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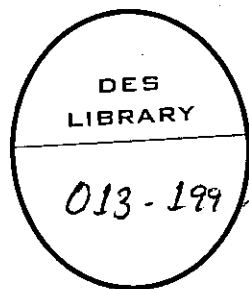
GOVERNMENT OF KERALA

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**REPORT ON THE CROP CUTTING SURVEY**  
**ON**  
**WINTER AND SUMMER CROP OF PADDY,**  
**1970**

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TRIVANDRUM.

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**REPORT ON THE CROP CUTTING SURVEY**

*ON*

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# CROP CUTTING SURVEY ON WINTER AND SUMMER PADDY 1970

## 1. Introduction

This report deals with the results obtained through crop cutting surveys conducted during the winter (Mundakan) and Summer (Punja) crops of paddy 1970 in the State. The report regarding the survey on Autumn (Virippu) crop of paddy 1969 has already been published. The important aspects of the survey are explained in the following paragraphs.

## 2. Object of the survey

The object of the survey was to obtain precise estimates of mean yield of dry paddy per hectare in each taluk and also the total production of rice in the State during the winter and summer seasons 1970.

## 3. Period of the survey

The survey on winter crop was conducted during the months of December 1969 to February 1970 and that on the summer crop during the months of February to June 1970.

## 4. Coverage

There are 55 taluks in the State. The survey on winter crop covered 53 taluks and that on summer crop 36 taluks, over and above, information on area and yield rate were collected from 12 taluks where the summer crop was newly raised.

## 5. Sampling design

The method of sampling used for both the surveys was a stratified multi-stage random sampling design. The taluk was taken as the stratum, a census village as the first stage unit, a survey sub-division number as the second stage unit, a kandom as the third stage unit and a square plot of side 5 metres as the ultimate sampling unit. From each of these selected villages a systematic sample of three survey sub-division numbers was selected from the frame consisting of the cumulative number of the wet land survey sub-divisions. In survey sub-division having more than one kandom, one kandom was selected by the method of simple random sampling for the crop cutting experiments, after the kandoms in the survey number were serially numbered beginning from the south-west corner and proceeding anti-clock-wise. A square plot of side 5 metres was located at random in the selected kandom. The crop in the square plot was harvested, threshed, winnowed and weighed. A sample of grain from every 6th plot harvested was forwarded to the District Statistical Officer for conducting diriage experiments for estimating the loss due to diriage.

## 6. Sampling selection

The selection of villages in each taluk was done by the District Statistical Officer and the list of selected villages was forwarded to the concerned Statistical Inspectors. The selection of plots was done by the Statistical Inspectors. The District Statistical Officer intimates the list of the selected villages to the Head Office and the Regional Officer, National Sample Survey, Sasthamangalam, Trivandrum-10.

## 7. Field Work

The field work was attended to by the Investigators under the supervision of the Statistical Inspectors and District Statistical Officers.

Eventhough 903 experiments were planned during winter crop, only 804 experiments could be conducted. In Summer, 489 experiments were conducted out of 562 experiments planned. The percentages of response were 89 and 88 during winter and summer crops respectively. The loss in the number of experiments was mainly due to the harvest of the selected plot prior to the dates fixed, without intimating the field staff. Inspection were carried out by the Officers of this Department at three Stages (viz) pre-harvest, at harvest and post-harvest stages. During the winter crop 104 inspections were conducted at the pre-harvest stage 194 at harvest stage and 33 at post-harvest stage. As far as summer crop is concerned 67 inspections were conducted at pre-harvest stage, 42 at harvest stage and 21 at post-harvest stage. The percentage of inspection at harvest stage to total experiments conducted was 24.13% in winter and 22.90% in summer seasons.

## 8. Results

The analysis of data was done at the Headquarters, Office of the Bureau of Economics and Statistics, Trivandrum. The final estimates are presented in the following tables:—

Tables I to IV deal with winter crop, and V to VIII deal with summer crop.

(i) Taluk-wise figures relating to the number of experiments conducted the area under the crop estimated mean yield of dry paddy per hectare, its standard error and out-turn of cleaned rice for winter and summer crops are given in tables I and V respectively. During the year summer crop (third crop) was raised for the first time in 12 taluks. Crop Cutting Survey could not be conducted in all those taluks since it was not possible to prepare a frame of the plot growing summer paddy in those taluks as the area under the crop was small and was scattered. However an estimate of the area and production was obtained through local enquiry, which is given separately in table V-A.

Compared with the corresponding seasons of 1969 the average yield for the State during Winter 1970 decreased by 7% and during summer 1970 increased by 19%. Similarly the production of rice in the State during

winter crop 1970 decreased by 7% and summer crop 1970 increased by 19% respectively when compared to the corresponding season of the previous year. The decreased in average is marked in the districts of Quilon, Kottayam and Ernakulam. Severe rains at the flowering stage and the change from high yielding variety to the local by some cultivators contributed to the decrease in yield in Quilon district. In Kottayam district, on the other hand, the decrease in yield is caused by pest attack. In Ernakulam district, heavy pest attack just before and after flowering resulted in the presence of a high percentage of chaff in the final produce. Palghat District also registered decrease in yield mainly due to pest attack and lack of rains after the flowering stage.

(ii) During the winter crop 77.37% plots received chemical manures., 21.51% received both irrigation and chemical manure and the remaining 1.12% received neither irrigation nor chemical manure. During the summer crop 39.88% of the plots received chemical manures and 60.12% received both irrigation and chemical manure. The actual figures are given in tables II and VI.

(iii) Table III and VII give the frequency distribution of plot yield of winter and summer crops respectively.

(iv) The analysis of variance of yield rates of winter and summer crops is given in tables IV and VIII respectively.

The results of driage experiments conducted during both the seasons are given in table IX.

The yield rate of paddy in each taluk for the last 5 winter seasons is given in table X and that during summer seasons is given in table XI for comparison.

## 9. Procedure of Estimation

(i) *Mean yield*:—The mean yield of dry paddy and its standard error for each taluk are calculated by adopting the following formula.

$n_i$  = Number of cuts, taken in the  $i$ th village ( $i = 1, 2, \dots, 12$  when  $K$  is the number of villages selected in the taluk).

$x_{ij}$  = Weight of paddy taken from the  $j$ th cut in the  $i$ th village/kara  
( $j = 1, 2, \dots, n_i$ )

$$\text{Taluk mean} = \bar{X} = \sum_{i=1}^k \sum_{j=1}^{n_i} x_{ij} \Bigg| \sum_{i=1}^k n_i$$

Each cut is taken from 1/400th of a hectare.

Mean yield of dry paddy in kgm./hect. =  $\bar{x} \times 400 \times d$  where  $d$  is the driage ratio of dry paddy to wet paddy.

(ii) *Standard Error (S. E.) of the taluk mean yield:*

A = Mean square within kara.

B = Mean square between kara.

N = Total number of experiments.

$$\sum_{i=1}^k n_i \text{ in the taluk.}$$

$n_i$  = Number of experiments in the  $i$ th village/kara.

let  $m = \frac{N^2 - \sum n_i^2}{N(k-1)}$  where  $k$  is the number of village selected

in the taluk. Variance of the Taluk mean yield

$$= \frac{A}{N} + \frac{B-A}{m} \times \frac{\sum n_i^2}{N^2}$$

The standard error (S. E.) is the square root of this variances. The standard error in Kgs./Hectare is obtained by multiplying this root of variance with 400.

(iii) *Standard error of the State mean yield.*—If  $a_i$  is the area under the crop in the  $i$ th taluk and  $s_i$  the standard error of the estimate in the taluk stand-

ard error for the State mean yield  $\sqrt{\frac{\sum a_i s_i^2}{(\sum a_i)^2}}$

10. The weight of cleaned rice is reckoned as 65.7% of dry paddy.

11. Both State series and Intensive Agricultural Development Programme series of experiments were conducted in Alleppey and Palghat districts during winter season and only in Alleppey District during summer season. Summer paddy is not cultivated in the package area of Palghat District. The results obtained from the two series of experiments were pooled together and the mean yield of dry paddy per hectare was estimated as detailed below.

(12) The pooling of the estimate is done using the following method.

12 (1). If  $Y_1 + Y_2$  denote the average yield per hectare for the Intensive Agricultural Development Programme and State series with  $V_1$  and  $V_2$  as their sampling variances respectively. Then the combined estimates of the average yield will be calculated as

$$Y = \frac{1}{V_1} Y_1 + \frac{1}{V_2} Y_2 = \frac{V_2 Y_1 + V_1 Y_2}{V_1 + V_2}$$

$$\frac{1}{V_1} + \frac{1}{V_2}$$

Procedure to find out the standard error (S. E.) of the combined estimate.

If  $V_1$  and  $V_2$  denote the sampling variance for the estimates of average yield for the I. A. D. P. and State series respectively, the standard error for the combined estimate will be

$$\frac{1}{\sqrt{\frac{1}{V_1} + \frac{1}{V_2}}}$$

13. The yield obtained through the two series and the pooled estimate are given below:—

| District | Mundakan 1970 (Winter)<br>mean yield of dry paddy<br>(Kgs./hect.) |          |        | Punja 1970 (Summer)<br>mean yield dry paddy<br>Kgs./Hect. |          |        |
|----------|---|----------|--------|---|----------|--------|
|          | State<br>series   | I.A.D.P. | Pooled | State<br>series   | I.A.D.P. | Pooled |
| Alleppey | 1926  | 1724     | 1792   | 3491  | 2946     | 3149   |
| Palghat  | 2572  | 2864     | 2779   | ..  | ..       | ..     |

The production of rice during winter 1970 as per the pooled estimates is 27,058 tonnes in Alleppey district and 163,340 tonnes in Palghat district. The corresponding figures obtained through State series are 29,084 tonnes in Alleppey and 151,194 tonnes in Palghat district. The production of rice during summer 1970 as per pooled estimates is 86,281 tonnes in Alleppey district while that for State series is 95,655 tonnes.

14. The total production of rice in the State according to the pooled estimate during the agricultural year 1969-70 is 1,226,413 tonnes as given below:—

| Season and year  | Production Rice in tonnes |
|------------------|---------------------------|
| Autumn Crop 1969 | 521,443                   |
| Winter Crop 1970 | 526,570                   |
| Summer Crop 1970 | 178,400                   |
| <b>Total</b>     | <b>1,226,413</b>          |

15. For the purpose of comparison the estimates of area under paddy, yield rate and production of cleaned rice during the different seasons of the past five years are given in the Statement "A".

*Additional Director.*





**TABLE I**  
**Winter Crop of Paddy 1970**

|                     | No. of Experi-<br>ments | Area in Hectares | Mean yield of dry<br>paddy kgs./Hect. | S. E. of the mean<br>yield | Production Rice<br>in Tonnes |
|---------------------|-------------------------|------------------|---------------------------------------|----------------------------|------------------------------|
| (1)                 | (2)                     | (3)              | (4)                                   | (5)                        | (6)                          |
| 1. Neyyattinkara    | 17                      | 6005             | 2910                                  | 210                        | 11481                        |
| 2. Trivandrum       | 17                      | 4436             | 2017                                  | 72                         | 5878                         |
| 3. Nedumangad       | 16                      | 5043             | 2354                                  | 164                        | 7799                         |
| 4. Chirayinkil      | 15                      | 4717             | 2457                                  | 103                        | 7615                         |
| TRIVANDRUM DISTRICT | 65                      | 20201            | 2469                                  | 80                         | 32773                        |
| 5. Quilon           | 18                      | 4760             | 2037                                  | 370                        | 6370                         |
| 6. Kottarakkara     | 13                      | 6901             | 1989                                  | 132                        | 9018                         |
| 7. Kunnathur        | 15                      | 5614             | 2323                                  | 125                        | 8568                         |
| 8. Pathanapuram     | 15                      | 4891             | 2484                                  | 144                        | 7982                         |
| 9. Pathanamthitta   | 14                      | 2453             | 2369                                  | 148                        | 3818                         |
| 10. Karunagappally  | 18                      | 4721             | 1925                                  | 171                        | 5971                         |
| QUILON DISTRICT     | 93                      | 29340            | 2165                                  | 85                         | 41727                        |
| 11. Karthigappally  | 18                      | 5890             | 2367                                  | 67                         | 9160                         |
| 12. Mavelikara      | 13                      | 5498             | 2051                                  | 142                        | 7408                         |
| 13. Chengannur      | 14                      | 2464             | 1983                                  | 171                        | 3210                         |
| 14. Thiruvella      | 14                      | 2872             | 2549                                  | 202                        | 4810                         |
| 15. Kuttanad        | ..                      | ..               | ..                                    | ..                         | ..                           |
| 16. Ambalapuzha     | 14                      | 2211             | 1453                                  | 376                        | 2111                         |
| 17. Sherthallai     | 15                      | 4047             | 897                                   | 288                        | 2385                         |
| ALLEPPEY DISTRICT   | 88                      | 22982            | 1926                                  | 79                         | 29084                        |
| 18. Changanacherry  | 17                      | 1488             | 2310                                  | 258                        | 2258                         |
| 19. Kanjirappally   | 11                      | 143              | 1765                                  | 218                        | 166                          |
| 20. Peermade        | 3                       | 90               | 2486                                  | ..                         | 147                          |
| 21. Kottayam        | 17                      | 6809             | 2291                                  | 102                        | 10249                        |
| 22. Vaikom          | 10                      | 7175             | 1851                                  | 316                        | 8726                         |
| 23. Meenachil       | 14                      | 2882             | 2304                                  | 150                        | 4362                         |
| 24. Devikulam       | 9                       | 4325             | 1642                                  | 105                        | 4666                         |
| 25. Udumbanchola    | 3                       | 1767             | 2731                                  | ..                         | 3171                         |

|                           | (1) | (2) | (3)    | (4)  | (5) | (6)    |
|---------------------------|-----|-----|--------|------|-----|--------|
| <b>KOTTAYAM DISTRICT</b>  |     | 84  | 24679  | 2081 | 101 | 33745  |
| 26. Thodupuzha            |     | 17  | 3488   | 1622 | 92  | 3717   |
| 27. Moovattupuzha         |     | 15  | 10834  | 1684 | 176 | 11986  |
| 28. Cochin                |     | ..  | ..     | ..   | ..  | 3221   |
| 29. Kanayannur            |     | 18  | 4552   | 1077 | 81  | 14039  |
| 30. Kunnathunad           |     | 15  | 11532  | 1853 | 210 | 12704  |
| 31. Alwaye                |     | 16  | 9937   | 1946 | 217 | 2241   |
| 32. Parur                 |     | 14  | 2051   | 1663 | 64  | 47908  |
| <b>ERNAKULAM DISTRICT</b> |     | 95  | 42394  | 1720 | 90  | 955    |
| 33. Cranganore            |     | 17  | 1491   | 975  | 156 | 15103  |
| 34. Mukundapuram          |     | 18  | 16804  | 1368 | 148 | 27104  |
| 35. Trichur               |     | 18  | 18246  | 2261 | 266 | 26547  |
| 36. Thalappally           |     | 17  | 16843  | 2399 | 149 | 8427   |
| 37. Chowghat              |     | 16  | 8115   | 1018 | 125 | 75136  |
| <b>TRICHUR DISTRICT</b>   |     | 86  | 61499  | 1859 | 106 | 31869  |
| 38. Chittur               |     | 10  | 21713  | 2234 | 248 | 39262  |
| 39. Alathur               |     | 15  | 18005  | 3319 | 300 | 28590  |
| 40. Palghat               |     | 15  | 15721  | 2768 | 311 | 17302  |
| 41. Ottapalam             |     | 18  | 11495  | 2291 | 113 | 17904  |
| 42. Perinthalmanna        |     | 18  | 11606  | 2348 | 56  | 16267  |
| 43. Ponnani               |     | 15  | 10922  | 2267 | 247 | 151194 |
| <b>PALGHAT DISTRICT</b>   |     | 91  | 89462  | 2572 | 106 | 12274  |
| 44. Tirur                 |     | 18  | 13727  | 1361 | 221 | 15099  |
| 45. Ernad                 |     | 17  | 13728  | 1674 | 141 | 9868   |
| 46. Kozhikode             |     | 18  | 9500   | 1581 | 120 | 5041   |
| 47. Quilandy              |     | 16  | 6592   | 1164 | 149 | 2813   |
| 48. Badagara              |     | 16  | 3281   | 1305 | 259 | 22779  |
| 49. South Wynad           |     | 18  | 15081  | 2299 | 126 | 67874  |
| <b>KOZHIKODE DISTRICT</b> |     | 103 | 61909  | 1669 | 64  | 14424  |
| 50. North Wynad           |     | 18  | 9194   | 2388 | 298 | 3475   |
| 51. Tellicherry           |     | 18  | 3482   | 1519 | 215 | 1083   |
| 52. Cannanore             |     | 13  | 1619   | 1018 | 193 | 7284   |
| 53. Taliparamba           |     | 18  | 6122   | 1811 | 208 | 5054   |
| 54. Hosdurg               |     | 15  | 4467   | 1722 | 137 | 5689   |
| 55. Kasargode             |     | 17  | 4821   | 1796 | 159 | 37009  |
| <b>CANNANORE DISTRICT</b> |     | 99  | 29705  | 1896 | 110 | 516450 |
| <b>STATE</b>              |     | 804 | 382171 | 2057 | 33  |        |

TABLE II

## Winter crop of Paddy 1970 in Kerala State

District-wise yield rate from irrigated, chemically manured, combined and control plots.

| District   | Irrigated plots       |                                   | Chemically manured plots |                                   | Irrigated and manured plots |                                   | Neither irrigated nor manured plots |                                   |
|------------|-----------------------|-----------------------------------|--------------------------|-----------------------------------|-----------------------------|-----------------------------------|-------------------------------------|-----------------------------------|
|            | Number of Experiments | Mean yield of dry paddy Kg./Hect. | Number of Experiments    | Mean yield of dry paddy Kg./Hect. | Number of Experiments       | Mean yield of dry paddy Kg./Hect. | Number of Experiments               | Mean yield of dry paddy Kg./Hect. |
| (1)        | (2)                   | (3)                               | (4)                      | (5)                               | (6)                         | (7)                               | (8)                                 | (9)                               |
| Trivandrum | ..                    | ..                                | 34                       | 2418                              | 27                          | 2476                              | 4                                   | 2381                              |
| Quilon     | ..                    | ..                                | 84                       | 2182                              | 7                           | 2338                              | 2                                   | 671                               |
| Alleppey   | ..                    | ..                                | 71                       | 1833                              | 14                          | 2506                              | 3                                   | 318                               |
| Kottayam   | ..                    | ..                                | 43                       | 2068                              | 41                          | 2193                              | ..                                  | ..                                |
| Ernakulam  | ..                    | ..                                | 73                       | 1532                              | 22                          | 1745                              | ..                                  | ..                                |
| Trichur    | ..                    | ..                                | 78                       | 1591                              | 8                           | 1688                              | ..                                  | ..                                |
| Palghat    | ..                    | ..                                | 48                       | 2234                              | 43                          | 2885                              | ..                                  | ..                                |
| Kozhikode  | ..                    | ..                                | 93                       | 1582                              | 5                           | 1522                              | ..                                  | ..                                |
| Cannanore  | ..                    | ..                                | 93                       | 1751                              | 6                           | 1643                              | ..                                  | ..                                |
| STATE      | ..                    | ..                                | 622                      | 1848                              | 173                         | 2322                              | 9                                   | 1313                              |

TABLE III

**Winter crop of Paddy 1970**  
Frequency distribution of plot yield

| Sl. No. | Range of yield of paddy in Kgs./Hect. | Frequency distribution | Percentage |
|---------|---------------------------------------|------------------------|------------|
| (1)     | (2)                                   | (3)                    | (4)        |
| 1       | Below—500                             | 26                     | 3.23       |
| 2       | 500—699                               | 17                     | 2.11       |
| 3       | 700—899                               | 50                     | 6.22       |
| 4       | 900—1099                              | 42                     | 5.22       |
| 5       | 1100—1299                             | 43                     | 5.35       |
| 6       | 1300—1499                             | 54                     | 6.72       |
| 7       | 1500—1699                             | 83                     | 10.33      |
| 8       | 1700—1899                             | 84                     | 10.45      |
| 9       | 1900—2099                             | 76                     | 9.45       |
| 10      | 2100—2299                             | 72                     | 8.96       |
| 11      | 2300—2499                             | 78                     | 9.70       |
| 12      | 2500—2699                             | 51                     | 6.34       |
| 13      | 2700—2899                             | 41                     | 5.10       |
| 14      | 2900—3099                             | 26                     | 3.23       |
| 15      | 3100—3299                             | 20                     | 2.49       |
| 16      | 3300—3499                             | 10                     | 1.24       |
| 17      | 3500—3699                             | 10                     | 1.24       |
| 18      | 3700—3899                             | 4                      | 0.50       |
| 19      | 3900—4099                             | 4                      | 0.50       |
| 20      | 4100 & above                          | 13                     | 1.62       |
| All     |                                       | 804                    | 100.00     |

TABLE IV

**Winter crop of Paddy 1970**  
Analysis of variance of plot yield pooled for the State in  
Kgs. plot of 1/400 of an Hectares

| Source of variation        | Sum of squares | Degrees of freedom | Variance |
|----------------------------|----------------|--------------------|----------|
| (1)                        | (2)            | (3)                | (4)      |
| Between Taluk              | 1525.86        | 50                 | 30.52*   |
| Between Kara with in Taluk | 1084.27        | 247                | 4.39*    |
| With in Kara with in Taluk | 1614.75        | 501                | 3.22     |
| All                        | 4224.88        | 798                | ..       |

\* Significant at 1% level.

TABLE V  
Summer crop of Paddy 1970

| Sl. No. | Taluk & District    | No. of Experiment | Area in Hectares | Mean yield of dry paddy Kg/Hect. | S. E. of the Mean yield | Production Rice in Tonnes |
|---------|---------------------|-------------------|------------------|----------------------------------|-------------------------|---------------------------|
| (1)     | (2)                 | (3)               | (4)              | (5)                              | (6)                     | (7)                       |
| 1.      | Neyyattinkara       | 8                 | 158              | 2195                             | 156                     | 228                       |
| 2.      | Trivandrum          | 4                 | 344              | 1119                             | 49                      | 253                       |
| 3.      | Nedumangad          | 17                | 97               | 1135                             | 130                     | 72                        |
| 4.      | Chirayinkil         | 13                | 227              | 1059                             | 173                     | 158                       |
|         | TRIVANDRUM DISTRICT | 42                | 826              | 1310                             | 62                      | 711                       |
| 5.      | Quilon              | 18                | 384              | 1900                             | 255                     | 480                       |
| 6.      | Kottarakara         | 2                 | 126              | 3196                             | ..                      | 265                       |
| 7.      | Kunnathur           | 14                | 155              | 1372                             | 163                     | 140                       |
| 8.      | Pathanamthitta      | 4                 | 77               | 902                              | 156                     | 45                        |
| 9.      | Karunagapally       | 18                | 478              | 1072                             | 292                     | 336                       |
|         | QUILON DISTRICT     | 56                | 1220             | 1579                             | 142                     | 1266                      |
| 10.     | Karthigapally       | 17                | 3543             | 2050                             | 149                     | 4772                      |
| 11.     | Mavelikara          | 13                | 4357             | 2691                             | 44                      | 7703                      |
| 12.     | Chengannore         | 15                | 2191             | 2996                             | 633                     | 4313                      |
| 13.     | Thiruvella          | 14                | 3037             | 2864                             | 223                     | 5715                      |
| 14.     | Kuttanad            | 16                | 24700            | 3997                             | 109                     | 64863                     |
| 15.     | Ambalapuzha         | 17                | 3876             | 3255                             | 213                     | 8289                      |
|         | ALLEPPEY DISTRICT   | 92                | 41704            | 3491                             | 78                      | 95655                     |
| 16.     | Changanacherry      | 17                | 3553             | 2889                             | 195                     | 6744                      |
| 17.     | Kottayam            | 17                | 11171            | 2449                             | 309                     | 17974                     |
| 18.     | Vaikom              | 10                | 2339             | 2352                             | 470                     | 3614                      |
| 19.     | Meenachil           | 2                 | 440              | 2470                             | 283                     | 714                       |
|         | KOTTAYAM DISTRICT   | 46                | 17503            | 2526                             | 198                     | 29046                     |
| 20.     | Moovattupuzha       | 14                | 549              | 2132                             | 188                     | 769                       |
| 21.     | Kanayannure         | 17                | 367              | 2178                             | 189                     | 525                       |
| 22.     | Kunnathunad         | 14                | 1911             | 1507                             | 284                     | 1892                      |
| 23.     | Alwaye              | 15                | 3601             | 2617                             | 201                     | 6192                      |
| 24.     | Parur               | 14                | 3876             | 1990                             | 128                     | 5067                      |
|         | ERNAKULAM DISTRICT  | 74                | 10304            | 2134                             | 101                     | 14445                     |
| 25.     | Cranganore          | 6                 | 36               | 2264                             | 583                     | 54                        |
| 26.     | Mukundapuram        | 18                | 5264             | 3404                             | 153                     | 11773                     |
| 27.     | Trichur             | 18                | 5617             | 2669                             | 249                     | 9850                      |
| 28.     | Thalappally         | 18                | 1231             | 2508                             | 457                     | 2028                      |
| 29.     | Chowghat            | 16                | 1170             | 1730                             | 109                     | 1330                      |
|         | TRICHUR DISTRICT    | 76                | 13318            | 2861                             | 125                     | 25035                     |

| (1) | (2)  | (3) | (4)   | (5)  | (6) | (7)    |
|-----|--|-----|-------|------|-----|--------|
| 30. | Ponnani  | 17  | 3299  | 3071 | 565 | 6656   |
|     | PALGHAT DISTRICT   | 17  | 3299  | 3071 | 565 | 6656   |
| 31. | Tirur  | 17  | 1724  | 2184 | 217 | 2474   |
| 32. | Kozhikode  | 3   | 216   | 1775 | 222 | 252    |
| 33. | South Wynad  | 14  | 2231  | 2137 | 22  | 3133   |
|     | KOZHIKODE DISTRICT   | 34  | 4171  | 2138 | 91  | 5859   |
| 34. | North Wynad  | 18  | 618   | 1847 | 182 | 750    |
| 35. | Hosdurg  | 18  | 494   | 2405 | 141 | 781    |
| 36. | Kasargode  | 16  | 1606  | 2067 | 185 | 2181   |
|     | CANNANORE DISTRICT   | 52  | 2718  | 2079 | 120 | 3712   |
|     | STATE  | 489 | 95063 | 2920 | 60  | 182385 |
|     | Estimates of area & Production in Taluks where no G. C. Survey was conducted | ..  | 3078  | ..   | ..  | 5389   |
|     | TOTAL  | ..  | 98141 | 2912 | ..  | 187774 |

TABLE V (A)

Estimated area and Production of Summer Crops of Paddy 1970  
in Taluks where crop cutting Survey was not conducted

| Sl. No. | Taluk          | Area<br>in<br>Hectares | Mean yield of<br>dry paddy<br>Kgs/Hect | Production<br>Rice<br>Tonnes |
|---------|----------------|------------------------|--|------------------------------|
| 1.      | Kanjirappally  | 1                      | 2526                                   | 2                            |
| 2.      | Chittur        | 145                    | 3071                                   | 292                          |
| 3.      | Alathur        | 275                    | 3071                                   | 555                          |
| 4.      | Palghat        | 107                    | 3071                                   | 216                          |
| 5.      | Ottappalam     | 708                    | 3071                                   | 1428                         |
| 6.      | Perinthalmanna | 525                    | 3071                                   | 1059                         |
| 7.      | Ernad          | 540                    | 2138                                   | 759                          |
| 8.      | Quilandy       | 319                    | 2138                                   | 448                          |
| 9.      | Badagara       | 125                    | 2138                                   | 175                          |
| 10.     | Tellicherry    | 279                    | 2079                                   | 381                          |
| 11.     | Cannanore      | 22                     | 2079                                   | 30                           |
| 12.     | Taliparamba    | 32                     | 2079                                   | 44                           |
|         | Total          | 3078                   |  | 5389                         |

Concerned District yield rates are adopted in taluks where the crop Cutting Survey was not conducted.

TABLE VI

**Summer Crop of Paddy 1970 in Kerala State**  
**District-wise yield rate from irrigated chemically manured**  
**Combined and central plots**

| Name of District | Irrigated plots    |                                 | Chemically manured plots |                                 | Irrigated & manured plots |                                 | Neither irrigated Non-manured plots |                                 |
|------------------|--------------------|---------------------------------|--------------------------|---------------------------------|---------------------------|---------------------------------|-------------------------------------|---------------------------------|
|                  | No. of experiments | Mean yield dry Paddy Kgs./Hect. | No. of experiments       | Mean yield dry Paddy Kgs./Hect. | No. of experiments        | Mean yield dry Paddy Kgs./Hect. | No. of experiments                  | Mean yield dry Paddy Kgs./Hect. |
| (1)              | (2)                | (3)                             | (4)                      | (5)                             | (6)                       | (7)                             | (8)                                 | (9)                             |
| Trivandrum       | ..                 | ..                              | 31                       | 1040                            | 11                        | 2204                            | ..                                  | ..                              |
| Quilon           | ..                 | ..                              | 29                       | 1289                            | 27                        | 1673                            | ..                                  | ..                              |
| Alleppey         | ..                 | ..                              | 66                       | 3035                            | 26                        | 2856                            | ..                                  | ..                              |
| Kottayam         | ..                 | ..                              | 17                       | 2251                            | 29                        | 2806                            | ..                                  | ..                              |
| Ernakulam        | ..                 | ..                              | 1                        | 1277                            | 73                        | 2057                            | ..                                  | ..                              |
| Trichur          | ..                 | ..                              | 12                       | 3567                            | 64                        | 2489                            | ..                                  | ..                              |
| Palghat          | ..                 | ..                              | ..                       | ..                              | 17                        | 3071                            | ..                                  | ..                              |
| Kozhikode        | ..                 | ..                              | 12                       | 2043                            | 22                        | 2167                            | ..                                  | ..                              |
| Cannanore        | ..                 | ..                              | 27                       | 1956                            | 25                        | 2285                            | ..                                  | ..                              |
| STATE            | ..                 | ..                              | 195                      | 2203                            | 294                       | 2352                            | ..                                  | ..                              |

TABLE VII  
 Summer Crop of Paddy 1970  
 Frequency distribution of plot yield

| Sl. No. | Range of yield of paddy in Kgs/Hect. | Frequency distribution | Percentage |
|---------|--------------------------------------|------------------------|------------|
| 1       | Below—500                            | 13                     | 2.66       |
| 2       | 500—699                              | 9                      | 1.84       |
| 3       | 700—899                              | 14                     | 2.86       |
| 4       | 900—1099                             | 14                     | 2.86       |
| 5       | 1100—1299                            | 32                     | 6.54       |
| 6       | 1300—1499                            | 37                     | 7.57       |
| 7       | 1500—1699                            | 32                     | 6.54       |
| 8       | 1700—1899                            | 41                     | 8.38       |
| 9       | 1900—2099                            | 41                     | 8.38       |
| 10      | 2100—2299                            | 37                     | 7.57       |
| 11      | 2300—2499                            | 39                     | 7.98       |
| 12      | 2500—2699                            | 37                     | 7.57       |
| 13      | 2700—2899                            | 33                     | 6.75       |
| 14      | 2900—3099                            | 19                     | 3.89       |
| 15      | 3199—3299                            | 17                     | 3.48       |
| 16      | 3300—3499                            | 16                     | 3.27       |
| 17      | 3500—3699                            | 9                      | 1.84       |
| 18      | 3700—3899                            | 16                     | 3.27       |
| 19      | 3900—4099                            | 4                      | 0.82       |
| 20      | 4100—above                           | 29                     | 5.93       |
|         | ALL                                  | 489                    | 100.00     |

TABLE VIII  
 Summer Crop of Paddy 1972  
 Analysis of variance of plot yield pooled for the State in  
 Kgs. 2 of 1/400 of an hectare

| Source of variation | Sum of square | Degrees of freedom | Variance |
|---------------------|---------------|--------------------|----------|
| Between Taluk       | 1876.99       | 35                 | 53.63*   |
| Between Kara        | 1459.49       | 148                | 9.86*    |
| Within Taluk        |               |                    | ..       |
| Within Kara         | 1162.25       | 304                | 3.82     |
| Within Taluk        |               |                    | ..       |
| ALL                 | 4498.73       | 487                |          |

\* Significant at % level.



TABLE IX

## The results of driage experiments

| Sl. No. | Name of Taluk  | Winter Crop of paddy 1970 |                           | Summer crop of paddy 1970 |                           |
|---------|----------------|---------------------------|---------------------------|---------------------------|---------------------------|
|         |                | No. of experiments        | Driage ratio (Percentage) | No. of experiments        | Driage Ratio (percentage) |
| (1)     | (2)            | (3)                       | (4)                       | (5)                       | (6)                       |
| 1       | Neyyattinkara  | 3                         | 93.4                      | 1                         | 76.0                      |
| 2       | Trivandrum     | 3                         | 91.7                      | ..                        | ..                        |
| 3       | Nedumangad     | 3                         | 86.8                      | 3                         | 85.2                      |
| 4       | Chirayinkil    | 2                         | 94.2                      | 1                         | 82.0                      |
| 5       | Quilon         | 3                         | 90.6                      | 3                         | 82.2                      |
| 6       | Kottarakkara   | 2                         | 87.7                      | ..                        | ..                        |
| 7       | Kunnathur      | 2                         | 94.9                      | 1                         | 91.2                      |
| 8       | Pathanapuram   | 3                         | 93.1                      | ..                        | ..                        |
| 9       | Pathanamthitta | 3                         | 94.9                      | 1                         | 80.8                      |
| 10      | Karunagapally  | 3                         | 89.1                      | 3                         | 87.6                      |
| 11      | Karthikapally  | 2                         | 91.6                      | 2                         | 93.2                      |
| 12      | Mavelikara     | 2                         | 92.7                      | 2                         | 92.8                      |
| 13      | Chengannore    | 2                         | 93.0                      | 1                         | 92.8                      |
| 14      | Thiruvella     | 2                         | 94.0                      | 1                         | 91.2                      |
| 15      | Kuttanad       | ..                        | ..                        | 3                         | 93.3                      |
| 16      | Ambalapuzha    | 2                         | 92.4                      | 2                         | 93.0                      |
| 17      | Sherthalai     | 3                         | 91.2                      | ..                        | ..                        |
| 18      | Changanacherry | 3                         | 90.5                      | 3                         | 93.3                      |
| 19      | Kanjirapally   | 2                         | 91.0                      | ..                        | ..                        |
| 20      | Peermad        | ..                        | ..                        | ..                        | ..                        |
| 21      | Kottayam       | 3                         | 91.8                      | 3                         | 94.5                      |
| 22      | Vaikom         | 2                         | 95.0                      | 2                         | 92.3                      |
| 23      | Meenachel      | 3                         | 91.7                      | ..                        | ..                        |
| 24      | Deviculam      | 2                         | 91.0                      | ..                        | ..                        |
| 25      | Udumbanchola   | 1                         | 92.0                      | ..                        | ..                        |
| 26      | Thodupuzha     | 3                         | 87.6                      | ..                        | ..                        |
| 27      | Moovattupuzha  | 3                         | 89.2                      | 2                         | 93.0                      |
| 28      | Cochin         | ..                        | ..                        | ..                        | ..                        |
| 29      | Kanayannore    | 3                         | 88.3                      | 3                         | 93.9                      |
| 30      | Kunnathunad    | 2                         | 91.2                      | ..                        | ..                        |
| 31      | Alwaye         | 3                         | 94.3                      | 3                         | 94.4                      |
| 32      | Parur          | 2                         | 92.0                      | 2                         | 90.8                      |
| 33      | Cranganmore    | 3                         | 82.0                      | 1                         | 98.8                      |
| 34      | Mukundapuram   | 3                         | 85.3                      | 2                         | 93.2                      |

| (1) | (2)            | (3) | (4)  | (5) | (6)  |
|-----|----------------|-----|------|-----|------|
| 35  | Trichur        | 3   | 93.6 | 2   | 88.6 |
| 36  | Thalappally    | 3   | 92.0 | 3   | 85.9 |
| 37  | Chowghat       | 3   | 95.3 | 3   | 89.9 |
| 38  | Chittur        | 3   | 93.1 | ..  | ..   |
| 39  | Alathur        | 3   | 92.5 | ..  | ..   |
| 40  | Palghat        | 3   | 90.0 | ..  | ..   |
| 41  | Ottapalam      | 3   | 91.2 | ..  | ..   |
| 42  | Perinthalmanna | 3   | 91.7 | ..  | ..   |
| 43  | Ponmani        | 3   | 94.0 | 3   | 94.1 |
| 44  | Tirur          | 3   | 93.2 | 3   | 94.8 |
| 45  | Ernad          | 2   | 93.4 | ..  | ..   |
| 46  | Kozhikode      | 3   | 93.9 | ..  | ..   |
| 47  | Quilandy       | 3   | 94.5 | ..  | ..   |
| 48  | Badagara       | 3   | 93.2 | ..  | ..   |
| 49  | South Wynad    | 2   | 92.4 | 2   | 94.4 |
| 50  | North wynad    | 3   | 90.6 | 3   | 87.3 |
| 51  | Tellecherry    | 3   | 92.6 | ..  | ..   |
| 52  | Cannanore      | 2   | 89.0 | ..  | ..   |
| 53  | Thaliparamba   | 3   | 90.0 | ..  | ..   |
| 54  | Hosdurg        | 3   | 89.3 | 3   | 90.0 |
| 55  | Kasargode      | 3   | 86.7 | 3   | 91.3 |

TABLE X

Mean yield of dry paddy in Kgs./Hect. during Winter Paddy

| Taluk and District  | 1966<br>Winter<br>kgs./<br>Hect. | 1967<br>Winter<br>kgs./<br>Hect. | 1968<br>Winter<br>kgs./<br>Hect. | 1969<br>Winter<br>kgs./<br>Hect. | 1970<br>Winter<br>kgs./<br>Hect. |
|---------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| (1)                 | (2)                              | (3)                              | (4)                              | (5)                              | (6)                              |
| 1. Neyyattinkara    | 1914                             | 2150                             | 2146                             | 2649                             | 2910                             |
| 2. Trivandrum       | 1740                             | 2037                             | 2659                             | 2275                             | 2017                             |
| 3. Nedumangad       | 2406                             | 2320                             | 2540                             | 1871                             | 2354                             |
| 4. Chirayinkil      | 1552                             | 1871                             | 2348                             | 2068                             | 2457                             |
| TRIVANDRUM DISTRICT | 1913                             | 2101                             | 2407                             | 2239                             | 2469                             |

|                           | (1) | (2)  | (3)  | (4)  | (5)  | (6)  |
|---------------------------|-----|------|------|------|------|------|
| 5. Quilon                 |     | 1441 | 1698 | 2020 | 2164 | 2037 |
| 6. Kottarakara            |     | 2000 | 2689 | 2975 | 2860 | 1989 |
| 7. Kunnathur              |     | 1720 | 2287 | 2448 | 3534 | 2323 |
| 8. Pathanapuram           |     | 2639 | 2519 | 3068 | 3068 | 2484 |
| 9. Pathanamthitta         |     | 2678 | 2781 | 2710 | 2805 | 2369 |
| 10. Karunagappally        |     | 1630 | 1924 | 1587 | 2074 | 1925 |
| <b>QUILON DISTRICT</b>    |     | 1929 | 2292 | 2463 | 2778 | 2165 |
| 11. Karthigappally        |     | 1696 | 1633 | 2253 | 1680 | 2367 |
| 12. Mavelikara            |     | 1752 | 2418 | 1915 | 1897 | 2051 |
| 13. Chengannure           |     | 2601 | 2451 | 1740 | 2212 | 1983 |
| 14. Thiruvella            |     | 1769 | 1669 | 1590 | 2384 | 2549 |
| 15. Kuttanad              |     | ..   | ..   | ..   | ..   | ..   |
| 16. Ambalapuzha           |     | 960  | 992  | 1771 | 1093 | 1453 |
| 17. Sherthallai           |     | 923  | 1078 | 649  | 1129 | 897  |
| <b>ALLEPPEY DISTRICT</b>  |     | 1649 | 1767 | 1776 | 1723 | 1926 |
| 18. Changanacherry        |     | 1209 | 2010 | 2115 | 2573 | 2310 |
| 19. Kanjirappally         |     | 2434 | 2335 | 2365 | 1561 | 1765 |
| 20. Peermade              |     | 1785 | 1840 | 3291 | 3670 | 2486 |
| 21. Kottayam              |     | 1532 | 2203 | 1883 | 2280 | 2291 |
| 22. Vaikom                |     | 1136 | 2012 | 1564 | 2194 | 1851 |
| 23. Meenachil             |     | 1581 | 1440 | 1858 | 2546 | 2304 |
| 24. Deviculam             |     | 1076 | 2731 | 1851 | 3037 | 1642 |
| 25. Udumbanchola          |     | 2707 | 2378 | 2614 | 4474 | 2731 |
| <b>KOTTAYAM DISTRICT</b>  |     | 1334 | 2062 | 1783 | 2595 | 2081 |
| 26. Thodupuzha            |     | 1707 | 2006 | 2212 | 2745 | 1622 |
| 27. Moovattupuzha         |     | 1943 | 2402 | 2374 | 2368 | 1684 |
| 28. Cochin                |     | ..   | ..   | ..   | ..   | ..   |
| 29. Kanayannur            |     | 1516 | 1553 | 1780 | 1722 | 1077 |
| 30. Kunnathunad           |     | 1733 | 2154 | 1822 | 2453 | 1853 |
| 31. Alwaye                |     | 1375 | 2164 | 2142 | 2553 | 1946 |
| 32. Parur                 |     | 1234 | 1849 | 1303 | 1344 | 1663 |
| <b>ERNAKULAM DISTRICT</b> |     | 1760 | 2116 | 2051 | 2345 | 1720 |

|                    | (1) | (2)  | (3)  | (4)  | (5)  | (6)  |
|--------------------|-----|------|------|------|------|------|
| 33. Crangannore    |     | 1214 | 1582 | 1314 | 1221 | 975  |
| 34. Mukundapuram   |     | 1638 | 2115 | 1943 | 1775 | 1368 |
| 35. Trichur        |     | 2020 | 2063 | 2680 | 2267 | 2261 |
| 36. Thalappally    |     | 2012 | 2080 | 2148 | 2296 | 2399 |
| 37. Chowghat       |     | 1358 | 1421 | 1322 | 1166 | 1018 |
| IRICHUR DISTRICT   |     | 1806 | 1984 | 2122 | 1970 | 1859 |
| 38. Chittur        |     | 2088 | 2983 | 2665 | 2837 | 2234 |
| 39. Alathur        |     | 2368 | 3414 | 3043 | 3262 | 3319 |
| 40. Palghat        |     | 2669 | 3215 | 2828 | 2420 | 2768 |
| 41. Ottappalam     |     | 1914 | 2434 | 2286 | 2261 | 2291 |
| 42. Perinthalmanna |     | 2090 | 2562 | 2311 | 2056 | 2348 |
| 43. Ponnani        |     | 1583 | 1604 | 1677 | 2774 | 2267 |
| PALGHAT DISTRICT   |     | 2203 | 2886 | 2602 | 2666 | 2572 |
| 44. Tirur          |     | 998  | 1538 | 1458 | 1491 | 1861 |
| 45. Ernad          |     | 1772 | 1832 | 2251 | 1572 | 1674 |
| 46. Kozhikode      |     | 1573 | 2110 | 1551 | 1720 | 1581 |
| 47. Quilandy       |     | 1055 | 1341 | 1120 | 1322 | 1164 |
| 48. Badagara       |     | 1037 | 1221 | 1194 | 1114 | 1305 |
| 49. South Wynad    |     | 1741 | 1793 | 1878 | 2265 | 2299 |
| KOZHIKODE DISTRICT |     | 1532 | 1747 | 1811 | 1694 | 1669 |
| 50. North Wynad    |     | 1443 | 1719 | 2138 | 2287 | 2388 |
| 51. Tellicherry    |     | 1000 | 1337 | 1669 | 1027 | 1519 |
| 52. Cannanore      |     | 1163 | 1284 | 1726 | 1731 | 1018 |
| 53. Taliparamba    |     | 1254 | 1679 | 1603 | 1696 | 1811 |
| 54. Hosdurg        |     | 1368 | 1723 | 1578 | 1706 | 1722 |
| 55. Kasargode      |     | 2125 | 2414 | 1728 | 1872 | 1796 |
| CANNANORE DISTRICT |     | 1433 | 1753 | 1791 | 1833 | 1896 |
| STATE              |     | 1803 | 2187 | 2168 | 2222 | 2057 |

TABLE XI

## Yield of dry Paddy in Kgs/Hect. during Summer Crop of Paddy

| Sl. No. | Taluk & District    | 1966<br>Summer<br>Kgs/Ht. | 1967<br>Summer<br>Kgs/Ht. | 1968<br>Summer<br>Kgs/Ht. | 1969<br>Summer<br>Kgs/Ht. | 1970<br>Summer<br>Kgs/Ht. |
|---------|---------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
|         | (1)                 | (2)                       | (3)                       | (4)                       | (5)                       | (6)                       |
| 1.      | Neyyattinkara       | ..                        | ..                        | ..                        | ..                        | 2195                      |
| 2.      | Trivandrum          | ..                        | 1226                      | 1454                      | 1297                      | 1119                      |
| 3.      | Nedumangad          | ..                        | ..                        | 2423                      | 1097                      | 1135                      |
| 4.      | Chirayinkil         | ..                        | ..                        | 1549                      | 956                       | 1059                      |
|         | TRIVANDRUM DISTRICT | ..                        | 1226                      | 1627                      | 1153                      | 1310                      |
| 5.      | Quilon              | 1659                      | 1725                      | 1955                      | 1640                      | 1900                      |
| 6.      | Kottarakkara        | 1416                      | 2099                      | 2615                      | 2788                      | 3196                      |
| 7.      | Kunnathur           | 2148                      | 2168                      | 2207                      | 1579                      | 1372                      |
| 8.      | Pathanamthitta      | 2126                      | 2023                      | 1678                      | 1607                      | 902                       |
| 9.      | Karunagappally      | 1785                      | 1311                      | 1459                      | 1122                      | 1072                      |
|         | QUILON DISTRICT     | 1803                      | 1714                      | 1885                      | 1469                      | 1579                      |
| 10.     | Karthigappally      | 1452                      | 2214                      | 2351                      | 2016                      | 2050                      |
| 11.     | Mavelikara          | 2246                      | 2728                      | 2297                      | 2158                      | 2691                      |
| 12.     | Chengannore         | 1990                      | 2533                      | 1616                      | 2671                      | 2996                      |
| 13.     | Thiruvella          | 1704                      | 2256                      | 2344                      | 3044                      | 2864                      |
| 14.     | Kuttanad            | 1796                      | 2503                      | 2861                      | 3378                      | 3997                      |
| 15.     | Ambalapuzha         | 1036                      | 1625                      | 2224                      | 2157                      | 3255                      |
|         | ALLEPPEY DISTRICT   | 1742                      | 2402                      | 2596                      | 2960                      | 3491                      |
| 16.     | Changanacherry      | 1208                      | 2146                      | 2174                      | 3101                      | 2889                      |
| 17.     | Kottayam            | 1467                      | 2196                      | 1824                      | 2219                      | 2449                      |
| 18.     | Vaikom              | 1364                      | 2247                      | 2365                      | 2162                      | 2352                      |
| 19.     | Meenachil           | 832                       | 1638                      | 2066                      | 2023                      | 2470                      |
|         | KOTTAYAM DISTRICT   | 1395                      | 2181                      | 1930                      | 2385                      | 2526                      |
| 20.     | Moovattupuzha       | 1961                      | 1600                      | 2057                      | 1489                      | 2132                      |
| 21.     | Kanayannore         | ..                        | 3713                      | 2252                      | 1718                      | 2178                      |
| 22.     | Kunnathunad         | 1666                      | 1849                      | 1895                      | 1412                      | 1507                      |
| 23.     | Alwaye              | 1524                      | 1858                      | 2225                      | 2164                      | 2617                      |
| 24.     | Parur               | 2312                      | 2063                      | 2075                      | 2070                      | 1990                      |
|         | ERNAKULAM DISTRICT  | 2090                      | 2093                      | 2054                      | 1943                      | 2134                      |

|                    | (1) | (2)  | (3)  | (4)  | (5)  | (6)  |
|--------------------|-----|------|------|------|------|------|
| 25. Crangannore    |     | 2030 | 1469 | 1851 | 1364 | 2264 |
| 26. Mukundapuram   |     | 2215 | 1670 | 1967 | 1628 | 3404 |
| 27. Trichur        |     | 1564 | 2229 | 2796 | 2672 | 2669 |
| 28. Thalappally    |     | 2832 | 2175 | 3395 | 2155 | 2508 |
| 29. Chowghat       |     | 1464 | 2001 | 2805 | 1302 | 1730 |
| TRICHUR DISTRICT   |     | 1938 | 2008 | 2605 | 2058 | 2861 |
| 30. Ponnani        |     | 2094 | 1674 | 2254 | 1234 | 3071 |
| PALGHAT DISTRICT   |     | 2094 | 1674 | 2254 | 1234 | 3071 |
| 31. Tirur          |     | 1912 | 1627 | 2274 | 1466 | 2184 |
| 32. Kozhikode      |     | ..   | ..   | ..   | 2168 | 1775 |
| 33. South Wynad    |     | ..   | ..   | ..   | 2815 | 2137 |
| KOZHIKODE DISTRICT |     | 1912 | 1627 | 2274 | 2092 | 2138 |
| 34. North Wynad    |     | 987  | 812  | 1378 | 1436 | 1847 |
| 35. Hosdurg        |     | 1467 | 2198 | 1605 | 2014 | 2405 |
| 36. Kasargode      |     | 1710 | 1878 | 2162 | 1840 | 2067 |
| CANNANORE DISTRICT |     | 1314 | 1546 | 1603 | 1797 | 2079 |
| STATE              |     | 1733 | 2230 | 2377 | 2453 | 2920 |

