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GOVERNMENT OF KERALA

**CONSOLIDATED RESULTS OF
CROP ESTIMATION SURVEY
1982-83 & 1983-84**

DEPARTMENT OF ECONOMICS AND STATISTICS, TRIVANDRUM

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CONSOLIDATED RESULTS OF CROP
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DEPARTMENT OF ECONOMICS & STATISTICS
TRIVANDRUM - DECEMBER 1986

F O R E W A R D

This report on the consolidated results of crop estimation surveys relates to the period 1982-83 and 1983-84. The methodology employed in crop cutting experiments on major crops viz. paddy, tapioca, coconut, arecanut, cashew, pepper and minor crops selected for the years are briefly described in this. Four minor crops are selected each year and during the period under review the crops taken for crop cutting experiments were sugarcane, betal leaves, drumstick and tubers in 1982-83 and jack, mango, banana and plantain in 1983-84.

Suggestions for the improvement in the content of the report are welcome.

Trivandrum,
23-12-1986.

K. BALAKRISHNAN NAIR,
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CONSOLIDATED RESULTS OF CROP ESTIMATION SURVEYS 1982-83
AND 1983-84.

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1. Introduction

The Department of Economics and Statistics was conducting crop estimation surveys on paddy and tapioca, even before the introduction of the scheme of establishment of an agency for Reporting Crop Statistics in Kerala. During 1976-7, these surveys were extended to four other important crops viz. coconut, arecanut, cashew and pepper and they were being conducted on a regular basis. Crop cutting experiments on minor crops were also being conducted from 1977-78 onwards covering four crops every year. This report gives a brief review of the crop estimation surveys conducted during 1982-83 and 1983-84.

2. Objective, coverage and Design

The primary objectives of the surveys were to obtain (1) estimates of average yield per hectare of paddy at the taluk level and of other crops at the district level with reasonable precision through crop cutting experiments (2) to estimate the out turn of these crops in the State.

Coverage:

The experiments for a crop were limited to the taluk where the area of the crop was sizable. Number of taluks where the surveys were planned and the number of taluks where they were actually conducted for the years 1982-83 and 1983-84 are furnished below.

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| Crop | 1982-83 | | 1983-84 | |
|-----------------|--------------------------------------|-----------|--------------------------------------|-----------|
| | No. of taluks where the surveys were | | No. of taluks where the surveys were | |
| | Planned | Conducted | Planned | Conducted |
| 1 | 2 | 3 | 4 | 5 |
| 1. Paddy | | | | |
| Autumn | 58 | 53 | 58 | 53 |
| Winter | 57 | 57 | 57 | 57 |
| Summer | 49 | 49 | 49 | 49 |
| 2. Tapioca | 54 | 54 | 54 | 54 |
| 3. Coconut | 56 | 56 | 59 | 59 |
| 4. Arecanut | 45 | 45 | 48 | 48 |
| 5. Cashewnut | 37 | 37 | 38 | 38 |
| 6. Pepper | 44 | 44 | 46 | 45 |
| 7. Cocoa | 39 | 39 | 41 | 41 |
| 8. Sugarcane | 8 | 7 | .. | .. |
| 9. Betal leaves | 7 | 6 | .. | .. |
| 10. Drumstick | 58 | 56 | .. | .. |
| 11. Tubers | 57 | 57 | .. | .. |
| 12. Jack | .. | .. | 44 | 44 |
| 13. Mango | .. | .. | 59 | 57 |
| 14. Banana | .. | .. | 41 | 41 |
| 15. Plantain | .. | .. | 61 | 60 |

Note: After the formation of Pathanamthitta district in 1983-84 the number of taluks in the State increased to 61.



Design:

The survey started with locating and marking of plot of specified size in the case of paddy, tapioca, sugarcane, tubers, betel leaves or locating and marking of trees/standards/plants in the case of other crops using random sampling method. The produce at harvest was weighed or counted as the case may be and recorded in the prescribed proforma together with other relevant details.

2.1 Paddy

A stratified multistage random sampling design was adopted for the survey. During each season viz. autumn, winter and summer, crop cutting experiments on paddy were conducted separately, in the villages selected for Timely Reporting Survey in each taluk. The taluk was treated as stratum, revenue village as the first stage unit, survey sub-division number as the second stage unit, and a square plot of side 5 metres as the ultimate sampling unit. The produce of the plot was harvested, threshed, winnowed and weight of produce taken. Driage ratio was determined by processing sample grains taken from a sub sample plot.

2.2 Tapioca

The required number of plots were selected from the list of wet and dry plots. The plots were visited to ascertain its suitability for conducting the experiment. In certain cases, where the plot was found not suitable for conducting the experiment, the next plot was visited to get a suitable plot. Where the selected plot contained more than one patch, one patch was selected by random sampling method. An area of 2 x 2 sq. metre was fixed for conducting the experiment. All tapioca plants inside the square plot were harvested; the produce cleaned by removing the soil sticking to the tuber and then the weight of the produce recorded.



2.3 Tubers/betal leaves/sugarcane

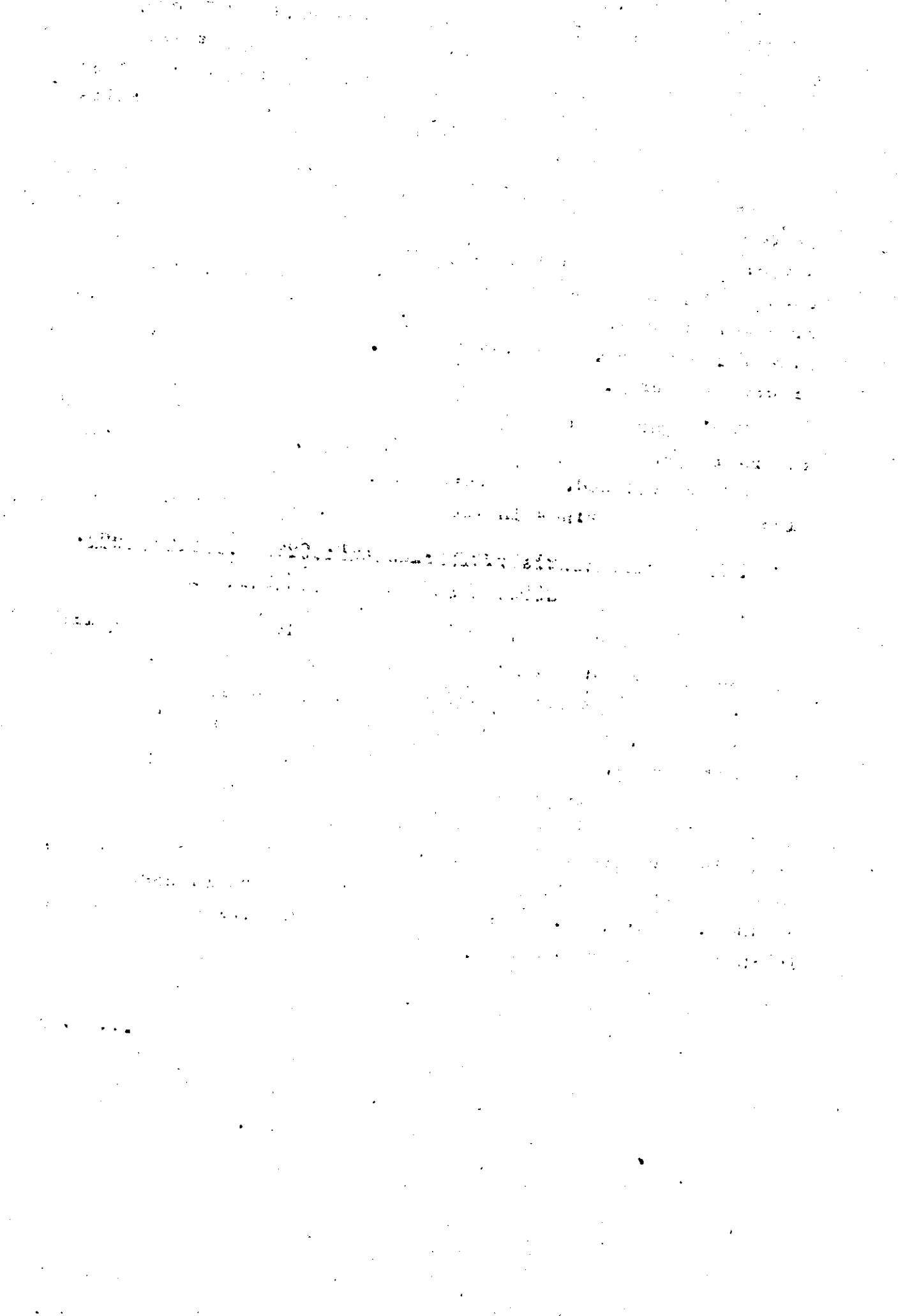
For tubers the required number of experimental plots was selected from the list of dry land plots having the crop (tubers include chena, chembu and kachil only for this purpose). For betal leaves all wet and dry land plots growing the crop available for harvest during the year were taken and details of harvest from the selected patch collected.

As in the case of other crops suitable plot was selected proceeding by the order of plots in the list used for selection. The size of the experimental unit for tubers was 5 pits for chena, 10 pits for kachil and one row for chembu i.e. 4 sq. metre area which was selected at random. For sugarcane the experimental plot i.e. 5 x 5 sq. metre was taken from the list of wet land plots growing the crop.

For sugarcane the plants in the experimental plots and for tubers the selected plants were harvested. The produce was cleaned and weighed. For betal leaves the number of leaves plucked from the vines in the selected patch was recorded.

2.4 Coconut, arecanut, cashew, pepper, cocoa, mango, jack, banana, plantain and drumstick

The required number of plots were selected from the list of dry land plots for each crop by simple random method. The plots were visited to ascertain its suitability for conducting the experiment i.e. to see if it contained the required number of trees/standards. From each selected plot, the required number of bearing trees/Standards were randomly selected for the experiment. For coconut, arecanut, cashew, pepper, cocoa and plantain five trees were selected; while in respect of mango, jack and drumstick two trees were selected and in case of banana 3 plants. The details of produce harvested were recorded in the prescribed proforma.



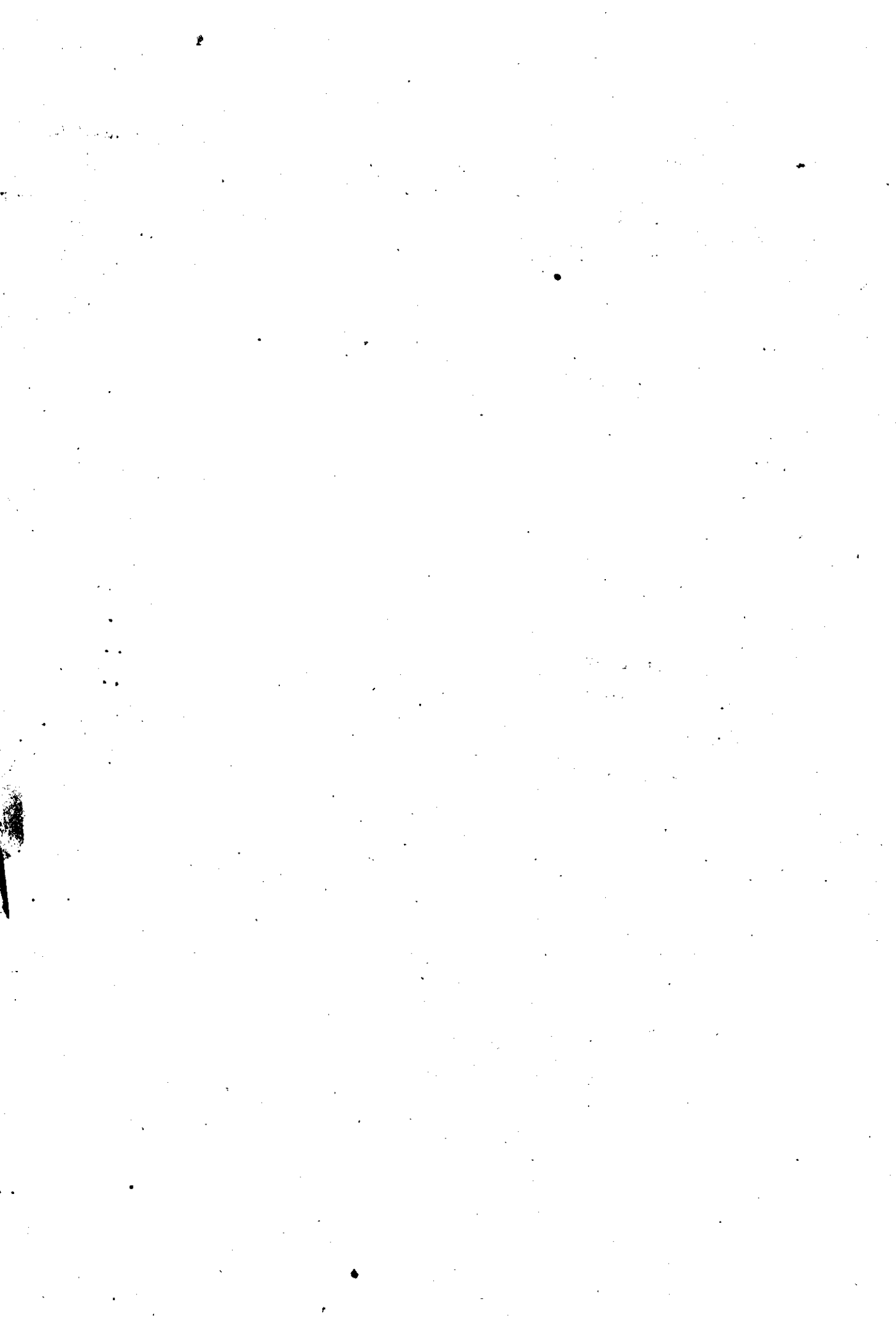
3. Sample size

Total number of crop cutting experiments planned during the years 1982-83 and 1983-84 are given below.

| Crop | 1982-83 | 1983-84 |
|-----------------|---------|---------|
| 1. Paddy | | |
| Autumn | 1550 | 1650 |
| Winter | 1550 | 1660 |
| Summer | 974 | 1012 |
| 2. Tapioca | 1265 | 1241 |
| 3. Coconut | 533 | 498 |
| 4. Arecanut | 430 | 402 |
| 5. Cashew | 398 | 418 |
| 6. Pepper | 389 | 389 |
| 7. Cocoa | 300 | 295 |
| 8. Sugarcane | 85 | .. |
| 9. Betal leaves | 55 | .. |
| 10. Drumstick | 290 | .. |
| 11. Tubers | 285 | .. |
| 12. Jack | .. | 255 |
| 13. Mango | .. | 213 |
| 14. Banana | .. | 290 |
| 15. Plantain | .. | 255 |

4. Field Work

The field work of the surveys comprising of selection of fields, identification of selected field, location, identification and marking of plot or trees for the experiments, recording the weight/number of nuts of the harvested produce, etc. were done by the investigators of the department under the supervision of the Taluk Statistical Inspectors and District level officers.



The planning of the survey and statistical analysis of the data, collected were done at the head-quarters of the Department.

5. Training

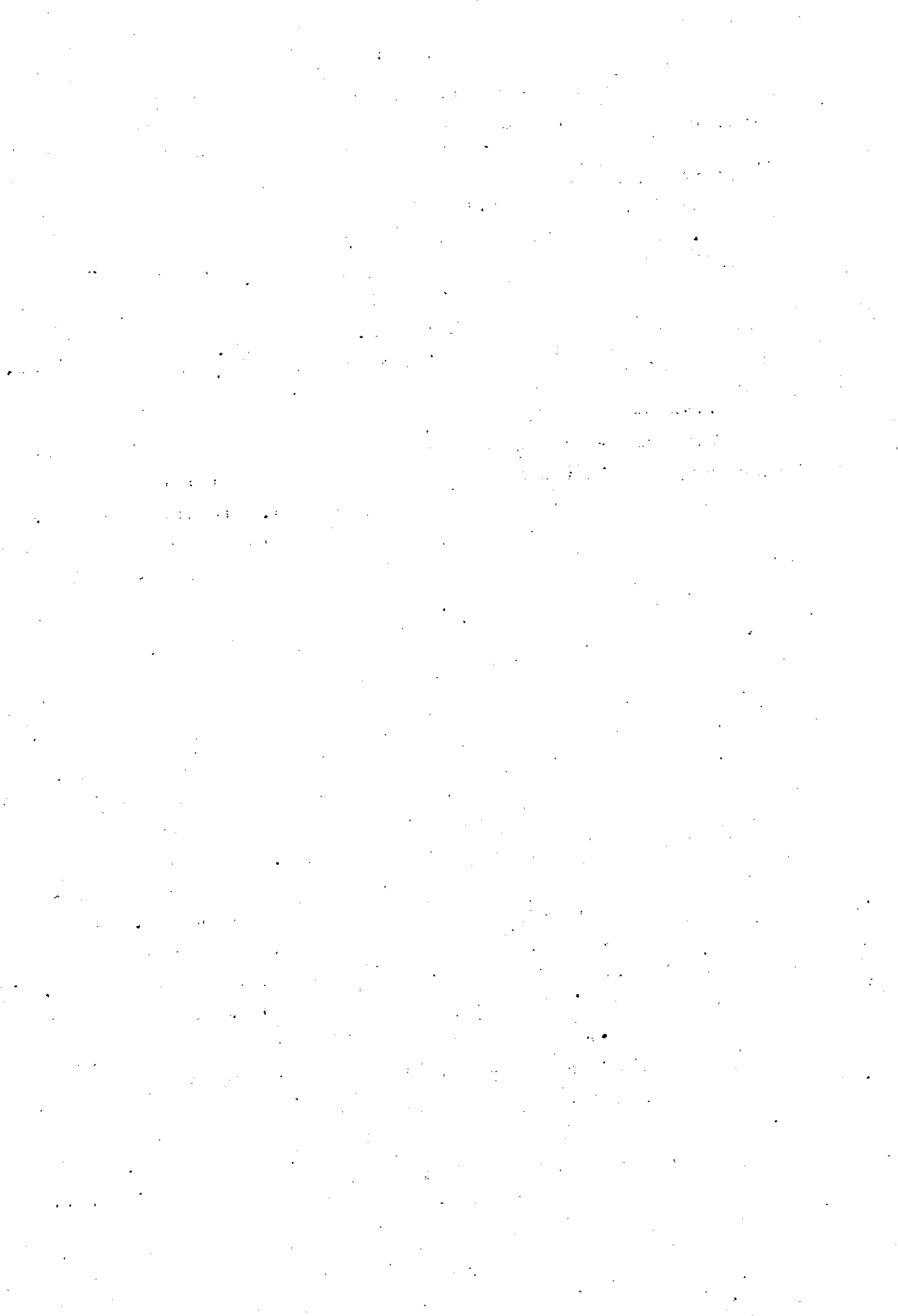
Training was imparted to officers at taluk and district levels. District level training programmes were organised for a total of 6 days in the State one day each devoted for 2 districts. The Officers from the National Sample Survey Organisation also participated in these conferences. Taluk level training programmes were also organised by the district level officers.

6. Response

The number of experiments planned, analysed and the percentage response in respect of paddy during the three seasons in each district is given in Table 1.1 and 1.2 in the appendix. Details regarding the number of experiments planned and analysed in respect of all other crops for the year 1982-83 and 1983-84 are shown in Tables 5 to 18.

7. Supervision

The field work of the investigators was supervised by the Statistical Inspectors at taluk level. District level officers also conducted inspections. All inspecting officers at District level had to conduct harvest stage inspection at the rate of one experiment in each taluk in the case of paddy while the Taluk Level Supervisors had to supervise one randomly selected experiment in each of the investigator unit subject to a minimum of six experiments in a taluk in each season. In the case of tapioca, the District level officers had to conduct inspection at the rate of three experiments in a District while the Taluk Statistical Inspectors had to inspect five experiments or 50% of the experiments planned in a taluk, whichever is less. Apart from these, inspection at pre-harvest and post-harvest stages were done by the Statistical Inspectors and District Officers.



Results

The estimated mean yield of dry paddy, the percentage of sampling error and the total production of rice during the two seasons for the year 1982-83 and 1983-84 are given in Table No. 2.1 and 2.2 in the appendix.

The details showing the irrigated ratio of paddy, percentage area under different agricultural practices during the years 1982-83 and 1983-84 for autumn, winter, and summer are given in Tables 3.1, 3.2, 4.11, 4.12, 4.13, 4.21, 4.22 and 4.23 respectively. The estimated mean yield rates of tapioca, coconut, arecanut, pepper, cashew, cocoa, sugarcane, tubers, drumstick, jack, mango, banana and plantain are given in Tables 5 to 17 in the appendix. The results on betel leaves were not included in the report since the survey was of a pilot nature.

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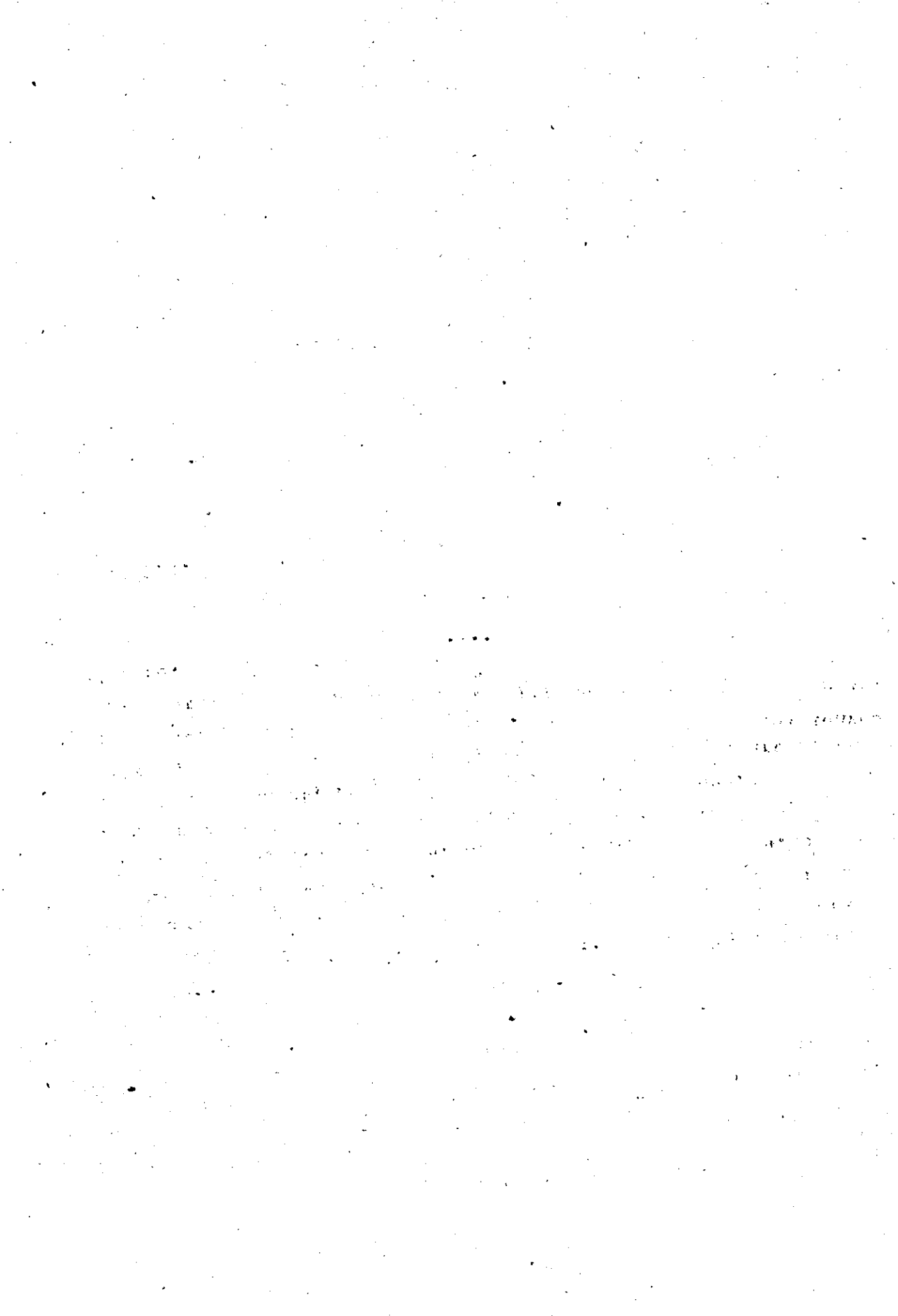


Table No.1.1 Coverage Sample Size and Response

YEAR: 1982-83

| District | RETURN - 1982 | | WINTER - 1983 | | SUMMER - 1983 | | TOTAL 1982-83 | | | | | |
|---------------|--------------------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|---------------------|-----|------|------|----|
| | No. of Experiments | Percentage response | No. of Experiments | Percentage response | No. of Experiments | Percentage response | No. of Experiments | Percentage response | | | | |
| 1. Trivandrum | 120 | 119 | 99 | 120 | 117 | 98 | 46 | 42 | 91 | 286 | 278 | 97 |
| 2. Gullion | 170 | 169 | 99 | 170 | 169 | 99 | 48 | 47 | 98 | 388 | 385 | 99 |
| 3. Alleppey | 198 | 183 | 92 | 186 | 179 | 96 | 140 | 133 | 95 | 524 | 495 | 94 |
| 4. Kottayam | 110 | 105 | 95 | 96 | 96 | 100 | 72 | 72 | 100 | 278 | 273 | 98 |
| 5. Idukki | 36 | 29 | 81 | 48 | 47 | 98 | - | - | - | 84 | 76 | 90 |
| 6. Ernakulam | 210 | 209 | 99 | 186 | 184 | 99 | 134 | 134 | 100 | 530 | 527 | 99 |
| 7. Trichur | 142 | 137 | 96 | 140 | 138 | 99 | 114 | 109 | 96 | 396 | 384 | 97 |
| 8. Palghat | 130 | 166 | 98 | 166 | 140 | 84 | 68 | 64 | 94 | 414 | 370 | 92 |
| 9. Malappuram | 130 | 129 | 99 | 120 | 111 | 93 | 80 | 75 | 94 | 330 | 315 | 95 |
| 10. Kozhikode | 84 | 76 | 90 | 84 | 84 | 100 | 62 | 61 | 98 | 230 | 221 | 96 |
| 11. Wynaad | - | - | - | 90 | 86 | 96 | 78 | 78 | 100 | 168 | 164 | 98 |
| 12. Cannanore | 170 | 169 | 99 | 144 | 143 | 99 | 132 | 132 | 100 | 446 | 444 | 99 |
| State | 1550 | 1491 | 96 | 1550 | 1494 | 96 | 974 | 947 | 97 | 4074 | 3932 | 97 |

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Year 1983-84

Table - 1.2 Coverage Sample size and Response

SPRING 1983 WINTER- 1984 SUMMER - 1984 TOTAL 1983-84

| District | No. of Experiments | | No. of Experiments | | No. of Experiments | | No. of Experiments | | No. of Experiments | | | |
|---------------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|------|----|
| | Planned | Actual | Planned | Actual | Planned | Actual | Planned | Actual | Planned | Actual | | |
| 1. Trivandrum | 120 | 113 | 94 | 120 | 117 | 98 | 48 | 46 | 96 | 288 | 276 | 96 |
| 2. Oullon | 175 | 170 | 97 | 170 | 167 | 98 | 38 | 37 | 97 | 383 | 374 | 98 |
| 3. Alleppey | 198 | 173 | 87 | 168 | 158 | 94 | 140 | 129 | 92 | 506 | 460 | 91 |
| 4. Kottayam | 110 | 107 | 97 | 96 | 91 | 95 | 84 | 74 | 88 | 290 | 272 | 94 |
| 5. Idukki | 36 | 36 | 100 | 53 | 52 | 98 | - | - | - | 89 | 88 | 99 |
| 6. Ernakulam | 220 | 220 | 100 | 200 | 195 | 98 | 148 | 135 | 91 | 568 | 550 | 97 |
| 7. Trichur | 137 | 135 | 99 | 145 | 140 | 97 | 114 | 110 | 96 | 396 | 385 | 97 |
| 8. Palghat | 160 | 162 | 95 | 160 | 149 | 93 | 68 | 67 | 99 | 388 | 368 | 95 |
| 9. Malappuram | 133 | 125 | 94 | 120 | 115 | 96 | 80 | 74 | 93 | 333 | 314 | 94 |
| 10. Kozhikode | 84 | 82 | 98 | 84 | 77 | 92 | 62 | 54 | 87 | 230 | 213 | 93 |
| 11. Wynaad | - | - | - | 90 | 88 | 98 | 78 | 76 | 97 | 168 | 164 | 98 |
| 12. Cannanore | 175 | 171 | 98 | 154 | 148 | 96 | 142 | 135 | 95 | 471 | 454 | 96 |
| State | 1550 | 1484 | 96 | 1560 | 1497 | 96 | 1002 | 937 | 94 | 4112 | 3918 | 95 |

Crop: Paddy Table 2.1 Yield Estimate - Rice - 1982-83

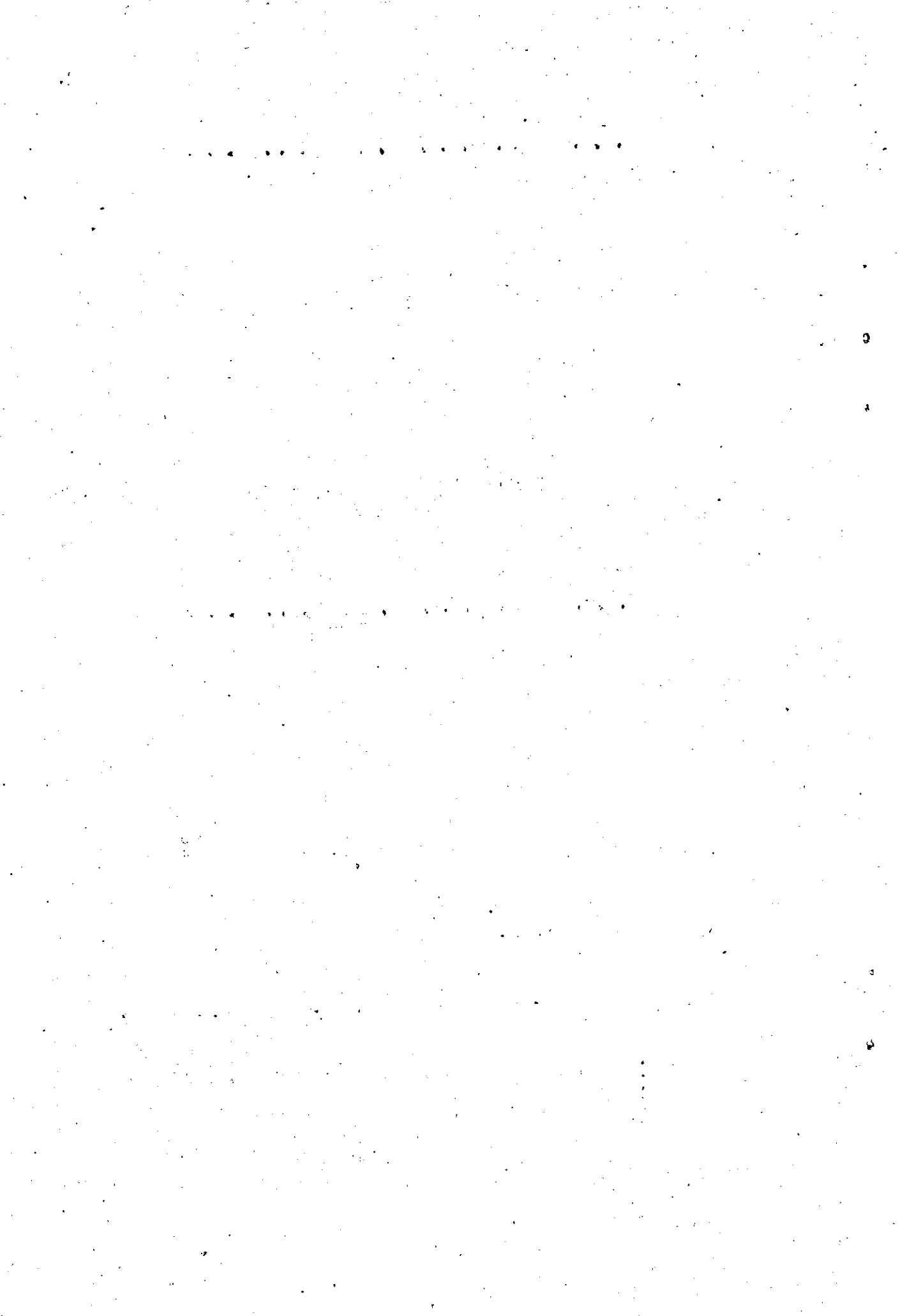
| District | Season | Area under crop | | Number of Experi- | | | Estima- ted yield in Kg./ Hect. of dry paddy | Samp- ling errors % | To produc- tion of rice in t. m. s. |
|------------|--------|-----------------|---------------|-------------------|---------------|-------------------------|--|------------------------------|---|
| | | Total | Coverage % | Plan- ned | Analy- sed | Res- pon- se % | | | |
| 1. | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Trivandrum | Autumn | 14581 | 100 | 120 | 119 | 99 | 2419 | 3.35 | 23174 |
| | Winter | 14375 | 100 | 120 | 117 | 98 | 2341 | 2.86 | 22108 |
| | Summer | 435 | 100 | 46 | 42 | 91 | 1914 | 12.17 | 547 |
| Quilon | Autumn | 24435 | 100 | 170 | 169 | 99 | 2715 | 2.69 | 43592 |
| | Winter | 24458 | 100 | 170 | 169 | 99 | 2569 | 3.62 | 41288 |
| | Summer | 24708 | 100 | 48 | 47 | 98 | 2077 | 4.43 | 966 |
| Alleppey | Autumn | 32545 | 100 | 198 | 183 | 92 | 2153 | 4.23 | 46026 |
| | Winter | 26801 | 100 | 186 | 179 | 96 | 2449 | 2.98 | 43127 |
| | Summer | 24516 | 100 | 140 | 133 | 95 | 3763 | 3.35 | 60615 |
| Kottayam | Autumn | 14184 | 100 | 110 | 105 | 95 | 3300 | 4.39 | 30748 |
| | Winter | 13261 | 100 | 96 | 96 | 100 | 3288 | 4.81 | 28647 |
| | Summer | 7154 | 100 | 72 | 72 | 100 | 5138 | 4.53 | 24149 |
| Idukki | Autumn | 3854 | 100 | 36 | 29 | 81 | 3603 | 4.33 | 9124 |
| | Winter | 5236 | 100 | 48 | 47 | 98 | 3297 | 4.46 | 11341 |
| | Summer | 159 | 100 | - | - | - | 1532 | - | 160 |
| Ernakulam | Autumn | 40053 | 100 | 210 | 209 | 99 | 2485 | 3.62 | 65388 |
| | Winter | 40877 | 100 | 186 | 184 | 99 | 2354 | 2.76 | 63216 |
| | Summer | 15080 | 100 | 134 | 134 | 100 | 2141 | 4.67 | 21214 |
| Trichur | Autumn | 40661 | 100 | 142 | 137 | 96 | 1966 | 4.93 | 52509 |
| | Winter | 49716 | 100 | 140 | 138 | 99 | 2094 | 3.72 | 68382 |
| | Summer | 17334 | 100 | 114 | 109 | 95 | 2503 | 6.55 | 28502 |
| Palghat | Autumn | 89438 | 100 | 180 | 166 | 92 | 3560 | 3.15 | 209159 |
| | Winter | 81044 | 100 | 166 | 140 | 84 | 2849 | 4.88 | 151679 |
| | Summer | 2676 | 100 | 68 | 64 | 94 | 2487 | 7.20 | 4373 |
| Malappuram | Autumn | 36731 | 100 | 139 | 120 | 86 | 1687 | 4.45 | 40717 |
| | Winter | 39450 | 100 | 120 | 111 | 93 | 2043 | 3.62 | 50260 |
| | Summer | 4321 | 100 | 80 | 75 | 94 | 2729 | 6.67 | 7747 |
| Kozhikode | Autumn | 10086 | 100 | 84 | 76 | 90 | 1405 | 5.62 | 9310 |
| | Winter | 14228 | 100 | 84 | 84 | 100 | 1793 | 5.13 | 16758 |
| | Summer | 2174 | 100 | 62 | 61 | 98 | 1624 | 6.28 | 2320 |
| Wynad | Autumn | 71 | 100 | - | - | - | 1377 | - | 64 |
| | Winter | 24255 | 100 | 90 | 86 | 96 | 2536 | 4.18 | 40406 |
| | Summer | 6156 | 100 | 78 | 78 | 100 | 1921 | 8.59 | 7771 |
| Cannanore | Autumn | 36033 | 100 | 170 | 169 | 99 | 2071 | 3.77 | 49017 |
| | Winter | 20572 | 100 | 144 | 143 | 99 | 2108 | 3.46 | 28492 |
| | Summer | 2835 | 100 | 132 | 132 | 100 | 1772 | 6.15 | 3301 |
| STATE | Autumn | 342669 | 100 | 1550 | 1491 | 96 | 2571 | 2.10 | 578828 |
| | Winter | 352273 | 100 | 1550 | 1494 | 96 | 2444 | 1.55 | 565704 |
| | Summer | 83548 | 100 | 974 | 947 | 97 | 2945 | 3.46 | 161665 |



Order:

Table - 2.2 Yield Estimate - Rice - 1983-84

| District | Season | Area under crop in hectares | | No. of Experiments | | Response % | Estimated yield in Kg./hect. of dry paddy | Sampling error % | Total production of Rice in Tonnes |
|------------|--------|-----------------------------|----------|--------------------|----------|------------|---|------------------|------------------------------------|
| | | Total | Coverage | Planned | Analysed | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Trivandrum | Autumn | 13165 | 100 | 120 | 113 | 94 | 2338 | 3.98 | 20226 |
| | Winter | 13546 | 100 | 120 | 117 | 98 | 1783 | 3.98 | 15864 |
| | Summer | 368 | 100 | 48 | 46 | 96 | 1539 | 11.89 | 372 |
| Quilon | Autumn | 23404 | 100 | 175 | 170 | 97 | 2344 | 5.55 | 36047 |
| | Winter | 24066 | 100 | 170 | 167 | 98 | 2115 | 4.54 | 33446 |
| | Summer | 410 | 100 | 38 | 37 | 97 | 906 | 3.64 | 244 |
| Alleppey | Autumn | 32593 | 100 | 198 | 173 | 87 | 2464 | 4.55 | 52761 |
| | Winter | 17786 | 100 | 168 | 158 | 94 | 2501 | 3.92 | 29228 |
| | Summer | 28671 | 100 | 140 | 129 | 92 | 3759 | 4.75 | 70808 |
| Kottayam | Autumn | 12906 | 100 | 110 | 107 | 97 | 3391 | 4.25 | 28754 |
| | Winter | 14583 | 100 | 96 | 91 | 95 | 2884 | 5.06 | 27632 |
| | Summer | 7312 | 100 | 84 | 74 | 88 | 2840 | 5.00 | 13641 |
| Idukki | Autumn | 3830 | 100 | 36 | 36 | 100 | 2529 | 3.60 | 6364 |
| | Winter | 3955 | 100 | 53 | 52 | 98 | 2775 | 3.71 | 7210 |
| | Summer | 287 | 100 | - | - | - | 1533 | - | 289 |
| Ernakulam | Autumn | 35736 | 100 | 220 | 220 | 100 | 2172 | 2.90 | 50995 |
| | Autumn | 36994 | 100 | 200 | 195 | 98 | 1973 | 3.40 | 47964 |
| | Summer | 14002 | 100 | 148 | 135 | 91 | 2184 | 2.20 | 20095 |



| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|--------|--------|-----|------|------|----|------|------|--------|----|
| Tirichur | Autumn | 37920 | 100 | 137 | 135 | 99 | 2144 | 3.69 | 53404 | |
| | Winter | 48220 | 100 | 145 | 140 | 97 | 2255 | 2.79 | 71443 | |
| | Summer | 17251 | 100 | 114 | 110 | 96 | 2671 | 4.90 | 30274 | |
| Palghat | Autumn | 87595 | 100 | 160 | 152 | 95 | 3040 | 3.59 | 175566 | |
| | Winter | 77692 | 100 | 160 | 149 | 93 | 3150 | 2.95 | 160779 | |
| | Summer | 24057 | 100 | 68 | 67 | 99 | 1878 | 7.24 | 3020 | |
| Melappuram | Autumn | 33779 | 100 | 135 | 125 | 94 | 1726 | 4.29 | 38301 | |
| | Winter | 35303 | 100 | 120 | 115 | 96 | 1975 | 3.65 | 45805 | |
| | Summer | 5667 | 100 | 80 | 74 | 93 | 2467 | 4.95 | 9185 | |
| Kozhikode | Autumn | 9377 | 100 | 84 | 82 | 98 | 1406 | 6.47 | 8938 | |
| | Winter | 11286 | 100 | 84 | 77 | 92 | 1479 | 5.34 | 10964 | |
| | Summer | 2192 | 100 | 62 | 54 | 87 | 1355 | 6.94 | 1951 | |
| Wynad | Autumn | - | 100 | 90 | 88 | 98 | 3068 | 4.37 | 48084 | |
| | Winter | 23856 | 100 | 78 | 76 | 97 | 3099 | 4.32 | 13671 | |
| | Summer | 6715 | 100 | 175 | 171 | 98 | 2027 | 4.19 | 49102 | |
| Cannanore | Autumn | 36878 | 100 | 154 | 148 | 96 | 1956 | 3.58 | 22203 | |
| | Winter | 17273 | 100 | 142 | 135 | 95 | 2066 | 5.61 | 3286 | |
| | Summer | 2421 | 100 | 1550 | 1484 | 96 | 2417 | 1.32 | 120458 | |
| State | Autumn | 327783 | 100 | 1560 | 1497 | 96 | 2442 | 2.17 | 520622 | |
| | Winter | 324560 | 100 | 1002 | 937 | 94 | 2894 | 2.25 | 166336 | |
| | Summer | 87743 | 100 | | | | | | | |

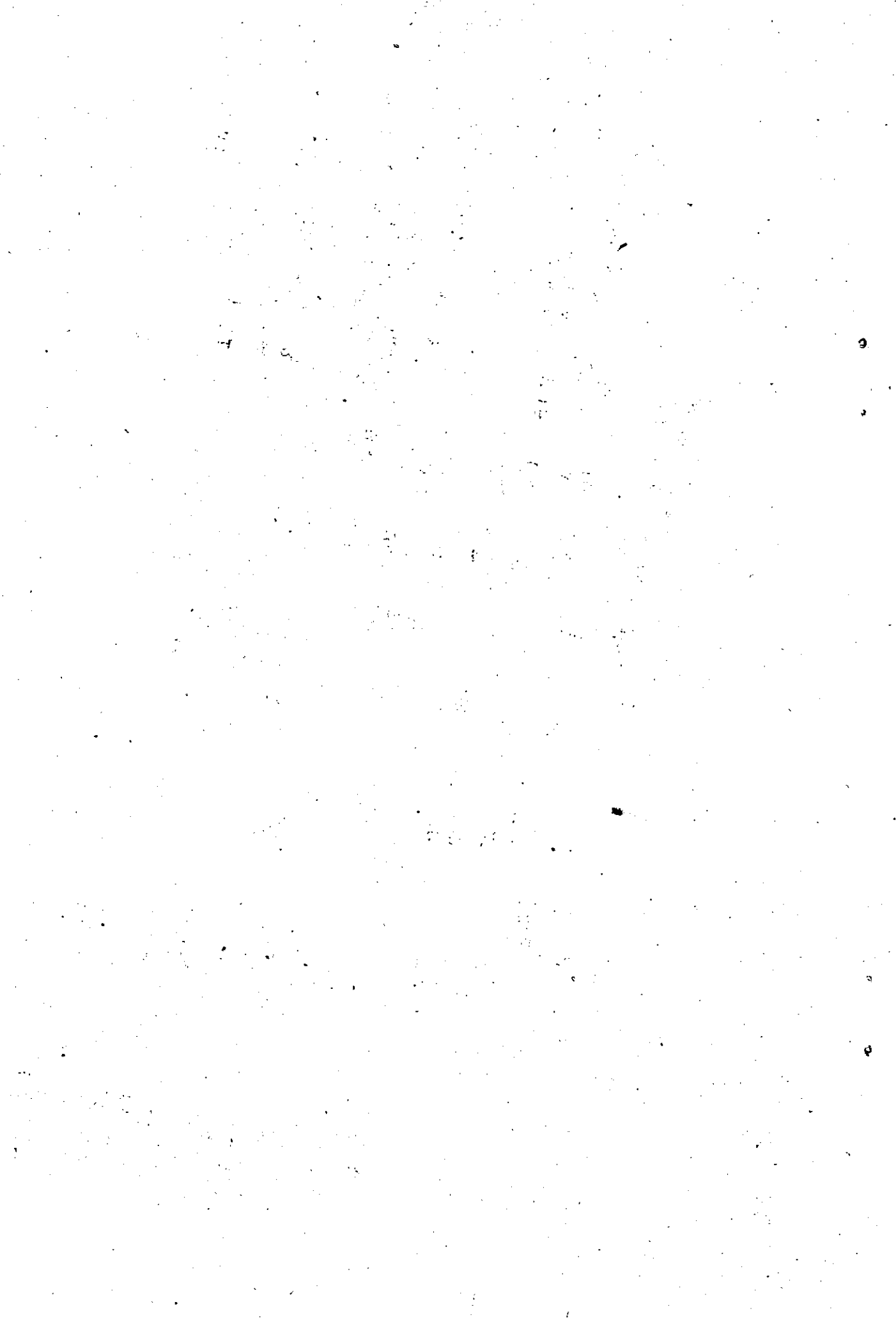


Table 3.1 Data on drilage (Percentage recovery of final Product dry paddy) from harvested Produce 1982-83

| Driage experiment 1982-1983 | | | | |
|-----------------------------|--------|-------------|--------------|----------------|
| District | Season | No. Planned | No. Analysed | Driage ratio % |
| 1 | 2 | 3 | 4 | 5 |
| Trivandrum | Autumn | 12 | 9 | 87.6 |
| | Winter | 12 | 12 | 91.6 |
| | Summer | 12 | 12 | 91.2 |
| Quilon | Autumn | 18 | 18 | 88.8 |
| | Winter | 18 | 18 | 88.6 |
| | Summer | 15 | 14 | 91.0 |
| Alleppey | Autumn | 21 | 18 | 88.6 |
| | Winter | 21 | 21 | 90.1 |
| | Summer | 18 | 18 | 92.0 |
| Kottayam | Autumn | 15 | 12 | 90.3 |
| | Winter | 15 | 15 | 90.3 |
| | Summer | 12 | 11 | 94.2 |
| Idukki | Autumn | 6 | 13 | 84.0 |
| | Winter | 12 | 11 | 89.8 |
| | Summer | - | - | - |
| Ernakulam | Autumn | 21 | 21 | 88.9 |
| | Winter | 18 | 18 | 90.0 |
| | Summer | 18 | 18 | 90.8 |
| Trichur | Autumn | 15 | 3 | 85.7 |
| | Winter | 15 | 15 | 88.1 |
| | Summer | 15 | 15 | 90.4 |
| Palghat | Autumn | 15 | 12 | 87.2 |
| | Winter | 15 | 15 | 90.4 |
| | Summer | 12 | 12 | 91.0 |
| Malappuram | Autumn | 15 | 13 | 88.6 |
| | Winter | 12 | 12 | 91.6 |
| | Summer | 12 | 12 | 91.0 |
| Kozhikode | Autumn | 9 | 9 | 88.3 |
| | Winter | 9 | 9 | 90.0 |
| | Summer | 9 | 9 | 90.5 |
| Wynad | Autumn | - | - | - |
| | Winter | 9 | 9 | 95.8 |
| | Summer | 9 | 9 | 94.1 |
| Cannanore | Autumn | 15 | 15 | 91.0 |
| | Winter | 15 | 15 | 93.8 |
| | Summer | 15 | 15 | 92.0 |
| Total | Autumn | 162 | 123 | 88.6 |
| | Winter | 171 | 170 | 90.6 |
| | Summer | 147 | 145 | 91.5 |

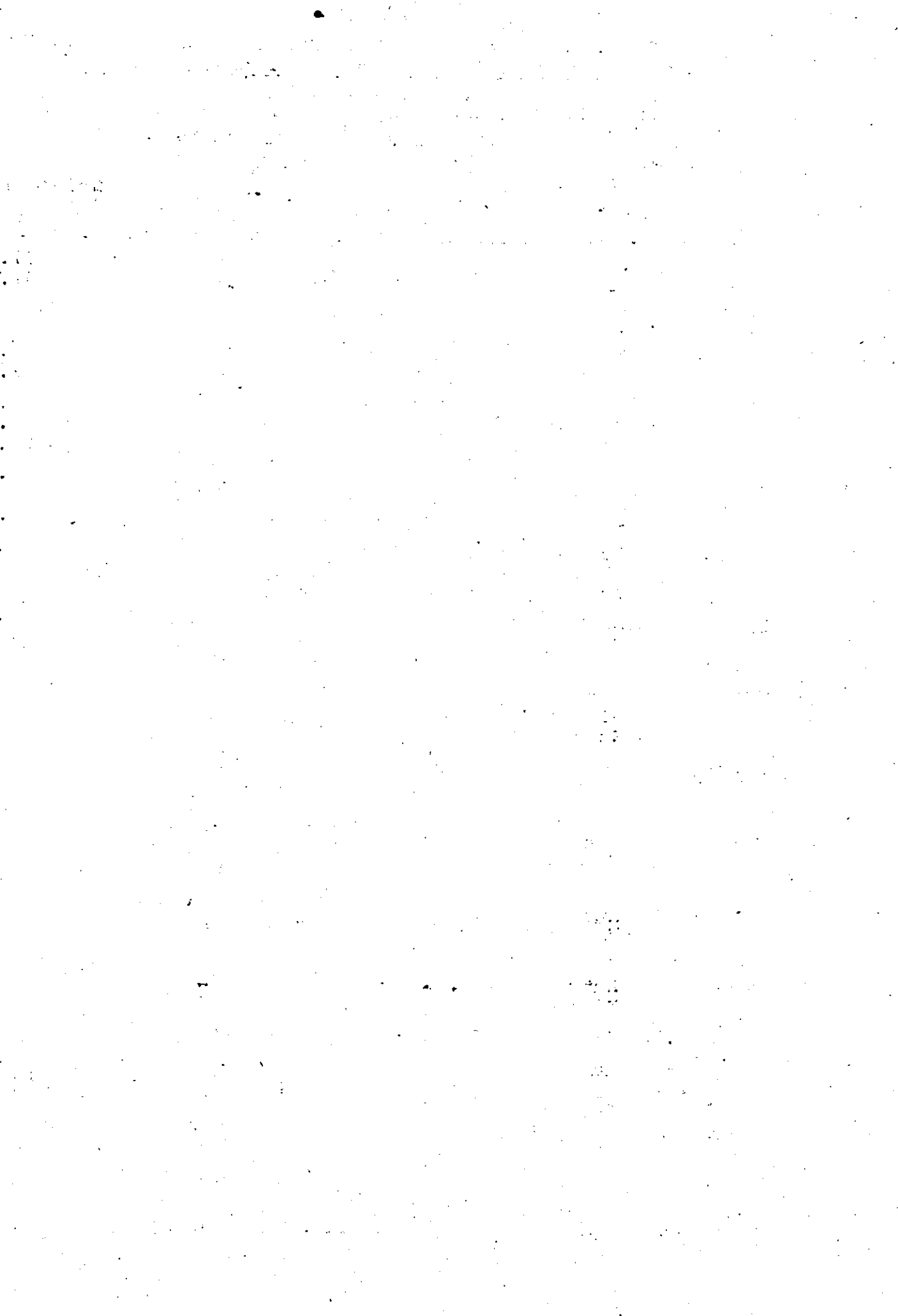


Table 3.2 Data on driage (Percentage recovery of Final Product (dry paddy) from harvested produce) 1983-84

| District | Season | Driage experiment 1983-84 | | |
|------------|--------|---------------------------|-------------|----------------|
| | | No.Planned | No.Analysed | Driage ratio % |
| 1 | 2 | 3 | 4 | 5 |
| Trivandrum | Autumn | 12 | 12 | 87.3 |
| | Winter | 12 | 12 | 90.8 |
| | Summer | 12 | 12 | 88.2 |
| Quilon | Autumn | 18 | 18 | 89.4 |
| | Winter | 18 | 18 | 88.8 |
| | Summer | 15 | 15 | 87.0 |
| Alleppey | Autumn | 21 | 21 | 85.0 |
| | Winter | 21 | 21 | 89.4 |
| | Summer | 21 | 21 | 89.5 |
| Kottayam | Autumn | 15 | 15 | 92.1 |
| | Winter | 15 | 15 | 91.9 |
| | Summer | 12 | 12 | 92.2 |
| Idukki | Autumn | 6 | 6 | 83.2 |
| | Winter | 11 | 11 | 85.9 |
| | Summer | - | - | - |
| Ernakulam | Autumn | 21 | 21 | 84.6 |
| | Winter | 18 | 18 | 86.4 |
| | Summer | 18 | 18 | 90.7 |
| Trichur | Autumn | 15 | 15 | 87.8 |
| | Winter | 15 | 15 | 90.3 |
| | Summer | 15 | 15 | 91.4 |
| Palghat | Autumn | 15 | 15 | 87.2 |
| | Winter | 15 | 15 | 88.2 |
| | Summer | 12 | 12 | 88.7 |
| Malappuram | Autumn | 12 | 12 | 89.4 |
| | Winter | 12 | 12 | 90.1 |
| | Summer | 12 | 12 | 91.8 |
| Kozhikode | Autumn | 9 | 9 | 86.3 |
| | Winter | 9 | 9 | 90.7 |
| | Summer | 9 | 9 | 91.7 |
| Wynad | Autumn | - | - | - |
| | Winter | 9 | 9 | 94.8 |
| | Summer | 9 | 9 | 94.8 |
| Cannanore | Autumn | 15 | 15 | 88.6 |
| | Winter | 15 | 15 | 91.3 |
| | Summer | 15 | 15 | 93.4 |
| State | Autumn | 159 | 159 | 87.4 |
| | Winter | 170 | 170 | 89.6 |
| | Summer | 150 | 150 | 90.6 |



Table V.11 Crop estimation Survey 1982-1983 statement showing the percentage area under different improved agricultural practices

Crop: Paddy

Autumn: 1982

| District | Percentage area under** | | | | | | | | |
|------------|-------------------------|-----------------|----------------------|---------------|-------------|----------------------|---------------------------|---------|--|
| | Improved varieties | Other varieties | Chemical fertilizers | Other Manures | Not manured | Treated insecticides | Untreated with pesticides | Remarks | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| Trivandrum | 19.33 | 80.67 | 98.32 | 0.84 | 0.84 | 31.09 | 68.91 | | |
| Quilon | 73.37 | 26.63 | 91.12 | 8.88 | - | 28.99 | 71.01 | | |
| Alleppey | 29.51 | 70.49 | 67.76 | 25.14 | 7.10 | 33.88 | 66.12 | | |
| Kottayam | 60.95 | 39.05 | 93.33 | 3.81 | 2.86 | 68.57 | 31.43 | | |
| Idukki | 51.72 | 48.28 | 100.00 | - | - | 44.83 | 55.17 | | |
| Ernakulam | 37.80 | 62.20 | 66.03 | 6.22 | 27.75 | 36.36 | 63.64 | | |
| Trichur | 26.28 | 73.72 | 53.28 | 30.66 | 16.06 | 37.23 | 62.77 | | |
| Palghat | 39.73 | 60.27 | 71.23 | 19.18 | 9.59 | 9.59 | 90.41 | | |
| Malappuram | 20.16 | 79.84 | 60.47 | 34.88 | 4.66 | 27.91 | 72.09 | | |
| Kozhikode | 18.42 | 81.58 | 6.58 | 76.31 | 17.11 | 17.11 | 82.89 | | |
| Wynad | - | - | - | - | - | - | - | | |
| Cannanore | 22.94 | 77.06 | 46.47 | 43.53 | 10.00 | 9.41 | 90.59 | | |
| State | 36.14 | 63.86 | 67.87 | 22.15 | 9.98 | 29.82 | 70.18 | | |

** based on the number of crop cutting experimental plots



Table 4.19 Crop estimation Survey 1981-82 statement showing the percentage area under different improved agricultural practices Winter 1983

| District | Percentage area under** | | | | | | | | |
|------------|-------------------------|-----------------|----------------------|---------------|-------------|---------------------------|---------|---|--|
| | Improved varieties | Other varieties | Chemical Fertilizers | Other methods | Not handled | Untreated with pesticides | Remarks | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| Trivandrum | 11.11 | 88.89 | 97.44 | 2.56 | - | 48.74 | 57.26 | | |
| Quilon | 26.04 | 73.96 | 93.49 | 5.92 | 0.59 | 30.13 | 69.82 | | |
| Alleppey | 9.50 | 90.50 | 67.04 | 16.76 | 16.20 | 40.22 | 59.78 | | |
| Kottayam | 54.17 | 45.83 | 96.88 | 2.08 | 1.04 | 84.37 | 15.63 | | |
| Idukki | 36.17 | 63.83 | 82.98 | 6.38 | 10.64 | 51.06 | 48.94 | | |
| Ernakulam | 3.26 | 96.74 | 89.13 | 7.61 | 3.26 | 60.33 | 39.67 | | |
| Trichur | 8.70 | 91.30 | 64.49 | 30.43 | 5.07 | 42.75 | 57.25 | | |
| Palghat | 28.57 | 71.43 | 80.72 | 15.71 | 3.57 | 21.43 | 78.57 | | |
| Malappuram | 10.81 | 89.19 | 70.28 | 27.02 | 2.70 | 38.74 | 61.26 | | |
| Kozhikode | 13.10 | 86.90 | 44.05 | 45.24 | 10.71 | 27.38 | 72.62 | | |
| Mynad | 16.23 | 83.72 | 46.51 | 36.05 | 17.44 | 19.77 | 80.23 | | |
| Cannanore | 25.87 | 74.13 | 72.73 | 25.87 | 1.40 | 59.44 | 40.56 | | |
| State | 18.41 | 81.59 | 76.91 | 17.54 | 5.55 | 43.24 | 56.76 | | |

**based on the number of crop cutting experimental plots

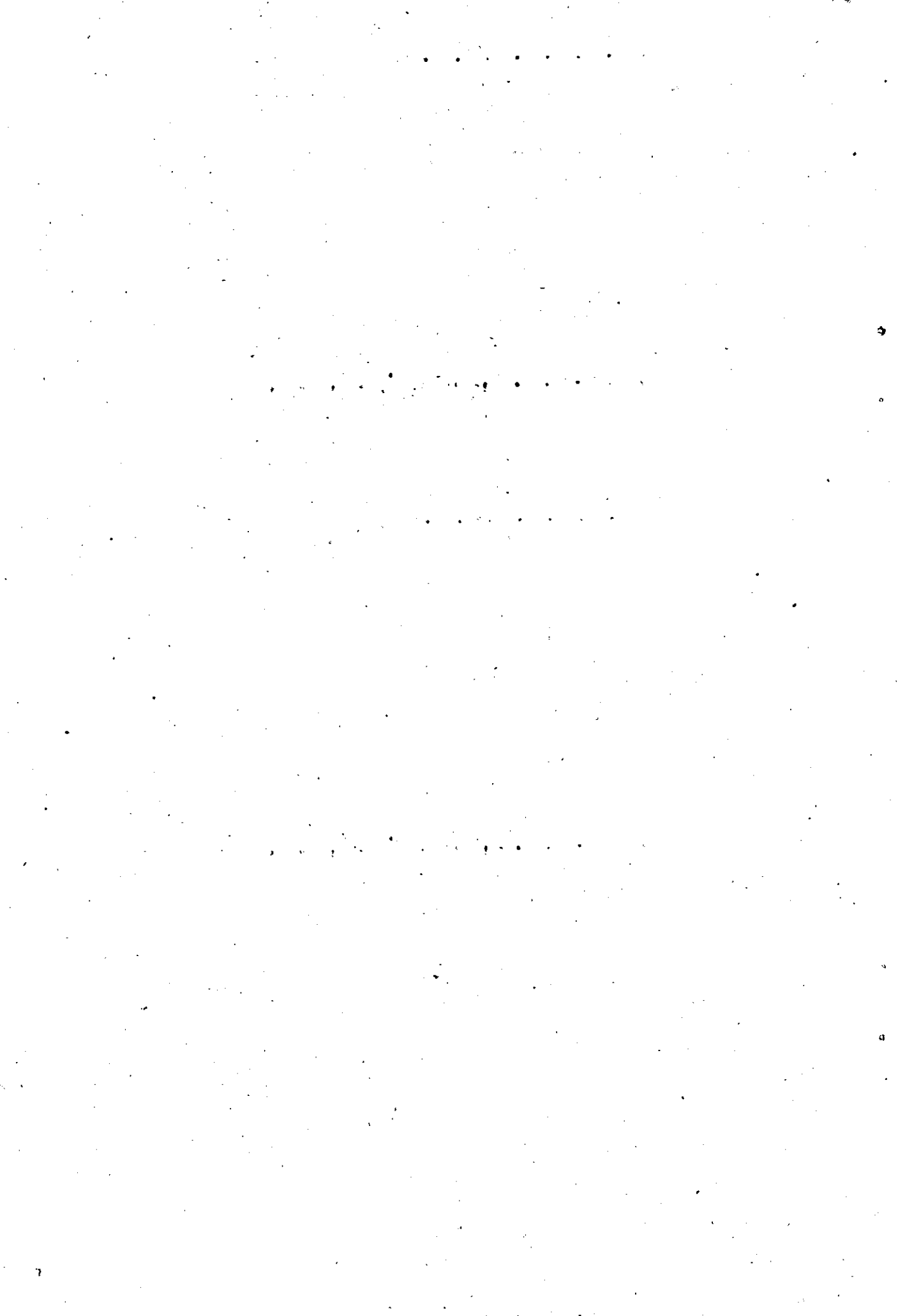


Table 4.10 Crop estimation survey 1982-1983 statement showing the percentage in area under different improved agricultural practices

Summer 1983

| Districts | Percentage area under** | | | | | | | | Remarks |
|------------|-------------------------|-----------------|----------------------|---------------|-------------|---------------------------------------|---------------------------|---|---------|
| | Improved varieties | Other varieties | Chemical fertilizers | Other manures | Not manured | Treatments of pesticides/insecticides | Untreated with pesticides | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| Trivandrum | 59.52 | 40.48 | 83.34 | 11.90 | 4.76 | 50.00 | 50.00 | | |
| Quilon | 29.79 | 70.21 | 72.34 | 21.28 | 6.38 | 68.09 | 31.91 | | |
| Alleppey | 60.15 | 39.85 | 95.49 | 0 | 4.51 | 95.49 | 4.51 | | |
| Kottayam | 55.56 | 44.44 | 98.61 | - | 1.39 | 97.22 | 2.78 | | |
| Idukki | - | - | - | - | - | - | - | | |
| Ernakulam | 23.88 | 76.12 | 80.60 | 8.95 | 10.45 | 55.97 | 44.03 | | |
| Trichur | 50.46 | 49.54 | 86.24 | 9.17 | 4.59 | 67.89 | 32.11 | | |
| Palghat | 56.25 | 43.75 | 76.56 | 21.88 | 1.56 | 45.31 | 54.69 | | |
| Malappuram | 68 | 32 | 88 | 6.67 | 5.33 | 78.67 | 21.33 | | |
| Kozhikode | 50.82 | 49.18 | 75.41 | 19.67 | 4.92 | 42.62 | 57.38 | | |
| Wynad | 60.26 | 39.74 | 61.54 | 21.79 | 16.67 | 16.67 | 83.33 | | |
| Cannanore | 36.36 | 63.64 | 74.25 | 23.48 | 2.27 | 41.67 | 58.33 | | |
| State | 48.47 | 51.53 | 81.94 | 12.25 | 5.81 | 61.35 | 38.65 | | |

** based on the number of crop cutting experimental plots



9.11.84 7.21 Crop estimation surveys 1983-84 statement showing the percentage area under different improved agricultural practices Autumn - 83

| District | Percentage area under | | | | | | | | |
|------------|-----------------------|-----------------|----------------------|---------------|-------------|-----------------|------------|----------------------------|---------|
| | Improved varieties | Other varieties | Chemical Fertilizers | Other manures | Not manured | Traps for pests | pesticides | Controlled with pesticides | Remarks |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| Trivandrum | 15.47 | 80.53 | 92.92 | 7.08 | - | 29.20 | 70.80 | | |
| Quilon | 57.65 | 42.35 | 90.00 | 8.82 | 1.13 | 11.76 | 88.24 | | |
| Alleppey | 45.13 | 50.87 | 84.39 | 10.98 | 4.63 | 46.24 | 53.76 | | |
| Kottayam | 66.36 | 33.64 | 92.52 | 6.54 | 0.94 | 65.42 | 34.58 | | |
| Idukki | 13.98 | 86.11 | 63.89 | 30.56 | 5.55 | 38.09 | 61.11 | | |
| Ernakulam | 25.09 | 70.91 | 72.27 | 5.45 | 22.28 | 46.36 | 53.64 | | |
| Trichur | 32.59 | 67.41 | 60.74 | 23.15 | 11.11 | 41.48 | 58.52 | | |
| Palghat | 32.89 | 67.11 | 75.00 | 24.34 | 6.66 | 11.84 | 88.16 | | |
| Malappuram | 14.40 | 85.60 | 53.60 | 35.20 | 11.20 | 26.40 | 72.60 | | |
| Kozhikode | 13.41 | 86.59 | 36.59 | 52.44 | 10.97 | 7.32 | 92.68 | | |
| Mynad | - | - | - | - | - | - | - | | |
| Cannanore | 23.39 | 76.61 | 50.29 | 40.35 | 9.36 | 5.85 | 94.15 | | |
| State | 34.23 | 65.77 | 71.70 | 20.42 | 7.89 | 29.78 | 70.22 | | |

Jr/

Table: 4.2.3. Crop estimates survey 1983-84 - statement showing the percentage area under different improved agricultural practices

Summer - 1983-84

| District | Improved variety | Other variety | Percentage area under | | Treated with insecticides | Not treated with insecticides | Area under improved practices |
|------------|------------------|---------------|-----------------------|--------------|---------------------------|-------------------------------|-------------------------------|
| | | | Chemical Fertilizers | Other manure | | | |
| Trivandrum | 69.57 | 30.43 | 100.00 | ... | 89.13 | 101.08 | 69.57 |
| Quilon | 21.62 | 78.38 | 97.30 | 2.70 | 83.88 | 161.22 | 21.62 |
| Alleppey | 86.04 | 13.96 | 100.00 | .. | 100.00 | 100.00 | 86.04 |
| Kottayam | 82.43 | 17.57 | 95.95 | 4.05 | 83.85 | 161.15 | 82.43 |
| Idukki | .. | .. | .. | .. | .. | .. | .. |
| Ernakulam | 16.30 | 83.70 | 97.04 | 2.22 | 89.63 | 101.37 | 16.30 |
| Trichur | 39.09 | 60.91 | 93.64 | 4.55 | 92.73 | 111.27 | 39.09 |
| Palghat | 38.81 | 61.19 | 88.06 | 10.45 | 73.44 | 101.56 | 38.81 |
| Malappuram | 43.24 | 56.76 | 81.08 | 18.92 | 79.73 | 111.27 | 43.24 |
| Kozhikode | 50.00 | 50.00 | 92.59 | 1.85 | 61.11 | 138.89 | 50.00 |
| Wayanad | 40.73 | 59.21 | 82.89 | 6.58 | 57.89 | 142.11 | 40.73 |
| Cannanore | 25.33 | 74.07 | 85.19 | 10.37 | 88.83 | 111.11 | 25.33 |
| State: | 45.63 | 54.32 | 92.64 | 5.12 | 84.53 | 115.47 | 45.63 |

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Table 3 Yield estimates - Tobacco - 1982-83 and 1983-84

| District | 1982-83 | | Average yield | 1983-84 | | Estimated average yield |
|----------------|--------------------|----------|---------------|--------------------|----------|-------------------------|
| | No. of experiments | | | No. of experiments | | |
| | Planned | Analysed | | Planned | Analysed | |
| Trivandrum | 123 | 124 | 16.00 | 126 | 126 | 17.93 |
| Quilon | 150 | 150 | 16.30 | 107 | 107 | 14.30 |
| Pathanamthitta | .. | .. | .. | 92 | 92 | 15.90 |
| Allappay | 82 | 82 | 16.83 | 33 | 33 | 20.38 |
| Kottayam | 108 | 108 | 20.73 | 108 | 108 | 22.98 |
| Idukki | 56 | 56 | 26.08 | 46 | 46 | 15.00 |
| Ernakulam | 100 | 100 | 19.25 | 100 | 100 | 21.25 |
| Trichur | 106 | 106 | 18.58 | 106 | 104 | 17.88 |
| Palghat | 90 | 89 | 14.43 | 90 | 90 | 14.10 |
| Malappuram | 128 | 123 | 12.48 | 128 | 128 | 11.95 |
| Kozhikode | 90 | 90 | 12.35 | 90 | 90 | 11.83 |
| Wayanad | 45 | 45 | 24.70 | 45 | 45 | 19.10 |
| Cannanore | 170 | 170 | 15.43 | 170 | 170 | 15.23 |
| State: | 1251 | 1243 | 16.92 | 1241 | 1239 | 16.83 |

Table: 6. Yield estimates - coconut - 1982-83 & 1983-84
.....

| District | 1982-83 | | 1983-84 | |
|-------------|-------------------------------|----------|---------------------------|--|
| | No. of experiments Planned | Analysed | Average yield/ tree | Estimated mean yield No. of nuts/ hect. |
| Trivandrum | 50 | 50 | 27 | 3942 |
| Quilon | 30 | 59 | 30 | 2967 |
| Puthanpatti | .. | .. | .. | 2754 |
| Alleppey | 45 | 44 | 36 | 3848 |
| Kottayam | 40 | 40 | 26 | 3006 |
| Idukki | 20 | 20 | 24 | 2432 |
| Ernakulam | 40 | 40 | 38 | 4256 |
| Trichur | 45 | 45 | 41 | 5472 |
| Palghat | 28 | 28 | 29 | 2714 |
| Malappuram | 55 | 55 | 31 | 2660 |
| Kozhikode | 75 | 75 | 40 | 5478 |
| Wayanad | 15 | 15 | 21 | 420 |
| Cannanore | 60 | 60 | 28 | 3360 |
| State: | 533 | 531 | 32 | 3814 |

Tab. c: 7. Yield estimates - arecanut 1982-83 and 1983-84

.....

| Centre | 1982-83 | | Average yield/ tree Nos. | Estimated mean yield (No. of nut/ hect.) | 1983-84 | | Average yield/ tree | Estimated mean yield/ No. of nuts/ hect. |
|----------------|-------------------------------|----------|--------------------------------|---|-------------------------------|----------|---------------------------|---|
| | No. of experiments Planned | Analysed | | | No. of experiments Planned | Analysed | | |
| Trivandrum | 25 | 25 | 60 | 103740 | 25 | 25 | 65 | 111205 |
| Quilon | 31 | 31 | 89 | 155305 | 23 | 23 | 62 | 93424 |
| Pattanambittta | .. | .. | .. | .. | 14 | 14 | 38 | 60686 |
| All eppoy | 21 | 21 | 68 | 91868 | 15 | 15 | 67 | 91589 |
| Kottayam | 25 | 25 | 89 | 151923 | 25 | 25 | 65 | 113165 |
| Idukki | 10 | 10 | 83 | 121595 | 10 | 10 | 51 | 76041 |
| Ernakulam | 52 | 52 | 95 | 172900 | 52 | 52 | 71 | 128794 |
| Trichur | 50 | 49 | 133 | 243257 | 50 | 50 | 93 | 170934 |
| Palghat | 16 | 16 | 104 | 156832 | 16 | 16 | 77 | 116809 |
| Malappuram | 58 | 58 | 86 | 152134 | 58 | 58 | 83 | 141100 |
| Kozhikode | 40 | 40 | 169 | 300313 | 40 | 40 | 112 | 195552 |
| Wayanad | 30 | 30 | 173 | 250331 | 30 | 30 | 134 | 143112 |
| Cannanore | 72 | 72 | 139 | 187233 | 72 | 72 | 110 | 157080 |
| State: | 430 | 429 | 114 | 185022 | 430 | 430 | 87 | 139554 |

Table: 8. Yield estimates - Cashew - 1982-83 and 1983-84 estimates - Cashew

| District | 1982-83 | | 1983-84 | | Average yield tree/Kg. | Estimated mean yield Kg./Hect. |
|----------------|----------------------------|-----------------------------|----------------------------|------------------------|------------------------|--------------------------------|
| | No. of experiments Planned | Average yield/tree tree/Kg. | No. of experiments Planned | Average yield tree/Kg. | | |
| Trivandrum | 21 | 2.234 | 21 | 1.160 | 225 | |
| Quilon | 25 | 3.402 | 25 | 1.921 | 425 | |
| Pathanamthitta | .. | .. | 12 | 0.539 | 111 | |
| Allappay | 15 | 1.867 | 5 | 0.470 | 84 | |
| Kottayam | 5 | 0.375 | 5 | 0.818 | 163 | |
| Idukki | 5 | 2.536 | 5 | 3.177 | 702 | |
| Ernakulam | 18 | 3.794 | 18 | 2.337 | 512 | |
| Trichur | 21 | 2.473 | 21 | 3.486 | 668 | |
| Palghat | 41 | 1.103 | 41 | 1.418 | 322 | |
| Malappuram | 75 | 2.154 | 75 | 2.129 | 530 | |
| Kozhikode | 19 | 6.460 | 19 | 3.333 | 753 | |
| Wayanad | 18 | 0.852 | 18 | 1.365 | 221 | |
| Cannanore | 135 | 2.468 | 135 | 2.500 | 635 | |
| State: | 398 | 2.452 | 400 | 2.149 | 544 | |

Table: 9. Yield estimates - Pepper - 1982-83 and 1983-84
.....

| Centre | 1982-83 | | Average yield/plant | Estimated mean yield/kg./Hect. | 1983-84 | | Average yield/plant Kg. | Estimated mean yield/Hect. |
|----------------|----------------------------|----------|---------------------|--------------------------------|----------------------------|----------|-------------------------|----------------------------|
| | No. of experiments Planned | Analysed | | | No. of experiments Planned | Analysed | | |
| Trivandrum | 23 | 23 | 1.576 | 202 | 23 | 23 | 1.211 | 115 |
| Quilon | 37 | 30 | 1.771 | 266 | 22 | 22 | 1.557 | 232 |
| Pathanamthitta | .. | .. | .. | .. | 23 | 23 | 1.204 | 189 |
| ALLIPPY | 27 | 20 | 0.794 | 111 | 5 | 5 | 1.017 | 133 |
| Kottayam | 35 | 35 | 1.201 | 180 | 35 | 35 | 1.217 | 189 |
| Idukki | 65 | 62 | 1.282 | 155 | 65 | 60 | 1.212 | 183 |
| Ernakulam | 27 | 27 | 1.065 | 135 | 27 | 27 | 1.719 | 234 |
| Trichur | 18 | 18 | 1.380 | 198 | 18 | 17 | 1.323 | 202 |
| Palghat | 10 | 10 | 1.459 | 155 | 10 | 10 | 0.847 | 114 |
| Malappuram | 20 | 20 | 2.339 | 303 | 20 | 20 | 1.138 | 174 |
| Kozhikode | 41 | 41 | 1.887 | 240 | 41 | 41 | 2.245 | 210 |
| Wayanad | 30 | 30 | 2.459 | 376 | 30 | 30 | 2.664 | 390 |
| Cannanore | 70 | 70 | 1.800 | 269 | 70 | 70 | 1.616 | 257 |
| State: | 389 | 386 | 1.603 | 223 | 289 | 383 | 1.555 | 231 |



Table: 10. Yield estimates - Cocoa 1982-83 and 1983-84.
.....

| | No. of experiments | | Average | Average | No. of experiments | | Average | Average |
|----------------|--------------------|----------|------------------------|-------------------------|--------------------|----------|---------------------|-------------------------|
| | Planned | Analyzed | yield/ tree/ kg. | yield/ Hect./ kg. | Planned | Analyzed | yield/ Hect./kg. | yield/ Hect./ kg. |
| Trivandrum | 5 | 5 | 2.146 | 115.920 | 5 | 5 | 2.747 | 193 |
| Quilon | 20 | 20 | 3.814 | 228.800 | 20 | 10 | 2.631 | 186 |
| Pathanamthitta | .. | .. | .. | .. | .. | 23 | 4.745 | 310 |
| Allappay | 50 | 45 | 2.899 | 156.600 | 50 | 36 | 3.667 | 212 |
| Kottayam | 20 | 20 | 2.010 | 106.855 | 20 | 20 | 3.227 | 205 |
| Idukki | 20 | 10 | 7.288 | 388.015 | 20 | 10 | 3.701 | 269 |
| Ermakulam | 40 | 35 | 4.319 | 243.000 | 40 | 40 | 4.458 | 277 |
| Trichur | 20 | 17 | 3.528 | 163.990 | 20 | 20 | 2.300 | 152 |
| Palghat | 30 | 30 | 2.558 | 155.520 | 30 | 29 | 1.957 | 133 |
| Malappuram | 30 | 27 | 2.381 | 164.220 | 30 | 20 | 3.255 | 191 |
| Kozhikode | 20 | 20 | 2.349 | 73.920 | 20 | 20 | 2.138 | 133 |
| Wayanad | 15 | 15 | 2.043 | 128.520 | 15 | 15 | 3.340 | 162 |
| Cannanore | 30 | 28 | 2.122 | 141.510 | 30 | 30 | 3.219 | 221 |
| State: | 300 | 272 | 3.014 | 173.825 | 300 | 278 | 3.303 | 218 |

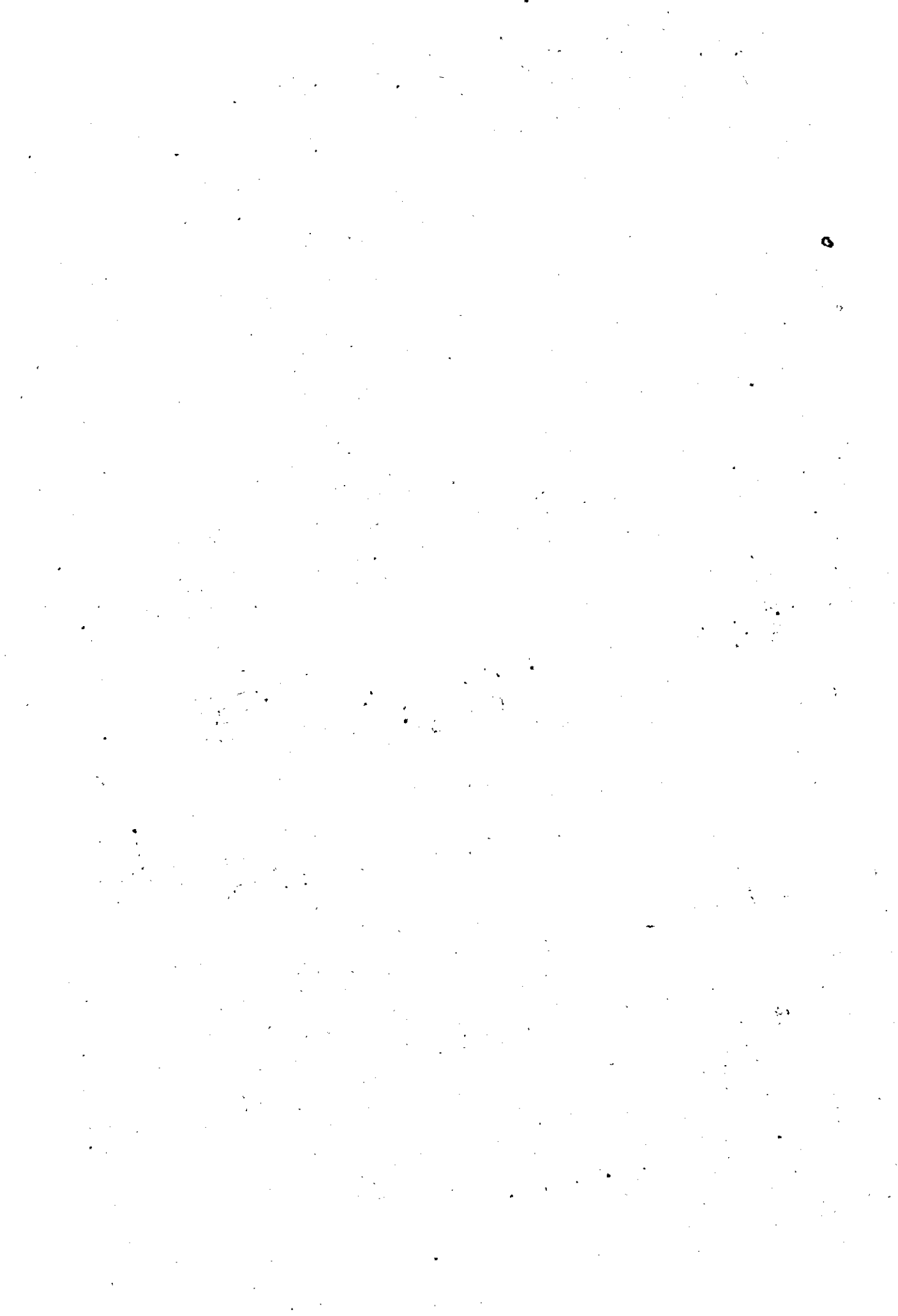


Table: II. Yield Estimators of Sugar Cane 1982 - 83.

| District | No. of experiments planned. | Analysed | Yield/hect. | Estimates A.E. of gur/hect in Tonnes. |
|------------|--------------------------------|----------|-------------|---|
| Trivandrum | 2 | 3 | 7.360 | 7.360 |
| Coilun | 5 | 5 | 73600 | 7.360 |
| Alleppey | 35 | 35 | 92916 | 9.292 |
| Kottayam | 20 | 10 | 140800 | 9.292 |
| Idukki | .. | .. | .. | 14.080 |
| Ernakulam | .. | .. | .. | 10.120 |
| Trichur | .. | .. | .. | 10.120 |
| Palghat | 25 | 25 | 101200 | 10.120 |
| Malappuram | .. | .. | .. | 10.120 |
| Kozhikode | .. | .. | .. | 10.120 |
| Wayanad | .. | .. | .. | 10.120 |
| Cannanore | .. | .. | .. | 10.120 |
| State | 85 | 75 | .. | 10.512 |



Table: 12 - Yield Estimates of Drumsticks 1982 - 83.

| District | No. of Experiments planned | Analysed | Average yield/ Bearing tree in kg. | Estimated mean yield/hactares/ Jones. |
|------------|----------------------------|----------|--|---|
| I | 3 | 4 | 5 | |
| Trivandrum | 20 | 20 | 5.459 | 1.201 |
| Quilon | 30 | 30 | 4.517 | 0.994 |
| Alleppey | 35 | 35 | 3.264 | 0.718 |
| Kottayam | 25 | 25 | 1.760 | 0.387 |
| Idukki | 20 | 10 | 4.772 | 1.050 |
| Ernakulam | 35 | 35 | 3.594 | 0.790 |
| Trichur | 25 | 23 | 8.084 | 1.778 |
| Palghat | 25 | 25 | 4.559 | 1.003 |
| Malappuram | 20 | 20 | 4.775 | 1.050 |
| Kozhikode | 25 | 25 | 4.288 | 0.943 |
| Wayanad | 15 | 15 | 4.884 | 1.074 |
| Cannanore | 25 | 25 | 4.928 | 1.084 |
| State | 290 | 278 | 4.549 | 1.001 |

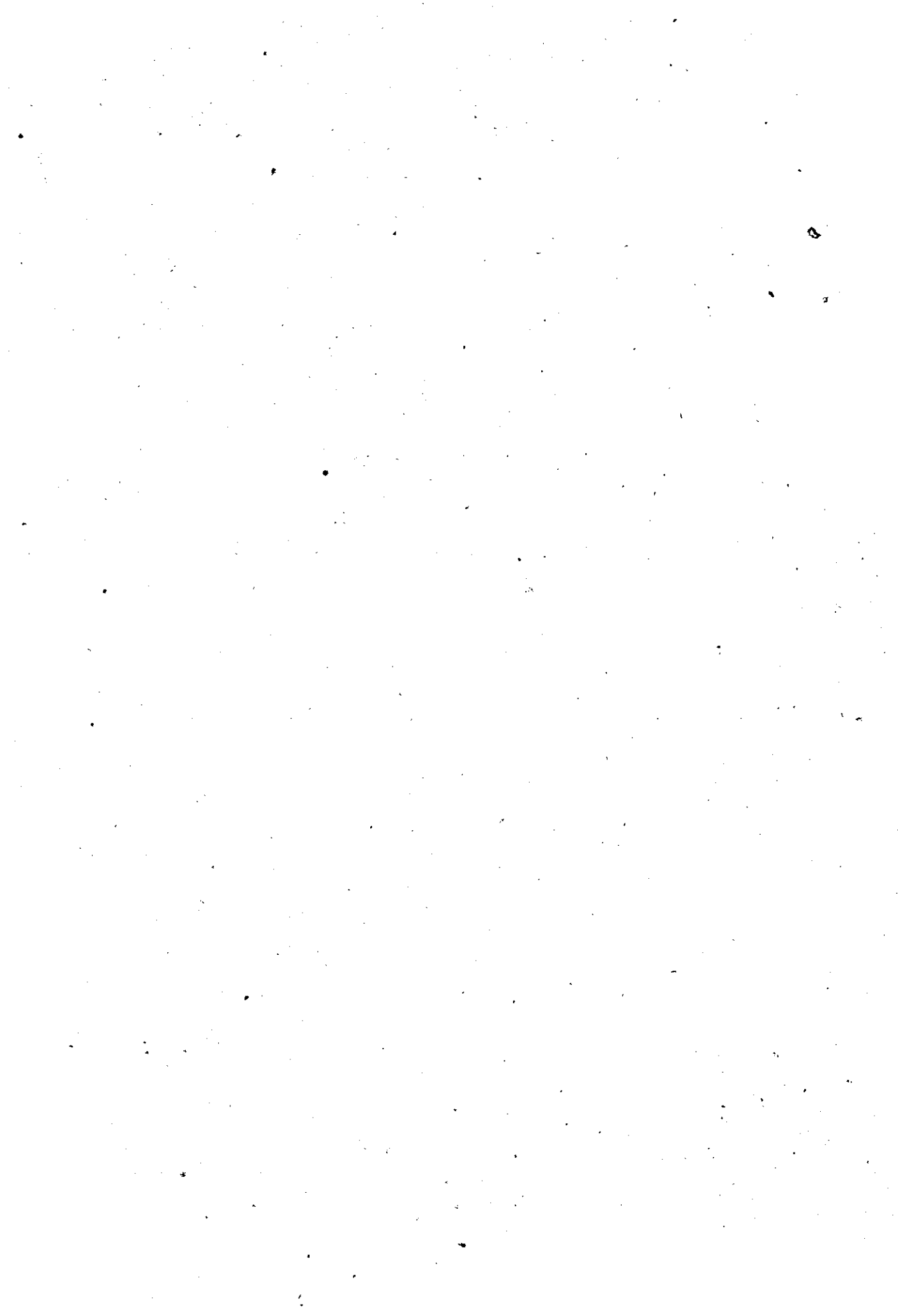


Table: 13 - Yield Estimates - Tobacco - 1982-83.

| District | No. of experiments planned. | Analysed | Average yield/ hect In tonnes. |
|------------|-----------------------------|----------|--------------------------------|
| 1 | 2 | 3 | 4 |
| Trivandrum | 20 | 20 | 7.097 |
| Quilon | 30 | 28 | 5.183 |
| Alleppey | 35 | 33 | 12.036 |
| Kottayam | 25 | 25 | 9.399 |
| Idukki | 20 | 20 | 11.114 |
| Ernakulam | 30 | 30 | 13.802 |
| Trichur | 25 | 24 | 7.057 |
| Palghat | 25 | 25 | 14.973 |
| Malappuram | 20 | 20 | 7.061 |
| Kozhikode | 15 | 15 | 6.556 |
| Wayanad | 15 | 15 | 7.199 |
| Cannanore | 25 | 25 | 11.686 |
| State | 285 | 280 | 9.057 |



Table - 14 - Yield estimates Tack 1983 - 84

| District | No. of experiments planned | Analysed | Average yield/tree Nos. | Estimated yield/hect. Nos. |
|----------------|----------------------------|----------|-------------------------|----------------------------|
| Trivandrum | 20 | 20 | 22 | 4488 |
| Quilon | 20 | 14 | 49 | 11025 |
| Pattanamthitta | | 11 | 32 | 7968 |
| Alleppey | 10 | 5 | 24 | 4104 |
| Kottayam | 20 | 19 | 18 | 3348 |
| Idukki | 10 | 10 | 15 | 3330 |
| Ernakulam | 10 | 10 | 22 | 4620 |
| Trichur | 10 | 10 | 16 | 3792 |
| Palghat | 20 | 20 | 21 | 4158 |
| Malappuram | 20 | 20 | 14 | 1932 |
| Kozhikode | 23 | 23 | 14 | 2688 |
| Wayanad | 13 | 13 | 9 | 1782 |
| Cannanore | 24 | 24 | 13 | 2730 |
| State | 200 | 199 | 20 | 4118 |

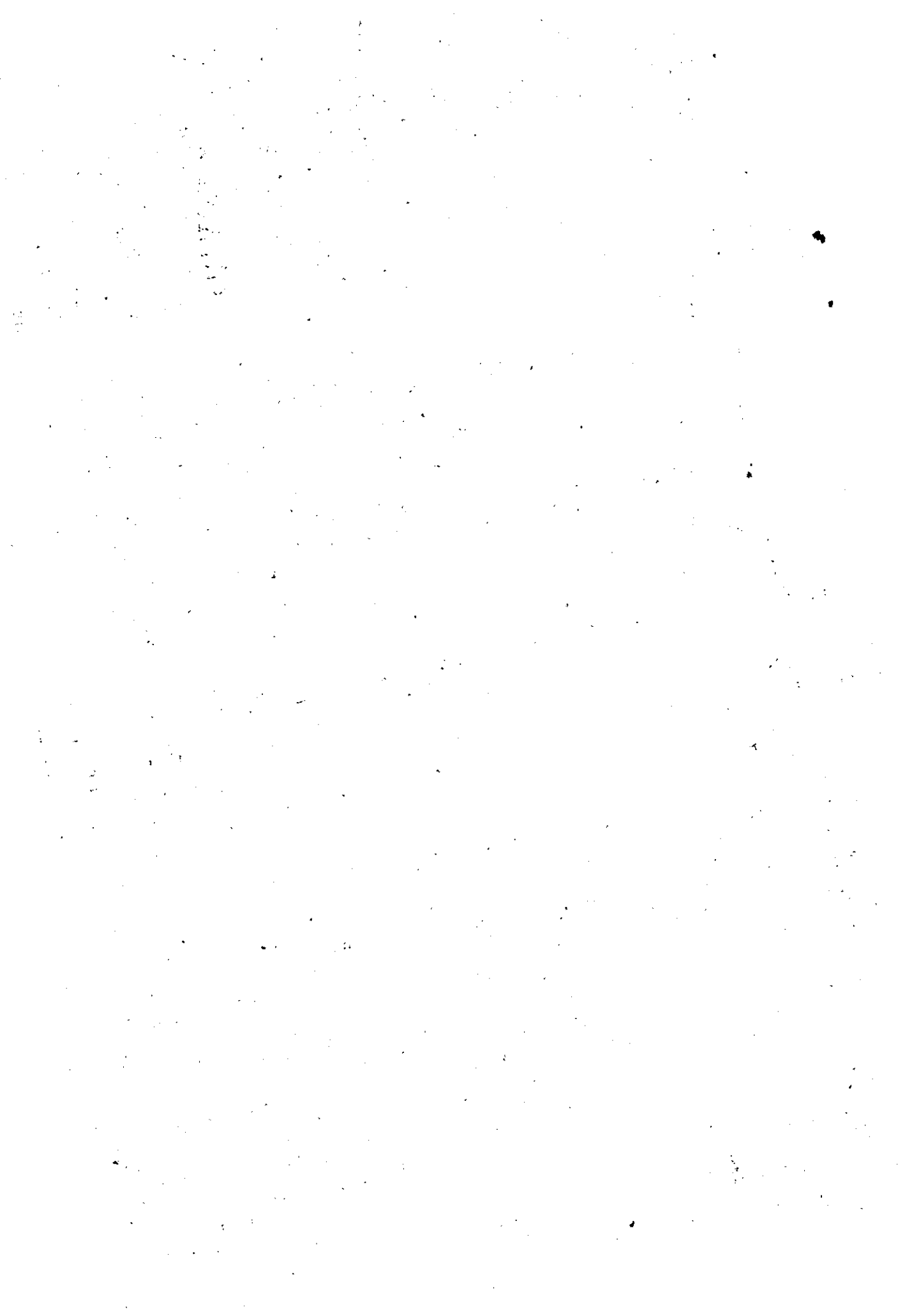


Table 15 - Yield estimates - Mango - 1983-84

| District | No. of experiments planned | Analysed | Average No. of Fruit/tree | Estimated Mean Yield/ Hect. Nos. |
|----------------|-------------------------------|----------|------------------------------|--|
| Trivandrum | 20 | 20 | 31 | 6138 |
| Quilon | 25 | 25 | 142 | 29252 |
| Pathanamthitta | 10 | 6 | 50 | 11700 |
| Alleppey | 24 | 24 | 72 | 15048 |
| Kottayam | 20 | 20 | 58 | 12702 |
| Idukki | 10 | 10 | 87 | 15051 |
| Ernakulam | 35 | 30 | 77 | 13860 |
| Trichur | 20 | 20 | 138 | 34914 |
| Palghat | 20 | 20 | 197 | 45901 |
| Malappuram | 16 | 15 | 182 | 29666 |
| Kozhikode | 15 | 15 | 125 | 20250 |
| Wayanad | 15 | 15 | 70 | 15750 |
| Cannanore | 25 | 24 | 179 | 35800 |
| State | 255 | 244 | 111 | 23141 |



Table: 16 - Yield estimates - Banana - 1983 - 84.

| District | No. of experiments planned. | Analysed | Average yield per plant (Kg) | Average yield hectare Tonnes. |
|----------------|-----------------------------|----------|------------------------------|-------------------------------|
| 1 | 2 | 3 | 4 | 5 |
| Trivandrum | 20 | 10 | 6.14 | 12.28 |
| Quilon | 15 | 15 | 5.05 | 10.10 |
| Pathanamthitta | 17 | 17 | 6.49 | 12.98 |
| Alleppey | 3 | 3 | 7.90 | 15.80 |
| Kottayam | 25 | 24 | 7.90 | 15.80 |
| Idukki | .. | .. | 5.34 | 10.68 |
| Ernakulam | 25 | 25 | 6.36 | 12.72 |
| Trichur | 25 | 25 | 5.58 | 11.16 |
| Palghat | 8 | 8 | 3.50 | 7.00 |
| Malappuram | 25 | 25 | 5.10 | 10.20 |
| Kozhikode | 20 | 20 | 6.40 | 12.80 |
| Wayanad | 15 | 15 | 6.49 | 12.98 |
| Cannanore | 25 | 25 | 6.48 | 12.96 |
| State | 213 | 212 | 5.95 | 11.91 |

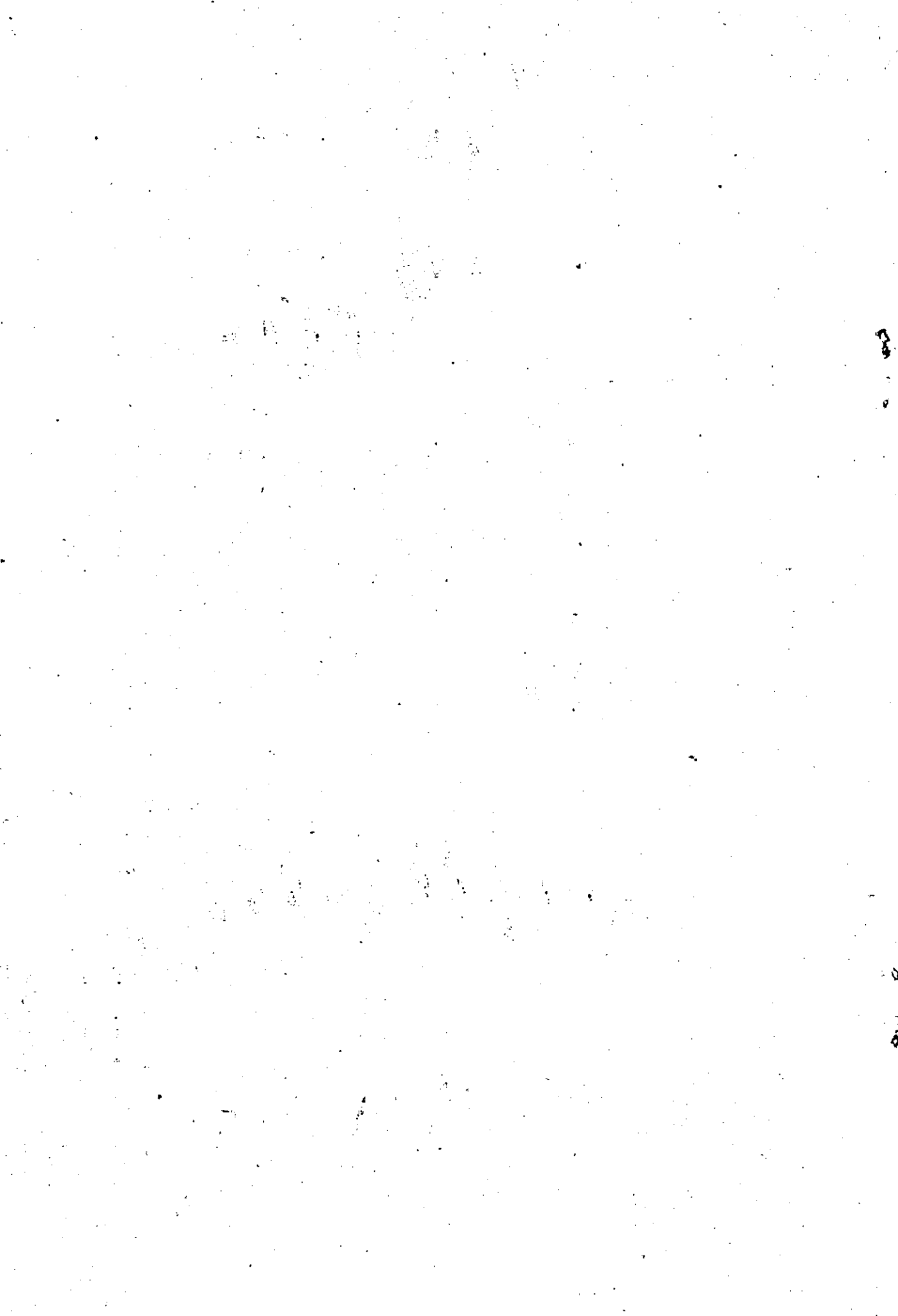


Table: 17 - Yield estimates - Plantain - 1983 - 84.

| District | No. of experiments planned | Analysed | Average yield per plant kg. | Average yield hectare tonne |
|----------------|----------------------------|----------|-----------------------------|-----------------------------|
| 1 | 2 | 3 | 4 | 5 |
| Trivandrum | 20 | 20 | 5.24 | 3.81 |
| Quilon | 23 | 23 | 7.16 | 4.57 |
| Pathanamthitta | 13 | 13 | 6.77 | 4.31 |
| Alleppey | 29 | 29 | 5.22 | 3.03 |
| Kottayam | 25 | 25 | 6.96 | 5.08 |
| Idukki | 20 | 20 | 6.58 | 3.92 |
| Ernakulam | 35 | 30 | 7.89 | 5.07 |
| Trichur | 25 | 25 | 5.39 | 2.22 |
| Palghat | 25 | 25 | 7.40 | 4.85 |
| Malappuram | 20 | 20 | 4.95 | 3.08 |
| Kozhikode | 15 | 15 | 6.37 | 3.62 |
| Wayanad | 15 | 15 | 6.50 | 5.43 |
| Cannanore | 25 | 25 | 6.82 | 3.96 |
| State | 290 | 285 | 6.45 | 4.03 |

