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**REPORT ON THE CROP-CUTTING SURVEY ON KANNI
CROP OF PADDY IN TRAVANCORE-COCHIN, 1955**

G. P. E.—1956

REPORT ON THE CROP-CUTTING SURVEY ON CROP OF PADDY IN TRAVANCORE-COCHIN.

This report deals with the results of the crop-cutting survey on Kanni (September-October) crop of paddy, 1955. As in the previous years, this survey covers only 34 out of the 36 Taluks in the State. Devicolam and Peermade are left out for the reason that the area under paddy cultivation there is comparatively small. Three hundred and twenty-seven villages were selected at random for crop-cutting, this being about a twelfth of the total number of villages in the State. The number of villages allotted to each Taluk was in proportion to the extent of paddy cultivation in the Taluk. From each of these villages selected, a random sample of five paddy fields was selected and from each paddy field thus selected a square plot measuring $16\frac{1}{2}$ ft. was harvested. The field work was conducted by the Statistical Officers on exactly the same lines as in the previous surveys.

Even though every precaution was taken to make all the selected fields available for experimentation, only 1402 plots were actually harvested out of a total of 1635.

The analysis of the data collected by the field staff was done in the Department of Statistics. The results are detailed in the Tables I to V. Table I gives the acreage under paddy, the number of experiments conducted, the estimated average yield per acre with its standard error, the total out-turn of paddy and rice and the percentage standard error for the Taluks and for the State as a whole. Table II shows the estimated acreage, the number of experiments, the mean yield per acre and the corresponding standard error for irrigated and unirrigated fields separately. Table III sets out the results of the analysis of variance of yields from irrigated and unirrigated plots respectively.

The total production of rice for the reference crop is estimated at 210,283 tons. A statement showing the area under and production of rice for the Kanni crop from the year 1952 onwards is given below.

Crop		Area under paddy (Acres)	Production of rice (Tons)
1955	Kanni	425,330	210,283
1954	"	423,355	193,486
1953	"	409,590	185,358
1952	"	407,772	174,162

Office of the Director of Statistics,
Trivandrum,
9th April 1956.

(Sd.)

for Director of Statistics

TABLE I
KANNI CROP OF PADDY—1955
Statement showing the estimated mean yield per acre and the total out-turn of paddy and rice in different Taluks

Serial No.	Taluk	Area (acres)	No. of experiments	Mean yield of dry paddy (lbs./acre)	Standard error in (Lbs.)	Total out-turn of dry paddy (Tons)	Total out-turn of rice (Tons)	Percentage of standard error
1	2	3	4	5	6	7	8	9
1	Thovala	11512	40	2653	44	13635	8958	1.66
2	Agastheeswaram	21078	70	2494	67	23468	15418	2.69
3	Kalkulam	22685	75	2608	95	26412	17353	3.64
4	Vilavancode	7380	30	2503	427	8246	5418	17.06
5	Neyyattinkara	14359	50	1467	211	9404	6178	14.38
6	Trivandrum	8912	25	1626	162	6469	4250	9.96
7	Nedumangad	13100	40	1793	100	10486	6889	5.58
8	Chirayinkil	10112	40	1195	82	5395	3545	6.86
9	Quilon	6713	24	1078	141	3231	2123	13.08
10	Kottarakara	15374	30	1729	59	11867	7797	3.41
11	Kunnathur	10950	40	1195	157	5842	3838	13.14
12	Shencottah	4690	20	2508	361	5251	3450	14.39
13	Pathanapuram	1642	35	1934	103	8808	5787	5.33
14	Pathanamthitta	1560	30	1393	170	970	637	12.20
15	Thiruvella	14800	25	1459	137	9640	6333	9.89
16	Mavelikkara	8825	45	1440	50	5673	3727	3.47
17	Karunagapally	9813	35	1521	128	6663	4378	1.42

TABLE I—(cont.)

Serial No.	Taluk	Area (acres)	No. of experiments	Mean yield of dry paddy (lbs./acre)	Standard error in (Lbs.)	Total out-turn of dry paddy (Tons)	Total out-turn of rice (Tons)	Percentage of standard error
1	2	3	4	5	6	7	8	9
18	Karthigapally	10428	35	1296	49	6033	3964	3.78
19	Ambalapuzha	3971	30	1278	127	2265	1488	9.94
20	Sherthala	18100	38	1075	141	8686	5707	13.11
21	Changanacherry	1621	25	1726	92	1749	821	5.33
22	Kottayam	3048	23	1613	144	2195	1442	8.93
23	Vaikom	4050	20	1284	226	2322	1526	17.60
24	Meenachil	4247	30	1432	73	2810	1846	4.86
25	Theodupuzha	8800	35	1333	54	5237	3441	4.05
26	Muvattupuzha	13615	45	1451	99	8819	5794	6.82
27	Parur-Changanur	11725	25	1361	121	7124	4680	8.89
28	Cochin-Kanyanur	27012	63	991	41	11950	7851	4.14
29	Mukundapuram	20974	55	1248	63	11686	7678	5.05
30	Kunnathunad	25521	45	1547	36	17625	11580	2.33
31	Trichur	24022	64	1652	91	17716	11639	5.51
32	Chittur	29300	90	2032	90	26581	17464	4.43
33	Talapilly	35391	125	1665	32	26306	17283	1.92
	State Total	425330	1402	1647	20	320064	210283	1.21

TABLE II
KANNI CROP OF PADDY—1955
Statement showing the mean yield of dry paddy per acre with its standard error for irrigated and unirrigated fields

Serial No.	Taluk	Irrigated					Unirrigated				
		Estimated area receiving irrigation	No. of experiments	Average yield per acre	Standard Error	Estimated area receiving no irrigation	No. of experiments	Average yield per acre	Standard Error		
		(Acres)		(Lbs.)	(Lbs.)	(Acres)					
1	2	3	4	5	6	7	8	9	10		
1	Thovala	4029	14	2686	29	7483	26	2636	61		
2	Agastheeswaram	6625	22	2601	52	14453	48	2446	75		
3	Kalkulam	8469	28	2791	170	14216	47	2499	117		
4	Vilavancode	4182	17	3218	389	3198	13	1568	328		
5	Neyyatinkara	3733	13	1650	296	10626	37	1402	213		
6	Trivandrum	1069	3	2523	363	7843	22	1503	120		
7	Nedumangad										
8	Chiyayinkil	6067	24	1341	111	13100	40	1793	99		
9	Qulon					4045	16	975	96		
10	Kottaratta	10249	20	1704	55	6713	24	1078	141		
11	Kunnathoor	4654	17	1470	204	5125	10	1778	121		
12	Shencottah	3049	13	2519	432	6296	23	992	131		
13	Pathanapuram	1079	23	2088	99	1641	7	2490	643		
14	Pathanamthitta					563	12	1642	61		
15	Thiruvalla	13616	23	1468	138	1560	30	1393	170		
16	Mavelikara	5687	29	1353	138	1184	2	1345	522		
17	Karunagapally	3084	11	1758	125	3138	16	1597	273		
						6729	24	1412	121		

TABLE II—(cont.)

Serial No.	Taluk	Irrigated				Unirrigated			
		Estimated area receiving irrigation (Acres)	No. of experiments	Average yield per acre (Lbs.)	Standard Error	Estimated area receiving no irrigation (Acres)	No. of experiments	Average yield per acre	Standard Error
1	2	3	4	5	6	7	8	9	10
18	Karthigapally	1192	4	1508	94	9236	31	1268	50
19	Ambalapuzha	..	..	..	..	3971	30	1278	127
20	Sherthala	..	..	..	..	18100	38	1075	141
21	Chengamcherry	1426	22	1778	24	195	3	1340	199
22	Kottayam	663	5	1685	42	2385	18	1594	189
23	Vaikom	1620	8	1324	455	2430	12	1257	281
24	Meenachil	..	..	..	..	4247	30	1482	72
25	Thodupuzha	2514	10	1529	78	6286	25	1254	39
26	Muvattupuzha	2118	7	2056	66	11497	38	1339	66
27	Parur-Crangannur	2345	5	1174	173	9380	20	1408	144
28	Cochin-Kanayannur	4716	11	1199	25	22296	52	947	35
29	Mukundapuram	..	..	..	..	20974	55	1248	63
30	Kannathunad	..	..	..	..	25521	45	1547	36
31	Trichur	..	..	..	..	24022	64	1652	91
32	Chittur	10092	31	2327	74	19208	59	1878	102
33	Thalappilly	3804	14	1906	57	31587	111	1634	34
	State Total	106082	374	1927	35	319248	1028	1553	20

TABLE III
KANNI CROP OF PADDY—1955
Analysis of variance of plot yields in (lbs.) 2 per plot of 1/160 of an acre

Serial No.	Taluk	Plots which received irrigation						Plots which received no irrigation						Plots of both kinds					
		Between Karas			Within Karas			Between Karas			Within Karas			Between Karas			Within Karas		
		D.F.	M.S.	D.F.	M.S.	D.F.	M.S.	D.F.	M.S.	D.F.	M.S.	D.F.	M.S.	D.F.	M.S.	D.F.	M.S.	D.F.	M.S.
1	2	3	4	5	6	7	8	9	10	11	12	13	14						
1	Thovala	6	1'43	7	7'20	7	3'84	18	4'55	7	3'01	32	4'52						
2	Agastheeswaram	13	2'63	8	5'71	13	10'27	34	3'21	13	12'38	56	3'14						
3	Kalkulam	11	28'67	16	18'69	13	23'26	33	8'55	14	26'41	60	14'80						
4	Vilavancode	5	83'68	11	23'64	4	48'24	8	16'76	5	213'91	24	29'97						
5	Neyyattinkara	6	39'27	6	2'16	9	61'13	27	6'53	9	87'09	40	5'36						
6	Trivandrum	2	15'51	..	..	4	12'82	17	36'64	4	25'79	40	7'08						
7	Nedumangad	..	..	..	..	7	15'53	32	7'67	4	15'53	32	7'67						
8	Chirayinkal	..	..	15	20'26	7	5'39	8	2'94	7	15'53	32	7'67						
9	Quilon	..	..	..	..	7	18'54	19	2'94	8	10'64	31	13'84						
10	Kottarakara	..	..	15	3'07	4	4'73	6	3'35	4	18'54	19	4'78						
11	Kunnathur	..	..	11	3'18	3	12'61	15	1'80	5	4'09	24	2'96						
12	Shencottah	..	..	8	10'75	3	106'26	3	2'05	7	38'54	32	2'96						
13	Pathanapuram	..	..	16	1'63	5	2'05	6	3'56	4	90'27	15	28'80						
14	Pathanamthitta	..	..	..	..	5	33'74	24	1'01	6	14'38	28	2'95						
15	Karunagapally	..	..	4	1'19	6	0'37	17	1'49	5	33'74	24	1'01						
16	Karthigapally	..	..	1	0'00	6	2'97	24	0'72	6	0'86	28	2'58						

TABLE III—(cont.)

Serial No.	Taluk	Plots which received irrigation			Plots which received no irrigation			Plots of both kinds					
		Between Karas		Within Karas	Between Karas		Within Karas	Between Karas		Within Karas			
		D.F.	M. S.	D.F.	M. S.	D.F.	M. S.	D.F.	M. S.	D.F.	M. S.		
		3	4	5	6	7	8	9	10	11	12	13	14
17	Mavelikara	6	19.19	22	2.06	3	32.40	12	1.12	8	28.81	36	1.75
18	Thiruvella	4	17.00	18	3.88	1	21.37	24	4.02	4	21.56	20	3.70
19	Ambalapuzha	..	..	..	..	5	19.00	..	..	5	19.00	24	4.02
20	Sherattalai	..	..	..	..	7	29.14	30	2.86	7	29.14	30	2.86
21	Chengamacherry	..	4.89	17	2.20	1	4.22	14	8.84	4	8.35	20	2.51
22	Kottayam	..	..	..	3.39	3	23.81	1	4.16	4	18.23	18	7.55
23	Vaickom	1	57.66	6	5.24	2	31.47	9	3.44	3	40.03	16	4.18
24	Meenachil	..	..	..	1.83	5	6.13	24	3.44	5	6.13	24	3.44
25	Thodupuzha	4	2.29	5	0.56	6	1.52	18	1.21	6	4.01	28	1.62
26	Muvattupuzha	3	1.04	3	0.56	8	6.25	29	1.81	8	17.39	36	2.42
27	Kunnathunad	..	..	..	..	8	2.33	36	0.56	8	2.33	36	0.56
28	Parur-Canganur	..	..	..	5.82	3	16.19	16	6.04	4	14.27	20	6.00
29	Cochin-Kanayannur	7	0.28	3	0.31	14	2.27	37	0.69	14	3.46	48	0.73
30	Mukundapuram	..	..	..	..	10	8.48	44	5.27	10	8.48	44	5.27
31	Trichur	..	..	..	..	13	22.28	50	0.73	13	22.28	50	0.73
32	Chittur	6	6.61	24	7.47	12	26.90	46	6.35	17	28.19	72	7.15
33	Thalappilly	8	1.71	5	1.12	24	3.86	86	4.41	24	4.94	100	4.08

TABLE IV

KANNI CROP OF PADDY—1955

Analysis of variance of plot yields pooled for the State in
(lbs.)² per plot of 1/160 of an acre

A. Plots which received irrigation

Source	Sum of squares	Degrees of freedom	Variance
Between Taluks	5400.83	23	234.82*
Between Karas within Taluks	2285.08	121	18.88*
Within Karas within Taluks	1820.13	229	7.95
Total	9506.04	373	..

B. Plots which received no irrigation

Source	Sum of squares	Degrees of freedom	Variance
Between Taluks	8647.06	32	270.22*
Between Karas within Taluks	4174.39	228	18.31*
Within Karas within Taluks	3373.83	767	4.40
Total	16195.28	1027	..

C. Plots of both kinds combined

Source	Sum of squares	Degrees of freedom	Variance
Between Taluks	14077.46	32	439.92*
Between Karas within Taluks	6696.56	254	26.36*
Within Karas within Taluks	6829.80	1115	6.13
Total	27603.82	1401	..

Note.— * Denotes significance at 1 per cent level.

TABLE V

Percentage reduction due to Driage

<i>Taluk</i>	<i>Percentage reduction</i>
1. Thovala	6.73
2. Agastheeswaram	12.14
3. Kalkulam	7.68
4. Vilavancode	7.55
5. Neyyattinkara	7.25
6. Trivandrum	5.88
7. Nedumangad	8.33
8. Chirayinkil	6.17
9. Quilon	6.11
10. Kottarakara	3.90
11. Kunnathur	5.20
12. Pathanapuram	4.90
13. Shencottah	7.60
14. Karunagapally	7.98
15. Karthigapally	6.80
16. Mavelikara	6.80
17. Pathanamthitta	5.10
18. Thiruvella	11.54
19. Ambalapuzha	7.59
20. Shertalai	4.60
21. Changanacherry	7.07
22. Kottayam	13.56
23. Vaickom	4.60
24. Meenachil	3.90
25. Thodupuzha	4.20
26. Muvattupuzha	2.90
27. Kunnathunad	3.40
28. Parur-Cranganur	6.40
29. Cochin-Kanayannur	11.47
30. Mukundapuram	6.80
31. Trichur	4.48
32. Chittur	7.09
33. Talappilly	4.60

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