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

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G. P. E.—1956

**REPORT ON THE CROP-CUTTING SURVEY ON  
CROP OF PADDY IN TRAVANCORE-COCHI**

This report deals with the results of the crop-cut Kumbhom (February-March) crop of paddy 1955. As usual, this survey covers all the Taluks in the State except Devicolam and Peermede where the acreage under paddy cultivation is comparatively small. Three hundred and one villages were selected at random for crop-cutting. 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 a random sample of five paddy fields was selected and from each paddy field a square plot measuring 16½ ft. was harvested. The field work was carried out exactly on the same lines as previous surveys.

In spite of the precautions taken to make all the selected fields available for experimentation, only 1440 plots were actually harvested out of a total of 1505.

The analysis of the data collected by the field staff was done in the Department of Statistics. The results are detailed in Tables I to V given at the end of this report. Table I gives the acreage under paddy, the number of experiments conducted, the estimated average yield per acre with its standard error, the total outturn of dry 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 fields which received 'Grow More Food' aid and which did not receive any aid, separately. Table III sets out the results of the analysis of variance of yields from plots receiving Grow More Food aid and no aid respectively.

Out of the 20 Taluks which received Grow More Food aid, only the following 12 taluks showed significant increase in yield according to the 't' test of significance at 5 per cent level.

- |                 |                  |
|-----------------|------------------|
| 1. Thovala      | 7. Karunagapally |
| 2. Vilavancode  | 8. Thiruvella    |
| 3. Kottarakara  | 9. Ambalapuzha   |
| 4. Kunnathur    | 10. Kottayam     |
| 5. Pathanapuram | 11. Chittur      |
| 6. Shencottah   | 12. Talappilly   |

The total production of rice for this crop is estimated at 3,39,408 tons. It is calculated that this estimate has a standard error of 1.20 per cent. A statement showing the area under and production of rice for the Kumbhom crop from the year 1952 onwards is given below:

Crop	Area under paddy (acres)	Production of rice (tons)
1952 Kumbhom	6,10,074	2,88,288
1953 Kumbhom	6,20,389	2,77,014
1954 Kumbhom	6,32,329	2,86,575
1955 Kumbhom	6,33,060	3,39,408

Office of the Director of Statistics, }  
Trivandrum, }  
11th January 1956. }

(Sd.)

For Director of Statistics

TABLE I—KUMBHOM CROP 1955  
Statement showing the Estimated Mean Yield per acre and the total outturn of paddy and Rice in different Taluks

Serial No.	Taluk	Area (acres)	No. of expts.	Mean yield of dry paddy	Standard error in	Total outturn of dry paddy	Total outturn of Rice	Percentage of Standard error
				(Lbs./acre)	(Lbs.)	(Tons)	(Tons)	
1	2	3	4	5	6	7	8	
1	Thovala	13287	40	2906	93	17233	11322	3.20
2	Agatheeswaram	21950	45	2423	87	23743	15599	3.59
3	Kalkulam	22685	45	2124	203	21510	14132	9.56
4	Vilavancode	5316	35	2480	167	4936	3243	8.03
5	Neyyattinkara	14359	40	1559	93	9994	6566	5.97
6	Trivandrum	9377	35	1834	100	7677	5044	5.45
7	Nedumangad	13141	38	2061	125	12091	7944	6.07
8	Chireyinkil	12254	40	1993	150	10903	7163	7.53
9	Quilon	10396	35	1137	106	5277	3467	9.32
10	Kottarakara	16396	30	1868	80	13673	8983	4.28
11	Kunnathur	13055	40	1966	169	11458	7528	8.60
12	Pathanapuram	10670	35	2502	121	11918	7830	4.84
13	Shencottah	8350	35	2422	195	9028	5931	8.05
14	Karungapally	18046	45	1481	51	11931	7839	3.44
15	Karthikapally	22449	44	2150	125	21547	14156	5.81
16	Mavelikara	19662	43	2802	223	24595	16159	7.96
17	Pathanamthitta	5883	30	1987	149	5219	3429	7.50

TABLE I—(cont.)

Serial No.	Taluk	Area (acres)	No. of expts.	Mean yield of dry paddy (Lbs./acre)	Standard error in (Lbs.)	Total outturn of dry paddy (Tons)	Total outturn of Rice (Tons)	Percentage of Standard error
18	Thiruvella	21431	50	1735	232	17041	11196	13.37
19	Ambalapuzha	47226	75	1784	111	37612	24711	6.22
20	Sherthala	7731	35	841	72	2903	1907	8.56
21	Changanacherry	25288	50	2030	103	22917	15056	5.07
22	Kottayam	34260	55	1828	137	27959	18369	7.49
23	Vaikom	20812	30	1323	67	12292	8076	5.06
24	Meenachil	4123	30	2072	180	3814	2506	8.69
25	Theodupuzha	9200	35	1911	88	7849	5158	4.61
26	Moovattupuzha	22543	50	2261	100	22754	14952	4.42
27	Kunnathunad	38467	65	1485	63	25501	16756	4.24
28	Parur-Canganore	13893	50	1312	37	8137	5346	2.82
29	Cochin-Kanayanore	8912	35	1193	31	4746	3118	2.60
30	Mukundapuram	36232	50	1314	44	21254	13966	3.35
31	Trichur	41382	65	1678	107	31000	20367	6.38
32	Chittur	25800	50	1858	72	21400	14060	3.88
33	Thalepilly	36484	50	1553	52	26681	17529	3.35
State Total		633060	1440	1826	22	516593	339408	1.20

TABLE II  
Statement showing the Mean Yield of dry paddy per acre with its Standard Error for Fields which received G. M. F. Aid and no Aid

Serial No.	Taluk	Aid					No Aid				
		Estimated area receiving G. M. F. Aid (Acres)	No. of experiments	Average yield per acre (Lbs.)	Standard Error (Lbs.)	Estimated area receiving No. G. M. F. Aid (Acres)	No. of experiments	Average yield per acre (Lbs.)	Standard Error (Lbs.)		
1	2		4	5	6	7	8	9	10		
1	Thovala	6311	19	3040	84	6976	21	2786	105		
2	Agastheeswararam	12682	26	2482	116	9268	19	2342	87		
3	Kalkulam	..	..	..	..	22685	45	2124	203		
4	Vilavancode	2430	16	2603	232	2886	19	1641	103		
5	Neyyattinkara	3231	9	1707	108	11128	31	1516	107		
6	Trivandrum	..	..	..	..	9377	35	1834	100		
7	Nedumangad	..	..	..	..	13141	38	2061	125		
8	Chirayinkil	3370	11	1829	40	8884	29	2055	192		
9	Quilon	..	..	..	..	10396	35	1137	106		
10	Kottarakara	10384	19	1994	88	6012	11	1647	149		
11	Kunnathur	1632	5	2215	243	11423	35	1931	191		
12	Pathanapuram	10060	33	2565	610	610	2	1446	228		
13	Shencottah	6680	28	2665	85	1670	7	1452	301		
14	Karunagapally	3208	8	1767	44	14838	37	1419	43		
15	Karthikapally	..	..	..	..	22449	44	2150	125		
16	Mavelikare	..	..	..	..	19662	43	2802	223		
17	Pathanamthitta	5883	30	1987	149	..	..	..	..		

TABLE II—(cont.)

Serial No.	Taluk	Aid						No Aid			
		Estimated area receiving G. M. F. Aid	No. of experiments	Average yield per acre	Standard Error	Estimated area receiving No. G. M. F. Aid	No. of experiments	Average yield per acre	Standard Error		
		(Acres)		(Lbs.)	(Lbs.)	(Acres)		(Lbs.)	(Lbs.)		
1	2	3	4	5	6	7	8	9	10		
18	Thiruvella	10716	25	1962	155	10715	25	1509	115		
19	Ambalapuzha	25817	41	2041	49	21409	34	1474	161		
20	Sherthala	25288	50	2030	103	7731	35	841	72		
21	Changanacherry	28654	46	1966	122	5606	9	1105	67		
22	Kottayam	..	..	..	..	20812	30	1323	180		
23	Vaikom	..	..	..	..	4123	30	2072	..		
24	Meenachil	..	..	..	..	..	..	..	..		
25	Theodupuzha	9200	35	1911	88	22543	50	2261	100		
26	Moovatupuzha	..	..	..	..	35508	60	1504	66		
27	Kumathunad	2959	5	1252	160	12226	44	1297	47		
28	Parur-Canganore	1667	6	1423	73	8912	35	1193	31		
29	Cochin-Kanayannur	..	..	..	..	36232	50	1314	44		
30	Mukundapuram	..	..	..	..	41382	65	1678	107		
31	Trichur	15996	31	1988	127	9804	19	1647	32		
32	Chittur	8338	13	1661	48	30146	47	1523	55		
33	Talappilly	..	..	..	..	..	..	..	..		
State Total		194506	456	2080	30	438554	984	1713	25		







TABLE IV

Analysis of Variance of plot yields pooled for the State  
in (lbs)<sup>2</sup> per plot of 1/160 of an acre

## A. Plots which received G. M. F. Aid

Source	Sum of squares	Degrees of freedom	Variance
Between Taluks	2675.98	19	140.84
Between Karas within Taluks	1805.01	116	15.56
Within Karas within Taluks	2430.61	320	7.60
Total	6911.60	455	..

## B. Plots which received no G. M. F. Aid

Source	Sum of squares	Degrees of freedom	Variance
Between Taluks	9510.14	29	327.94
Between Karas within Taluks	4695.95	208	22.58
Within Karas within Taluks	3669.90	746	4.92
Total	17875.99	983	..

## C. Plots of both kinds combined

Source	Sum of squares	Degrees of freedom	Variance
Between Taluks	13052.15	32	407.88
Between Karas within Taluks	7388.27	258	28.64
Within Karas within Taluks	6983.96	1149	6.08
Total	27424.38	1439	..

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. Vilvancode	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. Karthikapally	6.80
16. Mavelikara	6.80
17. Pathanamthitta	5.10
18. Thiruvella	11.54
19. Ambalapuzha	7.59
20. Shertala	4.60
21. Changanacherry	7.07
22. Kottayam	13.56
23. Vaikom	4.60
24. Meenachil	3.90
25. Thodupuzha	4.20
26. Moovattupuzha	2.90
27. Kunnathunad	3.40
28. Parur-Cranganore	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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