia mahogani |
| 24. | Bombay bag rose | Wood Etti | Delbergia latifolia |
| 25. | Jack tree | Plavu | Arteearpus integifelia |
| 26. | Majadi | Manjadi | Adennathera pavonina |

| (1) | (2) | (3) |
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