



GOVERNMENT OF KERALA

**Report on the Crop Cutting Survey
on Kanni (Autumn) Crop of Paddy
1958
in Kerala State**

**Department of Statistics,
Kerala.**

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**REPORT ON THE CROP CUTTING SURVEY
KANNI (AUTUMN) CROP OF PADDY 1954
IN KERALA STATE.**

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This Report presents a summary of the results of the Crop Cutting Survey on the September-October crop of paddy. The survey covered all the taluks in the Kerala State and the autumn crop of paddy is harvested.

SAMPLING DESIGN:

The design of the survey is one of multi-stage random sampling with stratification. The taluks were taken as the strata and villages the primary unit of sampling. The fields formed the secondary unit of sampling and the square plots formed the last stage of sampling unit. Altogether 300 villagers were selected for the crop cutting survey. The number of villages allotted to each one of the 50 taluks was six. A systematic sample of 5 paddy fields was chosen from each selected village and from each selected paddy field square plot of side $16\frac{1}{2}$ ft., was selected at random. If the field had more than one kandom, one of the kandoms was selected with probability proportional to area and the square plot was selected from it.

FIELD WORK:

The field works were performed by the Investigators and the Statistical Inspectors. Their work was supervised by the District Statistical Officers. Though 1,500 experiments were planned, only 1093 fields were actually available for harvest. The perimeter of the kandom and the average width of the bunds were also measured with a view to arrive at an estimate of the area occupied by bunds. The weight of the green winnowed paddy harvested from the square plot was noted correct to the nearest quarter of a pound. The drriage factor for each taluk was also determined based upon actual drriage experiments.

ANALYSIS OF THE DATA AND RESULTS:

The analysis of the data collected was done in the Head Office. The mean yield per acre for each taluk was estimated based upon the actual results of harvest. The area under the crop during the season in each taluk was estimated based upon the Land Utilisation Surveys conducted by this Department. The mean yield for the State was obtained by weighting the taluk mean yields with the corresponding area under the crop in the taluk. The standard error for the mean yields were also worked out in respect of all the taluks. The results of analysis are presented in the accompanying Tables. The total acreage under paddy during the crop was estimated as 9,82,200 acres and the total production was 4,45,500 tons of rice. The weight of rice was taken as 65.7% of the weight of paddy. The mean yield of paddy for the State during this crop was estimated as 1,547 lb. per acre and it has a standard error of 38 lbs. per acre which is about 2.5% of the mean yield.

Assistant Director-in-charge.

TABLE 1

KANNI CROP OF PADDY 1958 IN KERALA STATE

The estimated mean yield per acre and the total out-turn of dry Paddy and Rice in different taluks.

Sl. No.	District and Taluks.	No. of experiments.	Net area harvested	Mean yield of dry paddy (lbs per acres)	Standard error.	Total out-turn dry paddy (Tons).	Total out-turn of Rice (Tons).
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Neyyattinkara	42	12865	1831	109	10516	6909
2	Trivandrum	28	10574	1905	87	8993	5908
3	Nedumangad	51	11864	1620	148	8580	5637
4	Chirayinkil	20	9558	1520	328	6486	4262
	TRIVANDRUM DISTRICT	141	44861	1726	..	34575	22716
5	Quilon	..	6485	1419	..	4108	2699
6	Kottarakara	54	13724	1823	90	11169	7338
7	Pathanapuram	31	9550	1781	83	7593	4989
8	Pathanamthitta	20	1994	1526	123	1358	892
9	Kunnathur	40	10291	1929	312	8862	5822
10	Karunagapally	..	5990	1803	..	4821	3168
	QUILON DISTRICT	145	48034	1768	..	37912	24908
11	Karthikappally	19	14370	1639	197	10514	6908
12	Mavelikara	35	8259	1249	95	4605	3025

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
13	Chengannore	9	4596	2178	457	4469	2936
14	Thiruvalla	11	5984	2194	351	5861	3851
15	Ambalapuzha	6	2170	1254	145	1215	798
16	Shertalai	30	18094	1227	164	9911	6512
17	Kuttanad	8	5375	1758	488	4218	2771
	ALLEPPEY DISTRICT	118	58848	1553		40793	26801
18	Changanacherry	12	2434	1965	111	2135	1403
19	Kanjirapally	..	95	1965	..	83	55
20	Kottayam	14	3234	1779	318	2568	1687
21	Vaikom	11	3387	1574	107	2531	1663
22	Meenachil	..	4045	1554	..	2806	1843
	KOTTAYAM DISTRICT	37	13195	1719	..	10123	6651
23	Thodupuzha	30	8963	1341	154	5366	3525
24	Moovattupuzha	67	12612	1476	55	8310	5460
25	Kunnathunad	28	16356	911	138	6652	4370
26	Alwaye	13	17272	948	97	7310	4803
27	Cochin	..	8438	1516	..	5711	3752
28	Kanayannoore	5	20785	2028	126	18818	12363
29	Parur	15	7754	1332	314	4611	3029
	ERNAKULAM DISTRICT	158	92180	1380	..	56778	37303
30	Crangannore	5	1645	1332	314	978	643
31	Mukundapuram	44	19989	1431	88	12770	8390

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
32	Trichur	38	21908	1640	122	16040	10538
33	Talapally	10	34152	1235	145	18830	12371
34	Chowghat	30	7536	932	77	3136	2060
	TRICHUR DISTRICT	127	85230	1360	..	51753	34002
	Travancore- Cochin Region	..	342348	1518	..	231935	152381
35	Chittur	34	56173	2064	19	51759	34006
36	Alathur	28	49700	1906	222	42289	27784
37	Palghat	32	53133	2260	142	53607	35220
38	Ottapalam	19	46467	2015	47	41800	27463
39	Ponnani	6	33069	1063	..	15693	10310
40	Perinthalmanna	48	47230	1828	402	38543	25323
	PALGHAT DISTRICT	167	285772	1910	..	243692	160106
41	Tirur	16	50402	968	..	21781	14310
42	Ernad	15	54979	1771	74	43468	28558
43	Kozhikode	16	20454	1763	472	16098	10577
44	Quilandy	19	33772	818	68	12333	8103
45	Badagara	35	17770	851	77	6752	4435
46	Wynad South	..	1256	1494	..	838	551
	KOZHIKODE DISTRICT	101	178633	1270	..	101270	66534
47	Wynad North	..	..	..	..	..	..
48	Tellisery	16	26063	680	92	7912	5198
49	Cannanore	20	25921	1145	128	13250	8705

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
50	Taliparamba	7	26104	1612	148	18786	12342
51	Hosdurg	15	38677	910	162	15712	10323
52	Kasargode	41	58681	1735	164	45452	29863
	CANNANORE DISTRICT	99	175446	1291	..	101112	66431
	MALABAR REGION	..	639851	1562	..	446074	293071
	KERALA STATE	..	982199	1547	38	678009	445452
	Rounded to hundreds	..	982200	..	..	678000	445500

TABLE II.

KANNI CROP OF PADDY—1958.

Statement showing mean yields of dry paddy per acre with its standard error for irrigated and un-irrigated fields.

No.	Taluk.	Irrigated.			Un-irrigated.		
		Number of experi-ments.	Mean yield of dry paddy in lbs./acre.	Standard error in lbs./acre.	Number of experi-ments.	Mean yield of dry paddy in lbs./acre.	Standard error in lbs./acre.
1	2	3	4	5	6	7	8
1	Neyyattinkara	27	1802	123	15	1884	199
2	Trivandrum	3	3089	..	25	1763	218
3	Nedumangad	4	2115	..	47	1577	155
4	Chirayinkil	5	1990	282	15	1363	450
5	Quilon	..	..	..	..	..	..
6	Kottarakara	..	..	..	54	1823	90
7	Pathanapuram	..	..	..	31	1781	83
8	Pathanamthitta	..	..	..	20	1526	123
9	Kunnathur	..	..	..	40	1929	312
10	Karunagapally	..	..	..	..	..	..
11	Karthigapally	..	..	..	19	1639	197
12	Thiruvella	5	2797	44	6	1692	131
13	Mavelikara	..	..	..	35	1249	95

TABLE II—(contd.)

1	2	3	4	5	6	7	8
14	Chengannur	5	2599	90	4	1653	89
15	Ambalapuzha	6	1254	145	..	1758 ^a	488
16	Kuttanad	..	..	..	8	1227	164
17	Sbertallai	..	..	..	30	1965	111
18	Changanacherry	..	..	..	12	..	..
19	Kanjirapally Peermade	..	..	..	..	1779	318
20	Kottayam	..	1497	349	14	1740	135
21	Vaikom	3	..	..	8	..	..
22	Meenachil	..	..	..	..	1341	154
23	Thodupuzha	..	1532	82	30	1428	83
24	Muvattupuzha	31	..	..	36	..	..
25	Devicolem Udumbanchola	..	..	..	..	2028	126
26	Kanayanur	..	665	88	5	1156	179
27	Kunnathunad	14	831	69	14	1137	16
28	Alwaye	8	1367	240	5	1317	424
29	Parur Cranganur	6	1385	168	14	1474	195
30	Mukundapuram	21	1803	139	23	1510	34
31	Trichur	16	..	..	22	1235	145
32	Thalappally	..	..	..	10	932	77
33	Chowghat	..	2064	219	30	..	263
34	Chittur	34	2248	60	..	1849	2053
35	Alathur	4	2274	155	24	2053	..
36	Palghat	30	..	..	2	2015	47
37	Ottappalam	..	..	..	19	..	..

TABLE II—(concl'd.)

1	2	3	4	5	6	7	8
38	Ponnani	..	..	..	6	1063	..
39	Perinthalmanna	..	1772	457	30	1862	434
40	Tirur	1	2005	..	15	899	47
41	Errad	..	..	..	15	1771	74
42	Kozhikode	..	2255	395	10	1468	174
43	Quilandy	..	..	..	19	818	68
44	Badagara	1	1718	..	34	826	87
45	Wynad (South)	..	..	..	..	..	..
46	Wynad (North)	..	..	..	38	1494	160
47	Tellicherry	..	..	..	16	680	92
48	Cannanore	..	..	..	20	1145	128
49	Taliparamba	..	..	..	7	1012	148
50	Hosdurg	..	..	..	15	910	162
51	Kasargode	..	..	..	41	1735	164

TABLE III
KANNI CROP 1958
Analysis of variance of plot yields in (LBS) ² per plot of $\frac{1}{100}$ of an acre

No.	Taluk.	Irrigation fields.						Unirrigated fields.						Combined fields.					
		Between Karas.		Within Karas.		Between Karas.		Within Karas.		Between Karas.		Within Karas.		Between Karas.		Within Karas.			
		DF	MS	DF	MS	DF	MS	DF	MS	DF	MS	DF	MS	DF	MS	DF	MS		
1	2	3	4	5	6	7	8	9	10	11	12	13	14						
1	Neyyattinkara	7	13.84	19	8.24	4	21.32	10	4.63	10	18.19	31	6.64						
2	Trivandrum	..	..	..	..	5	47.76	19	8.26	19	8.30	22	7.93				
3	Nedumangad	..	..	..	..	9	43.49	37	7.59	10	43.28	40	7.80				
4	Chirayinkil	2	17.74	2	35.30	4	96.94	10	27.19	6	68.95	13	31.63						
5	Quillon	..	..	..	..	10	16.88	43	3.10	10	16.88	43	3.10				
6	Kottarakara	..	..	..	..	7	8.08	23	1.82	7	8.08	23	1.82				
7	Pathanapuram	..	..	..	..	4	11.65	15	5.07	4	11.65	15	5.07				
8	Pathanamthitta	..	..	..	..	7	22.68	32	8.26	7	22.68	32	8.26				
9	Kunnathur	..	..	..	..	3	28.58	15	18.98	3	28.58	15	18.98				
10	Karunagapally	..	..	..	..	1	4.14	4	4.02	3	44.84	11	1.68				
11	Karthigapally	..	..	4	0.38	6	12.53	28	7.72	6	12.53	28	7.72				
12	Thiruvella	..	..	..	..	..	..	..	..	..	..	..	..
13	Mavelikara	..	..	..	..	..	..	..	..	..	..	..	..

TABLE III—(contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
14	Chengannur	..	..	4	1.59	..	..	3	1.51	1	72.06	7	17.68
15	Ambalapuzha	1	4.95	4	1.20	..	..	..	1.24	1	4.95	4	1.20
16	Kuttanad	..	..	..	..	1	65.74	6	1.24	1	65.74	6	1.24
17	Sherthalai	..	..	..	..	5	31.39	24	1.20	5	31.39	24	1.20
18	Changanacherry	..	..	..	..	2	5.66	9	4.89	2	5.66	9	4.89
19	Kanjirapally— Peermade	..	..	..	..	..	..	..	..	..	..	..	..
20	Kottayam	..	..	..	..	3	42.98	10	5.30	3	42.98	10	5.30
21	Vaikom	..	..	..	..	1	6.99	6	17.42	2	6.01	8	16.62
22	Meenachil	..	..	..	..	..	..	..	..	..	..	..	..
23	Thodupuzha	..	..	..	..	6	26.66	23	1.76	6	26.66	23	1.76
24	Muvattupuzha	..	..	..	..	8	9.07	27	4.51	13	7.88	53	7.93
25	Deviculam— Udumbanchola	7	27.13	23	5.72	8	9.07	27	4.51	13	7.88	53	7.93
26	Kanayannur	..	..	..	..	..	..	..	..	..	..	..	..
27	Kunnathunad	..	..	..	..	..	..	..	..	..	..	..	..
28	Alwaye	2	3.89	11	0.38	2	15.01	11	0.75	5	20.74	22	0.57
29	Parur—Cranganur	1	1.59	6	2.27	1	0.11	3	0.76	3	4.34	9	1.77
30	Mukundapuram	1	11.54	4	12.43	3	75.17	10	2.44	3	76.89	16	5.06
31	Trichur	4	22.41	16	4.01	5	7.37	17	1.50	9	12.88	34	3.00
32	Thalapally	3	11.31	12	5.64	5	25.08	16	8.83	8	21.17	24	8.91
33	Chowghat	..	..	..	..	4	8.11	5	7.53	4	8.11	5	7.53
34	Chittur	6	63.39	27	5.02	5	6.92	24	2.28	5	6.92	24	2.28
35	Alathur	1	0.88	2	1.37	5	56.81	18	10.77	6	49.54	21	9.79

TABLE III—(concd.)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
36	Palghat	6	26.96	23	6.12	..	..	1	47.95	7	23.64	24	7.90
37	Ottapalam	..	..	..	..	3	1.69	15	8.45	3	1.69	15	8.45
38	Ponnani	..	..	..	..	1	0.71	4	1.32	1	0.71	4	1.32
39	Perinthalmanna	8	127.84	9	79.79	12	224.15	17	132.48	13	299.38	34	269.64
40	Tirur	..	..	..	..	4	2.42	10	5.06	4	2.15	11	8.77
41	Ernad	..	..	..	..	3	3.28	11	5.02	3	3.28	11	5.02
42	Kozhikode	1	29.44	4	1.03	3	69.99	6	1.02	3	110.12	12	0.85
43	Quilandy	..	..	..	..	5	3.33	12	2.84	5	3.33	12	2.84
44	Badagara	..	..	..	..	7	6.82	26	1.88	7	7.66	27	2.72
45	Wynad (South)	..	..	..	..	..	..	..	..	..	..	..	..
46	Wynad (North)	..	..	..	..	8	35.56	29	12.54	8	35.56	29	12.54
47	Tellissery	..	..	..	..	4	3.80	11	0.48	4	3.80	11	0.48
48	Cannanore	..	..	..	..	3	12.80	16	8.98	3	12.80	16	8.98
49	Thaliparamba	..	..	..	..	4	5.36	2	1.12	4	5.36	2	1.12
50	Hosdurg	..	..	..	..	3	7.26	11	10.86	3	7.26	11	10.86
51	Kasargode	..	..	..	..	8	41.64	32	14.05	8	41.64	32	14.05

TABLE IV

AUTUMN (KANNI) CROP OF PADDY 1958 (SEPTEMBER—OCTOBER)

Analysis of variance of plot yields pooled for the State in
(1b) 2 per plot (irrigated & unirrigated plots combined)
of 1/160 of an acre.

Source	Sum of squared	Degrees of freedom	Variance
Between Taluks	2875	43	67.0
Between Karas within Taluks	6772	229	29.9
Within Karas within Taluks	10670	853	12.5
Total	20317	1125	..

Percentage reduction due to driage.

Taluk	Percentage reduction
1. Neyyattinkara	8.5
2. Trivandrum	7.8
3. Nedumangad	6.4
4. Chirayinkil	7.25
5. Quilon	..
6. Kottarakkara	10.0
7. Pathanapuram	7.1
8. Pathanamthitta	6.5
9. Kunnathur	6.5
10. Karunagappally	4.76
11. Karthigappally	4.8
12. Thiruvalla	6.0
13. Mavelikkara	7.1
14. Chengannur	6.10
15. Ambalapuzha	9.09
16. Kuttanad	7.04
17. Shertalai	3.05
18. Changanassery	10.0
19. Kanjirappally, Peermade	..
20. Kottayam	7.7
21. Vaikom	9.4
22. Meenachil	..
23. Thodupuzha	10.75
24. Muvattupuzha	6
25. Devicolam	10
26. Kanayannur	4.09

Taluk	Percentage reduction
27. Kunnathunad	7.67
28. Alwaye	7.77
29. Parur, Cranganore	5.09
30. Mukundapuram	7.67
31. Trichur	5.71
32. Thalappally	7.08
33. Chowghat	7.32
34. Chittur	6.5
35. Alathur	7.1
36. Palghat	6.7
37. Ottappalam	7.6
38. Ponnani	7.8
39. Perinthalmanna	7.2
40. Tirur	10.5
41. Ernad	10.5
42. Kozhikode	10.5
43. Quilandy	10.5
44. Badagara	10.5
45. Wynad South	12.04
46. Wynad North	13.2
47. Tellicherry	15.75
48. Cannanore	11.5
49. Taliparamba	17.0
50. Hosdurg	13.52
51. Kasargode	13.52

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