



GOVERNMENT OF KERALA

REPORT OF CROP CUTTING
SURVEY ON
WINTER AND SUMMER CROPS
OF PADDY
1986-87

DEPARTMENT OF ECONOMICS AND STATISTICS
TRIVANDRUM, 1988

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FOREWORD

The Department of Economics and Statistics has been conducting crop estimation surveys on paddy from the year 1950, during each of the three crop seasons viz. Autumn (Viruppu) Winter (Mundakan) and Summer (Punja). The reports on the surveys are being published separately for Autumn (Khariff) crop and a combined one for Winter and Summer (Rabi) crops together. This report comes under the latter series pertaining to the agricultural year 1986-87. The objectives, coverage, sampling technique employed and results of analysis of the data obtained through the surveys are dealt with in this report.

This report is prepared in the Agricultural Statistics Division of this Department.

Trivandrum,
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DIRECTOR.

REPORT OF CROP CUTTING SURVEY ON
WINTER & SUMMER CROPS OF PADDY 1986-87

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1. Introduction

The Department of Economics and Statistics has been conducting crop cutting surveys on paddy every year. The survey is conducted during each of the three crop seasons viz. Autumn (Virippu), Winter (Mundakan) and Summer (Punja), separately. The results of the survey are generally published in two separate volumes one for Autumn (Khariff) crop and the other for Winter and Summer (Rabi) crops taken together. This report pertains to the survey undertaken by the Department during the Winter and Summer seasons of the agricultural year 1986-87.

2. Objectives:

The yield estimation surveys were conducted with the main objectives of obtaining reliable estimates on:

- i) average yield of paddy per hectare at taluk, district and state levels,
- ii) production of rice at taluk, district and state levels,
- iii) productivity of high yielding varieties of paddy at district and state levels and
- iv) productivity of the crop grown under different cultural practices.

3. Period of the survey:

The field work of the survey for Winter paddy was from December 1986 to February 1987 and that for Summer paddy was from March 1987 to June 1987.

4. Coverage:

The survey was conducted in all taluks of the state where the crop was raised in each season, except forest area. Information on area and production of the crop, varieties of seeds used, application of fertilizers and manures and plant protection measures adopted were collected through the survey.

5. Sampling Design:

The survey was conducted on a stratified multi-stage sampling design; the taluks are considered as strata. The revenue villages selected from each taluk for the conduct of sample survey under the scheme "Establishment of an Agency for Reporting Agricultural Statistics" (EARAS) towards the beginning of the agricultural year 1986-87 formed

the first stage unit for this survey. The survey sub-division numbers growing paddy in these selected villages formed the second stage unit. One Kandom each was chosen by simple random sampling after serially numbering them anticlock-wise starting from the south-west corner from the survey sub-division numbers already selected. They form the third stage unit. A square plot of side 5 metres located in the selected kandom formed the ultimate sample unit.

At the beginning of each season, lists of survey sub-division numbers growing paddy separately for (i) High Yielding Varieties (HYV.I), (ii) High Yielding Varieties unirrigated (HYV.VI), (iii) Local Varieties irrigated (L.I) and (iv) Local varieties unirrigated (L.U.I) were prepared in respect of selected village. The number of crop cutting experiment to be conducted in each of the above four categories in taluk is allocated among the four categories in proportion to the extent of area under the respective category of paddy and the availability of crops. The number of crop cutting experiments to be conducted in a taluk has been limited to 30 subject to the condition that in each selected village at least two experiments are conducted, during the crop season. The required number of survey sub-division numbers was selected from the lists of survey sub-division numbers growing paddy arranged category-wise. One Kandom each was selected from the second stage units to demarcate the plot for the experiment. The above selections were made by the method of simple random sampling. A square plot of side 5 metres was located in the selected kandom; using the same method and the crop in the demarcated plot harvested, threshed, winnowed and weighed. The weight of the cleaned grains and other relevant details such as irrigation status, application of fertilizers, manures, insecticides, pesticides, etc. were recorded in the prescribed schedule.

From every taluk, three samples of harvested produce weighing 250 grams each was collected at the time of harvest to find out the drilage ratio of the grains. The first sample was taken at the beginning, the second towards in the middle and the third towards the end of the harvest season. These samples were dried and weighed. The drilage ratio thus obtained was utilised for estimation of the dry weight of paddy.

6. Field work:

The field work of the survey was attended to by the Investigators of the Department under the close supervision of the Statistical Inspectors and the Taluk Statistical Officers. The Deputy Directors of the districts were in overall charge for the proper and timely conduct of the survey assisted by the District Officers and Additional District Officers.

On Winter and Summer paddy 1986-87, 1663 and 1131 crop cutting experiments respectively were planned for Winter 1612

(i) Mean Yield of Paddy at Taluk Level:

The following formula has been utilised to estimate mean yield of paddy at Taluk level.

$$\bar{x}_p = \frac{\sum_{j=1}^{n_p} xp_j}{n_p} \times 400 \times d \text{ where,}$$

n_p = number of crop cutting experiments conducted on the pth category paddy in the Taluk.

xp_j = Weight of paddy (in Kg.) obtained from the jth experiment on the pth category paddy of the Taluk.

p = 1, 2, 3, 4 represents HYV-I, HYV-UI, L-I and L-UI respectively.

d = The weight of dry paddy per Kg. of the harvested produce obtained through drilage experiments.

The experimental plot is $\frac{1}{400}$ of a hectare and hence \bar{x}_p gives the mean yield of dry paddy per hectare of the pth category at taluk level.

Mean yield of dry paddy of the Taluk for all categories taken together obtained by computing the weighted average of the mean yield of all the four categories, weights being the proportion of area under paddy of the respective classifications. Thus mean yield of dry paddy (all categories together) in Kg. per hectare of the taluk is given by,

$$\bar{x} = \frac{\sum_{p=1}^4 a_p \bar{x}_p}{\sum_{p=1}^4 a_p}, \text{ where}$$

a_p is the area under the pth category paddy in the Taluk.

Mean yield of paddy for the District is obtained as the weighted average of mean yield of the talukds in the districts, weights being the proportion of area under the crop in the respective taluks. So also mean yield of paddy for the State is computed as the weighted average of mean yield of the districts, weights being the proportion of area under the crop in the respective districts.

ii) Standard Error of Taluk Mean Yield:

Standard error of mean yield per hectare of the pth category paddy of the taluk is computed using the formula.

$$S_p = \sqrt{\frac{M.SS}{n_p}} \times 400d, \text{ where,}$$

$$n_p = \text{No. of crop cutting experiments conducted on pth category paddy of the Taluk}$$

$$MSS = \frac{TSS}{n_p - 1,}$$

$$n_p - 1$$

$$TSS = \sum_{j=1}^{n_p} x^2_{pj} - \frac{(\sum x_{pj})^2}{n_p}$$

$$j = 1$$

x_{pj} is the weight of harvested produce obtained from the jth cut on the pth category paddy of the Taluk

Then standard error of the Taluk mean yield is given by

$$S = \sqrt{\frac{\sum_{p=1}^4 (a_p s_p)^2}{\sum_{p=1}^4 a_p^2}} = \frac{1}{\sum_{p=1}^4 a_p} \sqrt{\sum_{p=1}^4 (a_p s_p)^2}$$

- where a_p represents the area of pth category paddy in the Taluk.

The standard error of the district mean yield is obtained similarly which is given by

$$S = \sqrt{\frac{\sum_{i=1}^n (a_i s_i)^2}{(\sum a_i)^2}} \text{ where}$$

- n = Number of Taluks in the District
- a_i = Area under paddy in the ith Taluk of the District and
- s_i = Standard error of the ith Taluk mean yield.

Computation of the standard error of the State mean yield is also made utilising the same formula, where 'n' will represent the number of districts in the State, 'a_i', area under paddy in the ith district and 's_i' the standard error of mean yield of the ith district.

(iii) Production of Rice:

The estimate of mean yield obtained from crop cutting survey and that of area obtained from area enumeration under "Timely Reporting Survey" were utilised for computation of estimates for production of rice. In terms of weight, 65.7% clean rice is accounted for from dry paddy.

11. Results of the Survey:

(1) General

Production of rice in the State during 1986-87 has been estimated at 11,33,786 tonnes. The corresponding figure for 1985-86 was 11,73,051, which shows that there was a decrease in production of rice to the tune of 39265 tonnes during the reporting year compared to the previous year.

State level estimates of area, mean yield of dry paddy and production of rice for 1985-86 and 1986-87 are furnished below:

Crop season	Area under paddy (Ha)		Mean yield of dry (Kg./Ha.) Paddy		Production of rice (Tonnes)	
	85-86	86-87	85-86	86-87	85-86	86-87
Autumn	279699	286569	2514	2488	461992	468409
Winter	313423	297068	2559	2545	526981	496623
Summer	85159	80166	3290	3204	184078	168754

During Winter and Summer seasons of 1986-87, area under paddy, yield rate as well as production of rice had decreased considerably when compared to the respective seasons of the previous year. The reason for this decrease may be attributed to the severe drought situation prevailed in the State during both the above crop seasons. Had there not been an increase in area and production during the Autumn season of 1986-87, compared to 1985-86, the total reduction would have been much larger.

On analysing the results of 1612 crop cutting experiments on Winter paddy and 1060 experiments on Summer paddy, it is seen that the plot yield from 48% and 51% experiments, respectively were above 2500 Kg./Ha. An yield rate above 5000 Kg./Ha. has been reported from 4% plots of Winter and 9% of Summer paddy crops. The yield rates from 11% of Winter plots and 17% Summer plots were below 1000 Kg./Ha.

The percentage distribution of plot yield is furnished below:

Yield range (Kg./Ha)	Percentage of experimental plots	
	Winter 1987	Summer 1987
0 - 1000	10.85	16.81
1000 - 2000	24.83	19.90
2000 - 3000	33.00	26.41
3000 - 4000	21.08	17.27
4000 - 5000	6.57	10.30
5000 - 6000	3.05	7.37
6000 - 7000	0.56	1.30
7000 - 8000	0.06	0.55
Above 8000	-	0.09
Total	100.00	100.00

The estimates of area, mean yield, standard error and production of rice at Taluk level are furnished in Tables 1.1 and 1.2 respectively for Winter and Summer crops of paddy 1986-87 along with the number of crop cutting experiments planned and analysed. The estimates of mean yield of Winter and Summer paddy for the years 1982 to 1987 are furnished in Tables 2.1 and 2.2 respectively to facilitate comparison.

(ii) High Yielding Varieties:

The district-wise area under paddy mean-yield and production of rice for Winter and Summer 1986-87 are furnished in Tables 3.1 and 3.2 respectively in respect of High Yielding Varieties and other varieties. The State level figures are as depicted below:

**State level area and production of
Winter & Summer paddy 1986-87**

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Varieties of paddy	Area under paddy (Ha)		Mean-yield (Kg./Ha)		Production of rice (Tonnes)	
	Winter 1987	Summer 1987	Winter 1987	Summer 1987	Winter 1987	Summer 1987
High Yielding Varieties	44604	41253	3142	3754	92085	101757
Other Varieties	252464	38913	2439	2621	404538	66997
All Varieties	297068	80166	2545	3204	496623	168754

The percentages of area under High Yielding Varieties and other varieties of paddy during Winter 1987 were 15 and 85 respectively whereas those for production were 19 and 81. Similar was the case with Summer paddy 1987. In respect of area the percentages were 51 and 49 and of production 60 and 40. The level of contribution of high yielding varieties to total production is much higher than that of local varieties, during both the seasons of 1986-87. High yielding varieties account for more than 50% of paddy area during summer season though it was only 15% in Winter. However a district-wise analysis shows that the productivity of local varieties excel that of high yielding varieties in Trivandrum, Trichur and Palghat during Winter 1987 and in Kottayam and Kasargode during Summer 1987.

The number of crop cutting experiments conducted on high yielding varieties, name of the variety corresponding to the highest average yield and yield rate in respect of each district for Winter 1987 are furnished below:

**High yielding variety with highest mean yield
- Winter 1987**

Sl. No.	District	Total no. of crop cutting experiments on HYV	Name of the HYV corresponding to the highest mean yield	Highest mean-yield (Kg./Ha)	No. of experimental plots where HYV in col.4 was grown
1	2	3	4	5	6
1.	Trivandrum	16	Bharathy	2733	4
2.	Quilon	13	Jaya	3538	1
3.	Pathanamthitta	50	Pavizham	3637	4
4.	Alleppey	35	Asha	4961	1
5.	Kottayam	75	Bhadra	5651	2
6.	Idukki	27	Jaya	4910	2
7.	Ernakulam	35	H4	3122	7
8.	Trichur	20	Pankaj	4140	1
9.	Palghat	30	Triveni	5879	1
10.	Malappuram	19	Triveni	4027	1
11.	Kozhikode	9	H4	3233	3
12.	Wayanad	25	IR 8	7405	1
13.	Cannanore	23	IR 8	3318	3
14.	Kasargode	12	Jyothi	4196	5

The highest yield rate has been recorded in Wayanad district for IR 8 followed by Triveni in Palghat district and Bhadra in Kottayam district, among high yielding varieties of paddy during Winter 1986-87.

**High yielding variety with highest mean yield
Summer 1987**

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Sl. District No.	Total No. of crop cutting experiments on HYV paddy	Name of the HYV corresponding to the highest yield	Highest mean yield (Kg./Ha)	No. of experimental plots where the HYV in Col.4 was grown
1	2	3	4	5
1. Trivandrum	13	H4	2418	1
2. Quilon	4	Triveni	2379	1
3. Pathanamthitta	47	Bharathi	6943	5
4. Alleppey	79	Pavizham	4107	1
5. Kottayam	64	Jyothi	4036	10
6. Idukki	1	H4	6623	1
7. Ernakulam	31	I.R.5	4216	7
8. Trichur	61	Jaya	5938	5
9. Palghat	9	Jaya	2349	3
10. Malappuram	39	Rohini	5575	1
11. Kozhikode	37	Jyothi	2810	12
12. Wayanad	31	Jaya	3419	10
13. Cannanore	9	Jyothi	2958	4
14. Kasaragode	9	Jaya	3683	5

For Summer 1987, the highest yield rate has been recorded by Bharathy in Pathanamthitta District followed by H4 in Idukki district and Jaya in Trichur district among high yielding varieties.

iii) Cultural practices:

(a) Winter Paddy - 1986-87: During winter season out of the total 1612 experimental plots, as many as 886 plots (55%) were irrigated. Of these irrigated plots 93% were applied with chemical fertilizers and 6% with other organic manures, leaving only 1% of the plots totally unmanured. Again out of the 726 unirrigated plots 83% were applied with chemical fertilizers and 11% with organic manures. The crop in 6% of the unirrigated plots were left to grow without any manure. It is significant to note that a little over 99% of the experimental plots cultivated with high yielding varieties of paddy were applied with chemical fertilizers or manures. Plant protection measures such as application of insecticides, pesticides and fungicides were reported to have resorted to in 54% of the experimental plots grown with high yielding varieties of paddy and 47% of plots during winter about 76% of the experimental plots grown with local varieties were treated against the attack of pests and diseases.

(b) Summer paddy 1987: Out of the 1060 experimental plots of summer paddy 876 (83%) plots were irrigated; and 91% of the irrigated plots were applied with chemical fertilizers, and 7% with other organic manures. However 2% of the irrigated plots were left unmanured. There were 184 unirrigated plots, of which 89% were applied with chemical fertilizers, and 6% with organic manures. Neither fertilizers nor manures were reported to have applied to 5% of the unirrigated plots. About 98% of the experimental plots cultivated with high yielding strains of seeds were found applied with chemical fertilizers and manures. Plant protection measures such as treatment with insecticides, pesticides, etc. were seen to have adopted in 85% of the experimental plots grown with high yielding varieties where as this percentage in the case of local varieties was only 64.

There was marked variation in productivity of the crop grown under different cultural practices both during winter and summer seasons. Yield rates of winter and summer paddy at State level according to various cultural practices are furnished below:

Mean yield of Winter & Summer paddy 1986-87 grown under different cultural practices

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Crop	Mean-yield in Kg./Ha.					
	Irriga- ted	Unirri- gated	Irri- gated and che- mically manured	Irri- gated but not manured	Treated with plant protect- ion chemicals	Not treat- ed with plant pro- tection chemicals
Winter Paady 1987	2694	2299	2721	2440	2783	2208
Summer Paddy 1987	2667	2434	2786	1980	3035	1578

During winter season the difference in yield rate between irrigated and unirrigated crops is 395 Kg./Ha and that between crops treated with plant protection chemicals and untreated crops is 575 Kg./Ha. Between crops manured and unmanured in irrigated plots the difference is 281 Kg./Ha. In the case of summer crop the range of variation in yield rate between irrigated and unirrigated paddy is only 183 Kg./Ha. But there is a very conspicuous difference in yield rate of the tune of 1457 Kg. per hectare between summer crop treated with plant protection chemicals and the untreated crop. So also the range variation between crops manured and unmanured in the case of irrigated summer paddy is 806 Kg. per hectare.

The district-wise details of mean yield and number of crop cutting experiments analysed in respect of winter and summer paddy 1986-87, grown under the various cultural practices are furnished in tables 4.1 and 4.2 appended.

Table 1.1 Winter Paddy 1987

Taluk-wise estimates of Area, Mean-yield and Production of Rice

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Taluk and District	No. of experiments		Area (Ha)	Mean-yield dry paddy (Kg/Ha)	Stand-ard error	Product ion of Rice (Tonnes)
	Planned	Analysed				
1	2	3	4	5	6	7
Neyyattinkara	30	26	3215	2516	174	5314
Trivandrum	30	28	2527	1668	168	2770
Nedumangad	30	28	3111	2257	153	4613
Chirayinkil	30	30	3913	2993	107	7694
TRIVANDRUM DISTRICT	120	112	12766	2431	74	20391
Quilon	30	29	2819	2491	160	4613
Kottarakkara	35	35	5479	2909	92	10472
Kunnathur	20	20	1596	2859	216	2998
Pathanapuram	30	30	3608	2945	148	6980
Karunagappally	30	30	3355	1472	257	3245
QUILON DISTRICT	145	144	16857	2556	75	28308
Kozhencherry	16	16	2239	2719	191	3999
Ranni	16	16	331	2920	91	635
Adoor	18	18	2463	2677	326	4332
Thiruvalla	16	16	464	3451	300	1052
Mallappally	18	18	460	2660	273	804
PATHANAMTHITTA DISTRICT	84	84	5957	2765	156	10822
Karthikappally	30	30	3224	1444	147	3058
Mavelikkara	25	24	3812	2663	224	6669
Chengannur	24	22	1968	3818	208	4936
Kuttanad	30	27	4941	3601	335	11690
Ambalappuzha	30	29	1749	2378	171	2733
Sherthalai	30	29	1735	697	78	795
ALLEPPEY DISTRICT	169	161	17429	2609	114	29881

contd..

Table 1.1 continued..

1	2	3	4	5	6	7
Changanacherry	16	16	1327	4154	374	3622
Kanjirappally	16	16	104	3161	339	216
Kottayam	24	24	4707	4064	256	12569
Vaikom	35	32	5085	2734	155	9134
Meenachil	24	24	2348	2997	317	4623
KOTTAYAM DISTRICT	115	112	13571	3383	125	30164
Peerumade	16	16	39	4254	527	109
Devicolum	16	14	487	3566	183	1141
Udumbanchola	21	31	1029	3600	180	2434
Thodupuzha	24	22	2116	2834	209	3940
IDUKKI DISTRICT	77	73	3671	3161	133	7624
Kothamangalam	35	35	3046	2836	176	5676
Muvattupuzha	30	30	4825	3019	126	9571
Cochin	-	-	-	-	-	-
Kanayannur	30	30	3199	2300	95	4834
Kunnathunad	35	35	11000	2527	123	18263
Alwaye	30	30	8491	2496	199	13922
Prur	30	30	2499	1841	72	3023
ERNAKULAM DISTRICT	190	190	33060	2545	71	55289
Cranganore	20	20	1624	1335	106	1424
Mukundapuram	35	32	12561	2316	121	19111
Trichur	30	29	11248	2334	129	17245
Thalappally	35	35	14146	2475	241	23005
Chowghat	30	30	2021	1375	70	1826
TRICHUR DISTRICT	150	146	41600	2291	96	62611
Chittur	35	28	17262	3002	339	34049
Alathur	35	35	16796	2768	214	30543
Palghat	30	30	14299	2326	263	21848
Ottappalam	30	30	16264	2343	124	25038
Mannarghat	30	30	6386	2139	138	8973
PALGHAT DISTRICT	160	153	71007	2582	115	120451
Perinthalmanna	30	30	5591	2698	118	9910
Ponnani	30	30	4074	2308	196	6178
Tirur	30	27	9136	1677	124	10066
Ernad	35	34	11662	2795	101	21413
MALAPPURAM DISTRICT	125	121	30463	2377	63	47567
Kozhikode	30	29	4983	1879	147	6152
Quilandy	30	30	3457	1646	123	3738
Badagara	24	24	1944	1450	155	1852
KOZHIKODE DISTRICT	84	83	10384	1721	87	11742

Contd..

Table 1.1 (Contd)

1	2	3	4	5	6	7
Vythiri	35	30	6191	2415	310	9824
Sultan Battery	35	29	8403	2915	308	16091
Mananthavady	30	30	9761	3568	219	22884
WAYANAD DISTRICT	100	89	24335	3050	198	48799
Tellicherry	30	30	3153	1713	84	3549
Cannanore	24	24	2862	2238	194	4246
Thaliparamba	30	30	3181	2218	124	4636
CANNANORE DISTRICT	84	84	9196	2058	80	12431
Hosdurg	30	30	3144	2310	167	4722
Kasaragode	30	30	3608	2435	107	5771
KASARAGODE DISTRICT	60	60	6752	2377	96	10543
STATE	1663	1612	297068	2545	38	496623

Table 1.2
Summer paddy 1987
Taluk-wise estimates of Area, Mean yield and production of Rice

Taluk and District	No. of experiments		Area (Ha.)	Mean-yield of dry paddy (Kg/Ha)	Stand-ard error	Product ion of rice (Tonnes)
	Plan- ned	Ana- lysed				
1	2	3	4	5	6	7
Neyyattinkara	16	12	110	1218	243	88
Trivandrum	16	16	116	905	151	69
Nedumangad	16	15	45	1049	218	31
Chirayinkil	16	10	9	846	158	5
TRIVANDRUM DISTRICT	64	53	280	1049	119	193
Quilon	16	16	60	1319	170	52
Kottarakara	16	10	16	1617	135	17
Kunnathur	16	16	50	1336	182	44
Pathanapuram	-	-	6	1336	-	6
Karunagappally	16	2	3	2720	563	6
QUILON DISTRICT	64	44	135	1409	103	125
Kozhencherry	16	16	166	1889	160	206
Ranni	16	4	60	2815	217	110
Adoor	16	16	53	3762	403	131
Thiruvalla	16	16	1831	5080	431	6111
Mallappally	20	20	60	3450	1103	136
PATHANAMTHITTA DISTRICT	84	72	2170	4695	365	6694
Karthigappally	30	29	3521	3303	279	7641
Mavelikkara	18	17	3799	5332	271	13308
Chengannur	20	20	1183	4260	134	3311
Kuttanad	30	29	11905	4227	216	33058
Ambalapuzha	16	16	1000	3464	274	2276
Sherthalai	-	-	-	-	-	-
ALLEPPEY DISTRICT	114	111	21408	4237	147	59594
Changanacherry	30	30	2377	3498	354	5463
Kanjirappally	-	-	1	3301	-	2
Kottayam	30	30	4602	3749	223	11336
Vaikom	16	16	110	3252	299	235
Meenachil	16	15	198	2937	380	382
KOTTAYAM DISTRICT	92	91	7288	3638	182	17418

(Contd..)

Table 1.2 (Contd.)

	1	2	3	4	5	6	7
Peerumade	-	-	4	1001	-	3	
Devikulam	-	-	171	2377	-	267	
Udumbanchola	5	5	245	2429	725	391	
Thodupuzha	-	-	18	1547	-	18	
IDUKKI DISTRICT	5	5	438	2360	405	679	
Kothamangalam	20	20	486	2133	228	681	
Muvattupuzha	24	24	878	2886	89	1665	
Cochin	-	-	-	-	-	-	
Kanayannur	20	20	570	3672	199	1375	
Kunnathunad	30	30	5083	2462	88	8221	
Alwaye	30	30	6037	2341	167	9284	
Parur	24	24	1338	2358	176	2073	
ERNAKULAM DISTRICT	148	148	14392	2464	79	23299	
Cranganore	16	16	75	3511	217	173	
Mukundapuram	30	30	7135	2396	235	11233	
Trichur	30	25	7542	3042	285	15072	
Thalappally	24	23	2428	3793	395	6050	
Chowghat	20	20	1059	4468	224	3108	
TRICHUR DISTRICT	120	114	18239	2974	106	35636	
Chittur	24	24	2	905	340	1	
Alathur	5	-	34	1791	-	40	
Palghat	16	16	128	1641	293	138	
Ottappalam	16	16	380	2916	335	728	
Mannarghat	20	20	368	1679	202	406	
PALGHAT DISTRICT	81	76	912	2191	167	1313	
Perinthalmanna	20	20	338	2031	119	451	
Ponnani	24	24	2134	3004	296	4212	
Tirur	24	22	1524	3029	252	3033	
Ernad	16	16	602	2566	339	1015	
MALAPPURAM DISTRICT	84	82	4598	2884	168	8711	
Kozhikode	20	20	996	1815	133	1188	
Quilandy	30	30	1552	2304	187	2349	
Badagara	16	16	184	1745	184	211	
KOZHIKODE DISTRICT	66	66	2732	2088	117	3748	

Table 1.2 (Contd.)

Table 1.2 (Contd.)

	1	2	3	4	5	6	7
Vythiri		24	24	972	1433	251	915
Sultanbattery		29	20	1820	3019	363	3610
Mananthavady		24	23	2830	2352	291	4374
WAYANAD DISTRICT		77	67	5622	2409	190	8899
Tellicherry		24	23	377	1110	139	275
Cannanore		24	24	21	2029	488	28
Thaliparamba		24	24	124	1768	214	144
CANNANORE DISTRICT		72	71	522	1303	114	447
Hosdurg		30	30	551	1903	258	689
Kasaragode		30	30	879	2267	193	1309
KASARAGODE DISTRICT		60	60	1430	2127	155	1998
S T A T E		1131	1060	80166	3204	61	168754

Table 2.1 Taluk-wise estimates of crop production (kg./ha.) during Winter season (1982-1987)

....

Taluk/District	1982	1983	1984	1985	1986	1987
1	2	3	4	5	6	7
Neyyattinkara	2148	2577	1681	2451	2108	2516
Trivandrum	2156	1933	1818	2300	2101	1668
Nedumangad	2568	2534	1536	2235	2323	2257
Chirayinkil	2433	2242	2056	2460	2541	2993
TRIVANDRUM DISTRICT	2344	2341	1783	2368	2290	2431
Quilon	1965	2224	1917	2482	2000	2491
Kottarakkara	3079	2502	2267	2753	2893	2909
Kunnathur	3043	2672	2030	2610	2429	2859
Pathanapuram	3141	3338	1863	2791	3140	2945
Pathanamthitta	2816	2787	2486	-	-	-
Karunagappally	1562	2056	2173	2168	1803	1472
QUILON DISTRICT	2631	2569	2115	2574	2510	2556
Kozhencherry	-	-	-	2797	3079	2719
Ranni	-	-	-	1557	2415	2920
Adoor	-	-	-	3033	2554	2677
Thiruvalla	-	-	-	3972	3776	3451
Mallappally	-	-	-	1425	3209	2660
PATHANAMTHITTA DIST.	-	-	-	2842	2861	2765
Karthigappally	1799	1582	3561	1522	2627	1444
Mavelikkara	1994	1975	1826	1997	1945	2663
Chengannur	3157	2934	2838	2688	3668	3818
Thiruvalla	3196	2522	2725	-	-	-
Kuttanad	4384	4619	3128	3050	4355	3601
Ambalapuzha	2502	537	1841	1310	1329	2378
Sherthalai	741	901	919	867	606	697
ALLEPPEY DISTRICT	2606	2449	2501	2057	2620	2609
Changanacherry	4037	4270	3729	2222	2608	4154
Kanjirappally	2771	2273	2650	2616	2917	3161
Kottayam	2419	3146	3097	3358	3211	4064
Vaikom	2272	3463	2408	2549	2081	2734
Meenachil	2575	2761	3045	2760	3200	2997
KOTTAYAM DISTRICT	2507	3288	2884	2818	2717	3383
Peerumade	3962	2125	2113	2392	2629	4254
Devicolam	2971	3772	2395	3227	2968	3566
Udumbanchola	3279	3413	3313	3631	3451	3600
Thodupuzha	2612	3043	2552	2796	2970	2834
IDUKKI DISTRICT	2868	3297	2775	3160	3172	3161

(contd.)

Table 2.1 (Contd.)

	1	2	3	4	5	6	7
Kothamangalam		2402	2403	2006	2535	2509	2836
Muvattupuzha		2735	2378	2617	2847	2998	3019
Cochin		-	-	-	-	-	-
Kanayannur		1585	1949	2300	2330	1885	2300
Kunnathunad		2413	2439	1619	2491	2625	2527
Alwaye		2081	2532	2137	2552	2529	2496
Parur		2511	1824	1089	2636	2557	1841
ERNAKULAM DISTRICT		2316	2354	1973	2554	2565	2545
Crangannore		1663	1527	833	1330	944	1335
Mukundapuram		1859	1896	2406	2346	2906	2316
Trichur		2452	2507	2415	2382	2857	2334
Thalappally		2390	2216	2261	2381	2290	2475
Chowghat		2098	1343	1795	1234	1926	1375
TRICHUR DISTRICT		2193	2094	2255	2261	2542	2291
Chittur		3286	3322	3877	3581	3458	3002
Alathur		3883	3692	3646	3553	2730	2768
Palghat		2862	2443	3210	2753	2461	2326
Ottappalam		2274	2036	2165	2147	2352	2343
Mannarghat		2031	2466	1968	2250	2708	2139
PALGHAT DISTRICT		3069	2849	3150	2957	2750	2582
Perinthalmanna		2372	2310	2042	2568	2459	2698
Ponnani		1831	1899	1919	1913	1673	2308
Tirur		2019	1820	1913	1772	1970	1677
Ernad		2401	2136	2012	2388	2542	2795
MALAPPURAM DISTRICT		2219	2043	1975	2164	2248	2377
Kozhikode		1653	2029	1578	2154	2090	1879
Quilandy		1585	1734	1356	1766	1810	1646
Badagara		1333	1339	1459	1188	1477	1450
KOZHIKODE DISTRICT		1565	1793	1479	1861	1886	1721
Vythiri		2864	2574	3150	2897	2589	2415
Sultanbattery		2642	2702	2865	3231	2872	2915
Mananthavady		2963	2361	3128	2150	2663	3568
WAYANAD DISTRICT		2824	2536	3068	2758	2722	3050

(Contd.)

Table 2.1 (Contd.)

	1	2	3	4	5	6	7
Tellicherry		1446	1706	1435	1647	2043	1713
Cannanore		1039	1077	1347	1754	1932	2250
Thaliparamba		1977	2274	2305	2057	2020	2210
Hosdurg		2304	2034	2304	1722	2109	-
Kasargode		2340	2300	2274	2191	2393	-
CANNANORE DISTRICT		2006	2108	1956	1900	2319	2058
Hosdurg		-	-	-	-	-	2310
Kasargode		-	-	-	-	-	2435
KASARGODE DISTRICT		-	-	-	-	-	2377
S T A T E		2518	2444	2442	2514	2559	2545

Table 2.2
Taluk-wise estimates of Mean Yield of dry paddy (Kg./Ha)
during summer season (1982-1987)

.....

Taluk/District	1982	1983	1984	1985	1986	1987
1	2	3	4	5	6	7
Neyyattinkara	1872	1587	1900	1863	1513	1218
Trivandrum	1319	2196	1261	1051	2047	905
Nedumangad	1770	2214	935	1015	978	1049
Chirayinkil	1660	710	1535	870	468	846
TRIVANDRUM DISTRICT	1695	1914	1539	1419	1645	1049
Quilon	1716	961	713	1354	1444	1319
Kottarakkara	1740	1450	1034	602	1686	1617
Kunnathur	1944	895	651	2323	2529	1336
Pathanapuram	1331	3213	1034	-	2906	1336
Pathanamthitta	1772	3460	1040	-	-	-
Karunagappally	1711	1893	1361	2985	2450	2720
QUILON DISTRICT	1751	2077	906	1547	1912	1409
Kochencherry	-	-	-	1974	4332	1889
Penni	-	-	-	-	3259	2815
Adoor	-	-	-	4505	3531	3762
Thiruvalla	-	-	-	4487	4373	5080
Mallappally	-	-	-	1728	4509	3450
PATHANAMTHITTA DISTRICT	-	-	-	4391	4321	4695
Karthigappally	4296	3242	3748	4729	3640	3303
Mavelikkara	3650	3466	4199	3382	4596	5332
Chengannur	3213	3737	3136	3559	4690	4260
Kuttanad	4050	3856	3581	3280	4211	4227
Ambalapuzha	3267	3429	3794	3072	3185	3464
Sherthalai	-	-	-	-	-	-
ALLEPPEY DISTRICT	4003	3763	3759	3502	4148	4237
Changanacherry	3572	5725	3061	3830	4440	3498
Kanjirappally	-	-	-	4019	4019	3301
Kottayam	3084	4805	2716	3787	4393	3749
Kottayam	3084	4805	2716	3787	4393	3749
Vaikom	2207	2506	1748	1522	3301	3252
Meenachil	3144	3825	3745	3189	4308	2937
KOTTAYAM DISTRICT	3192	5138	2840	3793	4394	3638

(Contd.)

Table 2.2 (Contd.)

	1	2	3	4	5	6	7
Peerumade	-	-	-	-	-	-	1001
Devicolam	1558	1558	1530	3628	1940	2377	2377
Udumbanchola	1558	1530	1534	3115	3422	2429	2429
Thodupuzha	1558	1530	1522	4122	1547	1547	1547
IDUKKI DISTRICT	1557	1532	1533	3353	2881	2360	
Kothamangalam	2258	1567	2229	2099	1952	2133	2133
Muvattupuzha	1892	2199	2758	2203	2255	2886	2886
Cochin	-	-	-	-	-	-	-
Kanayannur	2397	556	2771	2721	2621	3672	3672
Kunnathunad	2429	1675	1833	2539	2467	2462	2462
Alwaye	1966	2700	2224	2307	2410	2341	2341
Parur	2657	1649	2654	2950	2460	2358	2358
ERNAKULAM DISTRICT	2266	2141	2184	2456	2413	2464	
Cranganore	893	2352	1447	2429	3736	3511	3511
Mukundapuram	2014	2321	2167	2458	3113	2396	2396
Trichur	2223	2622	3138	2605	2780	3042	3042
Thalappally	2901	2181	2316	4231	3549	3793	3793
Chowghat	3702	2759	2727	2390	3281	4468	4468
TRICHUR DISTRICT	2335	2503	2671	2729	3027	2974	
Chittur	2925	3298	1889	3266	2174	905	905
Alathur	3611	1593	1605	2352	1247	1791	1791
Palghat	3670	1640	1746	1506	2111	1641	1641
Ottappalam	1826	2556	1994	1596	2279	2916	2916
Mannarghat	2257	1903	1819	2099	1940	1679	1679
PALGHAT DISTRICT	2591	2487	1878	2275	2076	2191	
Perinthalmanna	1990	1972	4657	1947	2111	2031	2031
Ponnani	2511	3673	2447	2888	3687	3004	3004
Tirur	2178	2750	2191	2778	3254	3029	3029
Ernad	1938	1219	1589	1394	2078	2566	2566
MALAPPURAM DISTRICT	2186	2729	2467	2557	3137	2884	
Kozhikode	1831	1424	1180	1961	1763	1815	1815
Quilandy	2205	1756	1466	2302	1794	2304	2304
Badagara	2425	1627	1373	3788	2853	1745	1745
KOZHIKODE DISTRICT	2117	1624	1355	2319	1869	2088	

(Contd.)

Table 2.2 (Contd.)

	1	2	3	4	5	6	7
Vythiri		3058	1518	3390	2486	2800	1433
Sultan Battery		2032	2085	3028	3328	1939	3019
Mananthody		3085	1900	3058	2240	3227	2352
WAYANAD DISTRICT		2685	1921	3099	2704	2669	2409
Tellicherry		2029	991	1363	1738	1182	1110
Cannanore		1590	1060	1197	976	1609	2029
Taliparamba		1628	1852	1628	2295	1779	1768
Hosdurg		2121	1534	2203	2230	2276	-
Kasargode		2515	2190	2345	2252	2378	-
CANNANORE DISTRICT		2171	1772	2066	2113	2055	1303
Hosdurg		-	-	-	-	-	1903
Kasargode		-	-	-	-	-	2267
KASARGODE DISTRICT		-	-	-	-	-	2127
S T A T E		2837	2945	2894	2993	3290	3204

Table 3.1
High Yielding and Other Varieties of Winter Paddy - 1987

...
District-wise estimates of area, meanyield and production of Rice

District/State	High yielding varieties			Other varieties			All varieties			
	Area (Ha.) of dry paddy (Kg./Ha)	Meanyield Production of (tonnes)	Area (Ha)	Area (Ha)	Meanyield Production of paddy (Kg./Ha)	Production of Rice (Tonnes)	Area (Ha.)	Meanyield of paddy (Kg./Ha.)	Production of Rice (Tonnes)	
	1	2	3	4	5	6	7	8	9	10
Trivandrum	1424	2318	2169	11342	2445	18222	12766	2431	20391	
Quilon	421	3294	911	16436	2539	27397	16857	2556	28308	
Pathanamthitta	1738	3263	3726	4219	2560	7096	5957	2765	10822	
Alleppey	4989	3010	9867	12440	2449	20014	17429	2609	29881	
Kottayam	10182	3457	23127	3389	3160	7037	13571	3383	30164	
Idukki	1660	3176	3464	2011	3149	4160	3671	3161	7624	
Ernakulam	4743	2873	8952	28317	2491	46337	33060	2545	55289	
Trichur	4192	1867	5141	37408	2338	57470	41600	2291	62611	
Palghat	3863	2533	6428	67144	2585	114023	71007	2582	120451	
Malappuram	2573	3129	5289	27890	2307	42278	30463	2377	47567	
Kozhikode	911	2428	1453	9473	1653	10289	10384	1721	11742	
Wayanad	5924	4500	17513	18431	2584	31286	24355	3050	48799	
Cannanore	1113	2877	2104	8083	1945	10327	9196	2058	12431	
Kasargode	871	3392	1941	5881	2226	8602	6752	2377	10543	
S T A T E	44604	3142	92085	252464	2439	404538	297068	2545	496623	

Table 3.2

High Yielding and Other Varieties of Summer Paddy - 1987

...

District-wise estimates of area, meanyield and production of Rice

...

District/State	High yielding varieties				Other varieties			All varieties		
	Area (Ha.)	of dry paddy (Kg./Ha)	Production (tonnes)	Area (Ha)	Area (Ha)	of dry paddy (Kg./Ha)	Production (Tonnes)	Area (Ha.)	of dry paddy (Kg./Ha.)	Production of Rice (Tonnes)
Trivandrum	74	1584	77	206	857	116	280	1049	193	
Quilon	13	1873	16	122	1360	109	135	1409	125	
Pathanamthitta	1997	4741	6220	173	4170	474	2170	4695	6694	
Alleppey	17010	4364	48774	4398	3745	10820	21408	4237	59594	
Kottayam	5236	3599	12381	2052	3736	5037	7288	3638	17418	
Idukki	169	3098	344	269	1896	335	438	2360	679	
Ernakulam	2600	2621	4477	11792	1596	18822	14392	2464	23299	
Trichur	6840	3530	15862	11399	2640	19774	18239	2974	35636	
Palghat	196	2314	298	716	2158	1015	912	2191	1313	
Malappuram	2759	3162	5731	1839	2466	2980	4598	2884	8711	
Kozhikode	1659	2421	2639	1073	1573	1109	2732	2088	3748	
Wayanad	2476	2856	4646	3146	2058	4253	5622	2409	8899	
Cannanore	65	1756	75	457	1239	372	522	1303	447	
Kasaragod	159	2077	217	1271	2133	1781	1430	2127	1998	
S T A T E	41253	3754	101757	38913	2621	66997	80166	3204	168754	

District-wise No. of experiments, yield and mean yield of paddy according to various cultivation practices
 Winter - 1986-87.

District		Irrigated													
		Applied with chemical fertilizers						Applied with other manures						Total	
		No. of experiments	Total yield	Mean yield	No. of experiments	Total yield	Mean yield	No. of experiments	Total yield	Mean yield	No. of experiments	Total yield	Mean yield		
1		2	3	4	5	6	7	8	9	10	11	12	13		
Trivandrum	HYV	10	63.20	2306	-	-	-	-	-	-	-	-	10	63.20	2306
	Local	38	237.51	2280	-	-	-	-	-	-	-	-	38	237.51	2280
	Total	48	300.71	2285	-	-	-	-	-	-	-	-	48	300.71	2285
Quilon	HYV	2	19.10	3430	-	-	-	-	-	-	-	-	2	19.10	3430
	Local	30	239.31	2865	-	-	-	-	-	-	-	-	30	239.31	2865
	Total	32	258.41	2901	-	-	-	-	-	-	-	-	32	258.41	2901
Pathanamthitta	HYV	43	350.54	3010	-	-	-	-	-	-	-	-	43	350.54	3010
	Local	16	105.87	2443	-	-	-	-	-	-	-	-	16	105.87	2443
	Total	59	456.41	2856	-	-	-	-	-	-	-	-	59	456.41	2856
Alleppey	HYV	16	169.02	3811	-	-	-	-	-	-	-	-	16	169.02	3811
	Local	7	70.49	3633	-	-	-	-	-	-	-	-	7	70.49	3633
	Total	23	239.51	3757	-	-	-	-	-	-	-	-	23	239.51	3757
Kottayam	HYV	37	310.28	3063	-	-	-	-	-	-	-	-	37	310.28	3063
	Local	23	170.42	2706	-	-	-	-	-	-	-	-	23	170.42	2706
	Total	60	480.70	2926	-	-	-	-	-	-	-	-	60	480.70	2926
Idukky	HYV	21	204.93	3497	2	19.18	3437	-	-	-	-	-	23	224.11	3492
	Local	44	452.20	3683	-	-	-	-	-	-	-	-	44	452.20	3683
	Total	65	657.13	3623	2	19.18	3437	-	-	-	-	-	67	676.21	3618

(Contd.)

		2	3	4	5	6	7	8	9	10	11	12	13
Table 4.1 (Contd.)													
Ernakulam	HYV	28	209.15	2755	-	-	-	1	9.43	3478	29	218.58	2780
	Local	125	855.66	2525	4	19.60	1807	-	-	-	129	875.26	2502
	Total	153	1064.81	2567	4	19.60	1807	1	9.43	3478	158	1093.84	2553
Trichur	HYV	9	45.80	1873	-	-	-	-	-	-	9	45.80	1873
	Local	67	461.30	2534	10	62.00	2282	3	13.93	1709	80	537.23	2471
	Total	76	507.10	2455	10	62.00	2282	3	13.93	1709	89	583.03	2411
Palghat	HYV	24	197.13	2957	-	-	-	-	-	-	24	197.13	2957
	Local	88	595.21	2435	1	3.31	1192	-	-	-	89	598.52	2421
	Total	112	792.34	2547	1	3.31	1192	-	-	-	113	795.65	2535
Malappuram	HYV	15	133.22	3275	-	-	-	-	-	-	15	133.22	3275
	Local	49	325.71	2451	19	136.53	2650	1	4.93	1818	69	467.17	2497
	Total	64	458.93	2645	19	136.53	2650	1	4.93	1818	84	600.39	2636
Kozhikode	HYV	5	36.44	2676	-	-	-	-	-	-	5	36.44	2676
	Local	1	6.55	2405	-	-	-	-	-	-	1	6.55	2405
	Total	6	42.99	2631	-	-	-	-	-	-	6	42.99	2631
Wayanad	HYV	12	151.52	4652	-	-	-	-	-	-	12	151.52	4652
	Local	10	69.55	2562	3	20.37	2501	7	51.96	2735	20	141.88	2613
	Total	22	221.07	3702	3	20.37	2501	7	51.96	2735	32	293.40	3378
Cannanore	HYV	13	100.75	2868	1	4.85	1795	-	-	-	14	105.60	2791
	Local	34	177.77	1935	9	42.36	1741	-	-	-	43	220.13	1894
	Total	47	278.52	2193	10	47.21	1747	-	-	-	57	325.73	2114
Kasargode	HYV	12	109.94	3342	-	-	-	-	-	-	12	109.94	3342
	Local	46	285.66	2265	-	-	-	-	-	-	46	285.66	2265
	Total	58	395.60	2488	-	-	-	-	-	-	58	395.60	2488
State	HYV	247	2101.02	3103	3	24.03	2922	1	9.43	3440	251	2134.48	3102
	Local	578	4053.21	2558	46	284.17	2254	11	70.82	2349	635	4408.20	2532
	Total	825	6154.23	2721	49	308.20	2295	12	80.25	2440	686	5542.68	2694

District	Unirrigated										Applied with other				
	Applied with chemical fertilizers					Applied with other manures					Not manured				
	No. of experiments	Total yield	plot yield	experiment yield	Mean yield	No. of experiments	Total yield	plot yield	experiment yield	Mean yield	No. of experiments	Total yield	plot yield	experiment yield	Mean yield
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Chidambaram	HYV	6	38.58	2346	-	-	-	-	-	-	-	-	-	-	-
	Local	58	387.24	2436	-	-	-	-	-	-	-	-	-	-	-
	Total	64	425.82	2427	-	-	-	-	-	-	-	-	-	-	-
Quilon	HYV	11	95.49	3118	-	-	-	-	-	-	-	-	-	-	-
	Local	96	642.10	2403	4	23.48	2109	1	8.00	2874	101	673.58	2396		
	Total	107	737.59	2476	4	23.48	2109	1	8.00	2874	112	769.07	2467		
Thanamthitta	HYV	7	67.60	3565	-	-	-	-	-	-	-	-	-	-	-
	Local	18	125.63	2577	-	-	-	-	-	-	-	-	-	-	-
	Total	25	193.23	2854	-	-	-	-	-	-	-	-	-	-	-
Tirupur	HYV	19	124.12	2357	-	-	-	-	-	-	-	-	-	-	-
	Local	86	454.63	1907	22	40.22	660	11	140.97	4624	119	635.82	1928		
	Total	105	578.75	1989	22	40.22	660	11	140.97	4624	138	759.94	1987		
Kottayam	HYV	38	408.37	3925	-	-	-	-	-	-	-	-	-	-	-
	Local	14	132.02	3444	-	-	-	-	-	-	-	-	-	-	-
	Total	52	540.39	3795	-	-	-	-	-	-	-	-	-	-	-
Idukki	HYV	4	30.63	2744	-	-	-	-	-	-	-	-	-	-	-
	Local	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	4	30.63	2744	-	-	-	-	-	-	-	-	-	-	-
Ernakulam	HYV	6	49.04	3014	-	-	-	-	-	-	-	-	-	-	-
	Local	25	138.42	2042	1	3.80	1401	-	-	-	-	-	-	-	-
	Total	31	187.46	2230	1	3.80	1401	-	-	-	-	-	-	-	-

(Contd.)

Table 4.1 (Contd.)

	14	15	16	17	18	19	20	21	22	23	24	25
Trichur												
HYV	10	48.14	1772	1	3.85	1417	-	-	-	11	51.99	1739
Local	22	83.77	1401	14	51.42	1352	10	40.51	1490	46	175.70	1406
Total	32	131.91	1517	15	55.27	1356	10	40.51	1490	57	227.69	1470
Palghat												
HYV	6	45.38	2723	-	-	-	-	-	-	6	45.38	2723
Local	33	225.19	2457	1	6.23	2243	-	-	-	34	231.42	2450
Total	39	270.57	2498	1	6.23	2243	-	-	-	40	276.80	2491
Malappuram												
HYV	4	19.50	1798	-	-	-	-	-	-	4	19.50	1798
Local	25	160.75	2371	5	16.00	1180	3	12.50	1537	33	189.25	2115
Total	29	180.25	2292	5	16.00	1180	3	12.50	1537	37	208.75	2081
Kozhikode												
HYV	4	19.14	1757	-	-	-	-	-	-	4	19.14	1757
Local	45	196.82	1606	18	80.49	1642	10	42.15	1548	73	319.46	1607
Total	49	215.96	1618	18	80.49	1642	10	42.15	1548	77	338.60	1615
Wayanad												
HYV	13	150.90	4276	-	-	-	-	-	-	13	150.90	4276
Local	28	210.48	2769	10	61.04	2249	6	28.70	1762	44	300.22	2514
Total	41	361.38	3247	10	61.04	2249	6	28.70	1762	57	451.12	2916
Cannanore												
HYV	7	36.18	1912	2	2.61	483	-	-	-	9	38.79	1595
Local	15	88.53	2184	3	8.05	993	-	-	-	18	96.58	1985
Total	22	124.71	2097	5	10.66	789	-	-	-	27	135.37	1855
Kasargode												
HYV	-	-	-	-	-	-	-	-	-	-	-	-
Local	2	6.66	1215	-	-	-	-	-	-	2	6.66	1215
Total	2	6.66	1215	-	-	-	-	-	-	2	6.66	1215
State												
HYV	135	1133.07	3062	3	6.46	786	-	-	-	138	1139.53	3012
Local	467	2852.24	2228	78	290.73	1360	43	292.75	2484	588	3435.72	2152
Total	602	3985.31	2415	81	297.19	1338	43	292.75	2484	726	4575.25	2299

(Contd.)

Table 4.1 (Contd.)

Winter 86-87

District		Treated with plant protection chemicals			Not treated with plant protection chemicals		
		No. of experiments	Total plot yield	Mean-yield	No. of experiments	Total plot yield	Mean-yield
		26	27	28	29	30	31
Trivandrum	HYV	11	69.53	2306	5	32.25	2553
	Local	38	276.07	2650	58	348.68	2193
	Total	49	345.60	2573	63	380.93	2206
Quilon	HYV	6	40.50	2425	7	74.09	3802
	Local	40	279.12	2506	91	633.77	2502
	Total	46	319.62	2496	98	707.86	2595
Pathanamthitta	HYV	39	321.88	3047	11	96.26	3231
	Local	20	140.47	2593	14	91.03	2401
	Total	59	462.35	2893	25	187.29	2766
Alleppey	HYV	33	267.23	2922	2	25.91	4674
	Local	71	581.09	2953	55	125.22	821
	Total	104	848.32	2943	57	151.13	957
Kottayam	HYV	70	674.93	3221	5	43.72	3193
	Local	35	287.59	3001	2	14.85	2712
	Total	105	962.52	3348	7	58.57	3056
Idukki	HYV	21	190.76	3256	6	63.98	3822
	Local	28	314.67	4028	18	157.45	3135
	Total	49	505.43	3697	24	221.43	3307
Ernakulam	HYV	21	168.15	2953	14	99.47	2620
	Local	107	719.25	2479	48	298.23	2291
	Total	128	887.40	2557	62	397.70	2366
Trichur	HYV	16	86.95	2000	4	10.84	997
	Local	53	310.95	2159	73	401.98	2026
	Total	69	397.90	2122	77	412.82	1973
Palghat	HYV	17	121.59	2575	13	120.92	3349
	Local	42	275.49	2361	81	554.45	2464
	Total	59	397.08	2423	94	675.37	2587
Malappuram	HYV	17	140.70	3052	2	12.02	2216
	Local	54	378.70	2586	48	277.72	2134
	Total	71	519.40	2698	50	289.74	2137
Kozhikode	HYV	6	36.35	2225	3	19.23	2354
	Local	18	91.58	1868	56	234.43	1537
	Total	24	127.93	1957	59	253.66	1579
Wayanad	HYV	13	157.55	4465	12	144.87	4448
	Local	12	111.31	3417	52	330.79	2344
	Total	25	268.86	3962	64	475.66	2738

(Contd.)

Table 4.1 (Contd.)

1		26	27	28	29	30	31
Cannanore	HYV	14	105.14	2779	9	39.25	1614
	Local	20	146.13	2703	41	170.58	1538
	Total	34	251.27	2736	50	209.83	1551
Kasaragode	HYV	11	99.74	3308	1	10.20	3721
	Local	31	196.74	2315	17	95.58	2051
	Total	42	296.48	2575	18	105.78	2144
State	HYV	295	2481.00	3068	94	793.01	3078
	Local	569	4109.16	2634	654	3734.76	2083
	Total	864	6590.16	2783	748	4527.77	2208

Table 4.2 District-wise number of experiments, yield and mean-yield of paddy according to various cultivation practices - Summer 86-87.

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District	Irrigated	Applied with chemical fertilizers												
		Applied with other manures						Not manured						Total
		No. of experiments	Total yield	Mean yield	No. of experiments	Total yield	Mean yield	No. of experiments	Total yield	Mean yield	No. of experiments	Total yield	Mean yield	
2	3	4	5	6	7	8	9	10	11	12	13			
Trivandrum	HYV	3	16.00	1897	-	-	-	-	-	-	-	3	16.00	1897
	Local	23	60.90	942	-	-	-	-	-	-	-	23	60.90	942
	Total	26	76.90	1052	-	-	-	-	-	-	-	26	76.90	1052
Coimblon	HYV	1	6.98	2379	-	-	-	-	-	-	-	1	6.98	2379
	Local	27	106.58	1345	3	11.19	1271	2	10.65	1815	32	128.42	1368	
	Total	28	113.56	1382	3	11.19	1271	2	10.65	1815	33	135.40	1398	
Puthanambhitta	HYV	43	531.60	4609	-	-	-	-	-	-	-	43	531.60	4609
	Local	25	253.66	3783	-	-	-	-	-	-	-	25	253.66	3783
	Total	68	785.26	4305	-	-	-	-	-	-	-	68	785.26	4305
Chempoo	HYV	46	523.78	4158	-	-	-	-	-	-	-	46	523.78	4158
	Local	15	133.84	3259	-	-	-	-	-	-	-	15	133.84	3259
	Total	61	657.62	3937	-	-	-	-	-	-	-	61	657.62	3937
Kottayam	HYV	39	413.28	3878	-	-	-	-	-	-	-	39	413.28	3878
	Local	12	113.51	3462	-	-	-	-	-	-	-	12	113.51	3462
	Total	51	526.79	3780	-	-	-	-	-	-	-	51	526.79	3780
Idukki	HYV	-	-	-	-	-	-	-	-	-	-	-	-	-
	Local	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-
Ernakulam	HYV	31	270.46	3179	-	-	-	-	-	-	-	31	270.46	3179
	Local	115	785.65	2489	1	5.28	1924	-	-	-	-	116	790.93	2485
	Total	146	1056.11	2636	1	5.28	1924	-	-	-	-	147	1061.39	2631

(Contd.)

Table A.2. (Contd.)

	2	3	4	5	6	7	8	9	10	11	12	
Trichur	HYV	61	640.32	3892	-	-	-	-	-	61	640.32	3892
	Local	51	348.17	2531	1	2.86	1060	4.85	1798	53	355.88	2490
	Total	112	988.49	3273	1	2.86	1060	4.85	1798	114	996.20	3240
Palghat	HYV	6	46.11	2767	-	-	-	-	-	6	46.11	2767
	Local	42	220.47	1862	16	30.08	667	6.29	2232	59	256.84	1545
	Total	48	266.58	1970	16	30.08	667	6.29	2232	65	302.95	1654
Malappuram	HYV	38	307.88	2991	-	-	-	1.57	580	39	309.45	2929
	Local	37	246.59	2461	5	26.14	1930	5.75	2123	43	278.48	2391
	Total	75	554.47	2729	5	26.14	1930	7.32	1351	82	587.93	2647
Kozhikode	HYV	35	246.73	2546	1	5.62	2030	6.86	2478	37	259.21	2530
	Local	24	100.48	1512	5	20.88	1508	-	-	29	121.36	1512
	Total	59	347.21	2126	6	26.50	1595	6.86	2478	66	380.57	2083
Wayanad	HYV	19	130.84	2647	4	16.49	1585	43.22	3323	28	190.55	2616
	Local	20	120.99	2325	2	8.60	1653	3.25	1249	23	132.84	2220
	Total	39	251.83	2482	6	25.09	1607	46.47	2977	51	323.39	2437
Cannanore	HYV	7	44.86	2422	1	3.65	1380	0.82	310	9	49.33	2072
	Local	24	103.75	1634	17	56.27	1251	3.60	680	43	163.62	1438
	Total	31	148.61	1812	18	59.92	1258	4.42	557	52	212.95	1548
Kasargode	HYV	9	67.30	2719	-	-	-	-	-	9	67.30	2719
	Local	48	276.64	2096	3	13.20	1600	-	-	51	289.84	2066
	Total	57	343.94	2194	3	13.20	1600	-	-	60	357.14	2164
STATE	HYV	338	3246.14	3504	6	25.76	1566	52.47	2393	352	3324.31	3434
	Local	463	2871.23	2262	53	174.50	1201	34.39	1568	524	3080.12	2144
	Total	801	6117.37	2786	59	200.26	1238	86.86	1980	876	6404.49	2667

(Contd.)

Table 4.2 District-wise number of experiments, yield and mean yield of paddy according to various cultivation practices - Summer 86-87.

District		Unirrigated											
		Applied with chemical fertilizers					Applied with other manures					Total	
		No. of experiments	Total yield	Mean yield	No. of experiments	Total yield	Mean yield	No. of experiments	Total yield	Mean yield	No. of experiments	Total yield	Mean yield
	1	14	15	16	17	18	19	20	21	22	23	24	25
Trivandrum	HYV	9	38.85	1535	-	-	-	1	1.23	437	10	40.08	1425
	Local	17	14.01	293	-	-	-	-	-	-	17	14.01	293
	Total	26	52.86	723	-	-	-	1	1.23	437	27	54.09	712
Quilon	HYV	2	3.60	613	1	2.00	682	-	-	-	3	5.60	636
	Local	4	33.30	2837	3	0.00	0	1	6.25	2130	8	39.55	1665
	Total	6	36.90	2096	4	2.00	171	1	6.25	2130	11	45.15	1399
Pathanamthitta	HYV	4	3.00	256	-	-	-	-	-	-	4	3.10	256
	Local	-	-	-	-	-	-	-	-	-	-	-	-
	Total	4	3.00	256	-	-	-	-	-	-	4	3.00	256
Alleppey	HYV	33	366.80	4059	-	-	-	-	-	-	33	366.80	4059
	Local	16	166.65	3804	-	-	-	1	1.85	676	17	168.50	3620
	Total	49	533.45	3976	-	-	-	1	1.85	676	50	535.30	3910
Kottayam	HYV	25	222.19	3253	-	-	-	-	-	-	25	222.19	3253
	Local	14	137.39	3592	1	17.50	6405	-	-	-	15	154.89	3779
	Total	39	359.59	3375	1	17.50	6405	-	-	-	40	377.08	3450
Idukki	HYV	1	19.95	6623	-	-	-	-	-	-	1	19.95	6623
	Local	4	17.86	1482	-	-	-	-	-	-	4	17.86	1482
	Total	5	37.81	2511	-	-	-	-	-	-	5	37.81	2511

(Table 4.2 contd.)

	14	15	16	17	18	19	20	21	22	23	24	25
Ernakulam	HYV	-	-	-	-	-	-	-	-	-	-	-
	Local	1	0.72	262	-	-	-	-	-	1	0.72	262
	Total	1	0.72	262	-	-	-	-	-	1	0.72	262
Thiruv	HYV	-	-	-	-	-	-	-	-	-	-	-
	Local	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-
Fingert	HYV	-	-	-	-	-	1	8.33	2955	3	9.91	1172
	Local	2	1.58	280	-	-	2	12.16	2157	8	52.29	2319
	Total	5	34.96	2481	1	1834	3	20.49	2423	11	62.20	2006
Malappuram	HYV	-	-	-	-	-	-	-	-	-	-	-
	Local	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-
Kozhikode	HYV	-	-	-	-	-	-	-	-	-	-	-
	Local	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-
Wayanad	HYV	-	-	-	-	-	-	-	-	-	-	-
	Local	3	22.51	2884	-	-	3	8.78	1125	13	46.72	1381
	Total	6	26.98	1729	4	1053	3	8.78	1125	16	69.23	1663
Cannanore	HYV	-	-	-	-	-	-	-	-	-	-	-
	Local	17	63.40	1410	2	5.10	964	-	-	19	68.50	1363
	Total	17	63.40	1410	2	5.10	964	-	-	19	68.50	1363
Kasaragod	HYV	-	-	-	-	-	-	-	-	-	-	-
	Local	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-
State	HYV	79	678.48	3133	1	2.00	682	2	9.56	1744	82	3070
	Local	84	495.27	2151	11	38.73	1284	7	29.04	1513	102	2014
	Total	163	1173.75	2627	12	40.73	1738	9	38.60	1565	184	2484

Table 4.2 (Contd.)

Centre		Treated with plant protection chemicals			Not treated with plant protection chemicals		
		No. of experiments	Total plot yield	Mean yield	No. of experiments	Total plot yield	Mean yield
1		26	27	28	29	30	31
Trivandrum	HYV	12	54.85	1625	1	1.23	437
	Local	33	53.18	573	7	21.73	1104
	Total	45	108.03	854	8	22.96	1021
Quilon	HYV	1	2.30	784	3	10.28	1168
	Local	34	157.69	1581	6	10.28	584
	Total	35	159.99	1558	9	20.56	779
Pathanamthitta	HYV	44	521.15	4416	3	13.45	1671
	Local	25	253.66	3783	-	-	-
	Total	69	774.81	4186	3	13.45	1671
Alleppey	HYV	78	880.73	4124	1	9.85	3577
	Local	32	302.34	3450	-	-	-
	Total	110	1183.07	3928	1	9.85	3597
Kottayam	HYV	64	635.47	3634	-	-	-
	Local	27	268.40	3631	-	-	-
	Total	91	903.87	3635	-	-	-
Idukki	HYV	1	19.95	6623	-	-	-
	Local	4	17.86	1482	-	-	-
	Total	5	37.81	2511	-	-	-
Ernakulam	HYV	27	245.00	3307	4	25.46	2319
	Local	90	716.73	2902	27	74.92	1011
	Total	117	961.73	2995	31	100.38	1180
Trichur	HYV	53	577.52	4040	8	62.80	2911
	Local	32	246.51	2856	21	109.37	1911
	Total	85	824.03	3595	29	172.17	2201
Palghat	HYV	7	52.45	2658	2	3.57	633
	Local	21	147.58	2493	46	161.55	1246
	Total	28	200.03	2535	48	165.12	1221

(Contd.)

Table 4.2 (Contd.)		26	27	28	29	30	31
1							
Malappuram	HYV	31	262.32	3124	8	47.13	2175
	Local	37	243.23	2427	6	35.25	2169
	Total	68	505.55	2745	14	82.38	2172
Kozhikode	HYV	34	236.60	2514	3	22.61	2722
	Local	7	30.57	1577	22	90.79	1491
	Total	41	267.17	2354	25	113.40	1638
Wayanad	HYV	11	78.93	2758	20	134.13	2578
	Local	12	78.20	2505	24	101.36	1623
	Total	23	157.13	2626	44	235.49	2057
Cannanore	HYV	3	11.03	1390	6	38.30	2413
	Local	21	109.15	1965	41	122.97	1134
	Total	24	120.18	1893	47	161.27	1297
Kasargode	HYV	5	48.00	3491	4	19.30	1754
	Local	23	147.25	2328	28	142.59	1852
	Total	28	195.25	2535	32	161.89	1839
STATE	HYV	371	3626.30	3566	63	388.11	2247
	Local	398	2772.35	2541	228	870.81	1393
	Total	769	6398.65	3035	291	1258.92	1578

9.98

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