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GOVERNMENT OF TRAVANCORE-COCHIN



BOARD OF STATISTICS

REPORT

ON

THE CROP-CUTTING SURVEY ON  
KANNI CROP OF PADDY

IN

THE TRAVANCORE-COCHIN STATE

1953

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## REPORT ON CROP-CUTTING SURVEY ON KANNI CROP OF PADDY IN TRAVANCORE-COCHIN—1953

The present report deals with the results of the crop-cutting survey on Kanni (September-October) crop of paddy 1953. The survey covers 34 out of the 36 Taluks in the State. The two Taluks Devikulam and Peermade were omitted because the extent of paddy cultivation in these Taluks is comparatively small. Three hundred and fifty one villages (which is about a twelfth of the total number of villages in the State) were selected at random from the 34 Taluks, the number selected from each Taluk being proportional to the area under paddy in the Taluk. From each of these villages a random sample of five paddy fields was selected for experimentation. The field work was carried out on exactly the same lines as in the previous surveys.

Out of the 1755 cuts normally fixed for the survey, only 1646 cuts were actually taken.

The results obtained from the analysis of the data collected by the field staff are detailed in Tables I to V given at the end of the report. Table I gives the acreage under paddy, the number of experiments conducted, the estimated average yield per acre, the total out-turn of dry paddy and rice and the percentage standard error for the Taluks separately and the State as a whole. The estimated acreage, the number of experiments, the mean yield per acre with its standard error for fields which received G. M. F. aid and no aid are detailed in Table II and Table III sets out the results of the analysis of variance of yields from plots which received G. M. F. aid and no aid respectively.

The following Taluks showed significant increase in yield due to G. M. F. Aid.

- |                 |                   |
|-----------------|-------------------|
| 1. Thovala      | 6. Pathanamthitta |
| 2. Quilon       | 7. Karunagappalli |
| 3. Kottarakkara | 8. Muvattupuzha   |
| 4. Pathanapuram | 9. Kunnathunad    |
| 5. Shencotta    | 10. Chittoor      |
| 11. Thalappilli |                   |

*Secretary*  
*Board of Statistics*

TABLE I  
Statement showing the estimated mean yield per acre and the total out-turn of dry paddy and rice in 34 taluks

Taluk	Area (acres)		Number of experiments		Estimated mean yield of dry paddy (lbs. per acre)		Standard error (lbs.)		Estimated total out-turn of dry paddy (tons)		Estimated total out-turn of rice (tons)		Percentage standard error	
	1	2	3	4	5	6	7	8						
Thovala	..	11,670	45	2,999	141	15,624	10,267	4.70						
Agastheeswaram	..	19,370	75	3,264	80	28,225	18,547	2.45						
Kalkulam	..	20,600	75	2,384	142	21,924	14,406	5.96						
Vilavancode	..	7,178	30	1,886	208	6,044	3,972	11.02						
Neyyattinkara	..	14,359	45	1,753	83	11,237	7,383	4.73						
Trivandrum	..	8,847	35	1,812	258	7,157	4,703	14.24						
Nectumangad	..	13,141	49	1,761	194	10,331	6,789	11.01						
Chirayinkil	..	11,091	35	1,283	165	6,353	4,175	12.86						
Quilon	..	5,791	35	1,055	96	2,727	1,792	9.10						
Kottarakkara	..	16,146	18	1,273	99	9,176	6,030	7.84						
Pathanapuram	..	10,202	35	1,383	93	6,299	4,139	6.72						
Shencottah	..	3,840	29	2,018	544	3,459	2,273	26.96						
Kunnathur	..	10,730	45	880	48	4,215	2,770	5.45						
Pathanamthitta	..	1,560	30	1,718	229	1,196	786	13.33						
Thiruvallah	..	6,008	34	1,233	112	3,307	2,173	9.08						
Mavelikkara	..	12,007	25	1,238	86	6,636	4,361	6.95						
Karunagappally	..	9,840	35	992	62	4,357	2,863	6.25						
Karthikappally	..	10,030	55	1,089	42	4,876	3,204	3.86						

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TABLE I—(cont.)

Taluk	Area (acres)	Number of experi- ments	Estimated mean yield of dry paddy (lbs. per acre)	Standard error lbs.	Estimated total out-turn of dry paddy (tons)	Estimated total out-turn of rice (tons)	Percentage standard error
1	2	3	4	5	6	7	8
Ambalapuzha	2,308	42	850	104	876	576	1.22
Sherthala	18,240	35	754	59	6,140	4,035	7.82
Changanacherry	1,621	30	1,677	22	1,214	798	1.31
Kottayam	3,271	30	1,639	146	2,393	1,572	8.91
Vaikom	4,064	30	955	56	1,733	1,139	5.86
Meenachil	4,150	30	1,774	54	3,287	2,160	3.04
Thodupuzha	9,100	35	1,730	106	7,028	4,618	6.13
Muvattupuzha	14,291	45	1,273	32	8,122	5,337	3.69
Kunnathunad	25,301	115	1,230	35	13,893	9,129	2.85
Parur	12,154	40	1,310	16	7,108	4,671	1.22
Kanayannur	23,373	55	730	35	7,617	5,005	4.79
Cranganur	143	25	1,315	48	84	55	3.65
Mukundapuram	17,012	95	1,145	56	8,696	5,714	4.89
Chittur	25,272	89	1,289	112	20,640	13,563	8.69
Trichur	21,482	80	1,374	42	13,177	8,659	3.30
Thalappilli	35,378	140	1,705	89	26,928	17,694	5.22
Total	4,09,590	1,646	1,543	20	2,82,079	1,85,358	

TABLE II  
Statement showing mean yield of dry paddy per acre with its standard error for fields which received G. M. F. aid and no aid respectively

Taluk	Aid				No Aid			
	Estimated area receiving G.M.F. Aid (Acres)	Number of experiments	Average yield per acre (lbs.)	Standard error (lbs.)	Estimated area under no aid (Acres)	Number of experiments	Average yield per acre (lbs.)	Standard error
I	2	3	4	5	6	7	8	9
Thovala	3,396	16	3,443	174	8,274	29	2,735	184
Agastheeswaram	7,148	24	2,586	245	19,370	75	3,264	80
Kalkulam	1,062	6	2,104	227	13,452	51	2,289	133
Vilavancode	2,728	7	1,690	..	6,116	24	1,830	272
Neyyattinkara	1,398	7	2,016	..	11,631	38	1,765	99
Trivandrum	3,942	14	1,815	119	7,449	28	1,786	401
Nedumangad	6,422	20	1,401	223	9,199	35	1,741	259
Chirayinkil	1,633	11	1,311	128	4,669	15	1,130	122
Quilon	9,607	8	1,455	152	4,158	24	938	98
Kottarakkara	7,956	29	1,451	102	6,539	10	1,129	77
Pathanapuram	2,972	24	2,264	653	2,246	6	1,054	106
Shencottah	10,515	43	888	42	868	5	1,242	402
Kunnathur	281	2	2,153	143	215	2	702	111
Pathanamthitta	..	..	..	..	1,279	28	1,686	259
Thiruvallah	3,254	8	1,383	159	6,008	34	1,233	112
Mavelikkara	590	2	978	252	8,753	17	1,170	71
Karunagappalli	..	..	..	..	9,250	33	994	67

TABLE II—(cont.)

Taluk	Aid					No Aid			
	Estimated area receiving G.M.F. Aid (Acres)	Number of experiments	Average yield per acre (lbs.)	Standard error (lbs.)	Estimated area under no aid (Acres)	Number of experiments	Average yield per acre (lbs.)	Standard error	
1	2	3	4	5	6	7	8	9	
Karthikappalli	2,377	12	1,223	71	7,653	43	1,047	61	
Ambalapuzha	..	..	..	..	2,308	42	850	104	
Sherthala	1,491	27	1,753	85	18,240	35	754	59	
Changanacherry	2,682	23	1,697	160	130	3	1,482	137	
Kottayam	..	..	..	..	589	7	1,447	133	
Vaikom	..	..	..	..	4,069	30	955	56	
Meenachil	..	..	..	..	4,150	30	1,774	54	
Thodupuzha	400	2	1,654	258	9,100	35	1,730	106	
Muvattupuzha	3,213	14	1,624	64	13,891	43	1,255	96	
Kunnathunad	3,731	14	1,293	158	22,088	101	1,176	28	
Parur	..	..	..	..	8,423	26	1,319	85	
Kanayannur	29	8	1,356	91	23,373	55	730	35	
Cranganur	..	..	..	..	114	17	1,234	58	
Mukundapuram	14,391	52	2,059	145	17,012	95	1,145	56	
Chittoor	..	..	..	..	10,901	37	1,502	127	
Trichur	10,507	42	2,042	170	21,482	80	1,374	42	
Talappilli	..	..	..	..	24,871	98	1,544	82	
<b>Total</b>	<b>101,725</b>	<b>415</b>	<b>1,743</b>	<b>47</b>	<b>307,865</b>	<b>1,231</b>	<b>1,476</b>	<b>22</b>	

TABLE III

Analysis of Variance of plot yields in lbs. per plot of 1/160th of an acre

Taluk	Plots which received G.M.F. Aid			Plots which received no aid			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.		
Thovala	6	21.23	9	28.32	8	33.58	20	9.94	8	46.58	36	18.55
Agastheeswaram	..	..	..	..	14	19.46	60	15.29	14	19.46	60	15.29
Kalkulam	3	50.52	16	34.22	11	34.21	39	13.35	14	61.02	70	16.65
Vilavancode	2	11.45	2	7.29	5	116.19	18	65.91	5	53.72	24	64.99
Neyyattinkara	1	4.06	4	54.31	7	14.45	30	13.75	8	12.76	36	17.98
Trivandrum	4	0.71	5	11.25	5	110.82	22	7.35	6	92.65	28	8.16
Nedumangad	1	12.78	9	24.08	8	80.92	26	7.57	9	71.63	39	12.07
Chirayinkil	5	36.92	14	4.14	4	5.87	10	6.59	6	38.03	28	5.01
Quilon	2	6.77	8	5.07	5	7.83	18	1.26	6	12.88	28	2.81
Kottarakkara	3	6.44	4	2.23	4	1.56	5	1.62	4	6.49	13	2.64
Pathanapuram	6	11.22	22	5.05	2	4.23	3	10.18	6	15.13	23	5.61
Shencottah	5	310.56	18	23.76	1	29.59	3	5.67	5	328.11	23	24.22
Kunnathur	8	2.84	34	1.19	1	0.97	..	..	8	3.18	36	1.14
Pathanamthitta	..	..	1	1.61	5	58.09	22	0.93	5	60.41	24	1.75
Thiruvalla	..	..	..	..	6	16.28	27	7.95	6	16.28	27	7.95
Mavelikkara	3	5.73	4	1.98	4	3.42	12	4.83	4	7.17	20	3.89

TABLE III—(cont.)

Taluk	Plots which received G.M.F. Aid			Plots which received no aid			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.		
Karunagappalli	6	2.08	1	5.18	6	5.70	26	5.15	6	5.33	28	5.05
Karthikappalli	..	..	5	0.79	10	5.07	32	4.06	10	9.15	44	2.90
Ambalapuzha	..	..	..	..	6	6.65	35	3.82	6	6.65	35	3.82
Sherthala	..	..	..	..	6	5.14	28	2.71	6	5.14	28	2.71
Changanacherry	5	0.75	22	4.18	2	0.22	..	..	5	1.02	24	4.12
Kottayam	5	22.41	17	13.06	3	4.75	3	3.18	5	24.27	24	10.40
Vaikom	..	..	..	..	5	3.15	24	4.66	5	3.15	24	4.66
Meenachil	..	..	..	..	5	3.74	24	3.06	5	3.74	24	3.06
Theodupuzha	..	..	..	..	6	3.74	28	5.50	6	15.29	28	5.50
Muvattupuzha	1	5.17	..	..	8	15.33	34	1.35	8	1.66	36	1.48
Kunnathunad	5	4.83	8	7.68	20	3.05	80	1.78	22	6.06	92	2.84
Perur	3	1.62	10	3.46	6	6.72	19	2.65	7	4.12	32	3.15
Kanayannur	..	..	..	..	10	2.56	44	2.78	10	2.56	44	2.78
Cranganur	2	2.70	5	4.75	4	2.09	12	0.88	4	2.29	20	1.67
Mukundapuram	..	..	..	..	18	11.64	76	4.97	18	11.64	76	4.97
Chittoor	12	40.81	39	24.28	10	12.77	26	17.54	17	46.06	71	21.16
Trichur	..	..	..	..	18	59.14	61	7.83	18	59.14	61	7.83
Talappilli	14	43.14	27	3.42	27	23.29	70	4.41	27	50.29	112	5.02



TABLE IV

Analysis of Variance of plot yields pooled for the State in lbs. per plot of 1/160th of an acre

(A) Plots which received G. M. F. Aid.—

Source	Sum of Squares	Degrees of Freedom	Variance
Between Taluks ..	4626.20	23	201.13*
Between Karas within Taluks..	3389.77	108	31.38*
Within Karas ..	2960.73	283	10.46

(B) Plots which received no Aid.—

Source	Sum of Squares	Degrees of Freedom	Variance
Between Taluks ..	5867.41	33	177.80*
Between Karas within Taluks..	9520.02	260	36.61*
Within Karas ..	11918.61	937	12.72

(C) Plots of both kinds.—

Source	Sum of Squares	Degrees of Freedom	Variance
Between Taluks ..	9714.48	33	294.38*
Between Karas within Taluks..	13970.40	299	46.72*
Within Karas ..	17134.94	1313	13.05

\* Denotes significance at 1 per cent level.

TABLE V  
Percentage reduction due to driage in different Taluks

Taluk	Percentage reduction	Taluk	Percentage reduction
Thovala	7.20	Karthikappally	9.20
Agastheeswaram	7.40	Ambalapuzha	6.70
Kalkulam	7.70	Sherthalai	5.60
Vilavancode	7.70	Changanacherry	7.40
Neyyattinkara	5.80	Kottayam	6.90
Trivandrum	8.10	Vaikom	9.10
Nedumangad	7.00	Meenachil	9.00
Chirayinkil	7.10	Thodupuzha	9.90
Quilon	8.00	Muvattupuzha	8.10
Kottarakkara	12.90	Kunnathunad	8.00
Pathanapuram	9.60	Parur	4.10
Shencottah	7.60	Kanayannur	9.60
Kunnathur	7.30	Cranganoor	6.60
Pathanamthitta	10.30	Mukundapuram	7.30
Thiruvalla	5.50	Chittoor	5.00
Mavelikkara	9.60	Trichur	6.50
Karunagappalli	14.20	Thalappilli	5.70

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