REPORT

ON

THE NUTRITIONAL DIET SURVEY OF WORKERS IN TEA PLANTATIONS

Issued by:
THE DIRECTOR OF STATISTICS
September, 1959.

APPENDIX I

List of Selected Estates

Sl. No.	*Name of Estate*		*District in which it is situated*
1.	Ponmudi	..	Trivandrum
2.	Bonnocode	..	"
3.	St. Mary's	..	Quilon
4.	Isfield	..	"
5.	Carmel	..	"
6.	Ambanad	..	"
7.	Pasupara	..	Kottayam
8.	Tyhrd Vembanad and Fairfield	..	"
9.	Shoolamalai	..	"
10.	Devicolam	..	"
11.	Panniar	..	"
12.	Elappally	..	"
13.	Kannimala	..	"
14.	Wallardy	..	"
15.	Pasumala	..	"
16.	Munnar	..	"
17.	Malakappara	..	Trichur
18.	Siruvani	..	Palghat
19.	Varadimala	..	"

APPENDIX II

Table I—Average Household Size

Serial No.	Name of Estate	Sample population			Average H. H. Size	Adult equivalent	Sex ratio
		Persons	Males	Females			
1	2	3	4	5	6	7	8
1	Ponmudi	59	32	27	5·9	4·58	844
2	Bonnocode	47	27	20	4·7	3·54	741
3	Isfield	54	22	32	5·4	4·08	1455
4	St. Marys	59	31	28	5·9	4·42	903
5	Carmel	48	25	23	4·8	3·68	920
6	Ambanad	43	23	20	4·3	3·32	870
7	Kannimala	44	20	24	4·4	3·30	1200
8	Devicolum	54	28	26	5·4	4·12	929
9	Munnar	47	24	23	4·7	3·72	958
10	Choolamala	41	22	19	4·1	3·36	864
11	Fairfield	42	17	25	4·2	3·40	1471
12	Pasuparai	41	21	20	4·1	3·10	952
13	Wallardy	47	25	22	4·7	3·58	880
14	Pasumala	53	23	30	5·3	4·00	1304
15	Panniyar	42	19	23	4·2	3·22	1211
16	Elappally	43	19	24	4·3	3·32	1263
17	Malakkappara	60	29	31	6·0	4·56	1069
18	Varadimala	39	18	21	3·9	3·00	1167
19	Siruvani	60	28	32	6·0	4·32	1143
	All Estates	923	453	470	4·9	3·72	1038

Table II—Percentage distribution of persons according to Age, Sex and Economic status

	All			Below 5			5—14			15—24		
	T	M	F	T	M	F	T	M	F	T	M	F
1	2			3			4			5		
Earners ..	42·0	22·5	19·5	..	..	..	0·1	..	0·1	11·5	4·4	7·1
Earning dependants ..	6·3	1·8	4·5	..	..	..	0·6	0·3	0·3	3·3	1·1	2·2
Non-earning dependants ..	51·7	24·8	26·9	18·4	8·0	10·4	25·4	13·7	11·7	3·2	1·5	1·7
Total ..	100·0	49·1	50·9	18·4	8·0	10·4	26·1	14·0	12·1	18·0	7·0	11·0

	25—44			45—64			65 and over		
	T	M	F	T	M	F	T	M	F
	6			7			8		
Earners ..	24·8	14·1	10·7	5·5	3·9	1·6	0·1	0·1	..
Earning dependants ..	1·9	0·4	1·5	0·5	..	0·5	..	..	..
Non-earning dependants ..	1·1	0·4	0·7	2·7	0·5	2·2	0·9	0·7	0·2
Total ..	27·8	11·9	12·9	8·7	4·4	4·3	1·0	0·8	0·2

Table III—Number of persons worked days at work and income for one month and one year according to occupations

	Item of work	Primary			Secondary			Others		
		Persons worked	Days at work	Income Rs.	Persons	Days	Income Rs.	Persons	Days	Income Rs.
	1	2			3			4		
Month	Plucking	236	4,644	6,941	2	17	33	..	..	..
	Field work	117	1,623	3,504	..	..	..	..	..	..
	Factory labour	27	697	1,302	..	..	..	..	..	..
	Others	66	1,818	2,373	46	244	539	..	..	766
	Total	446	8,782	14,120	48	261	572	..	..	766
Year	Plucking	236	55,386	83,219	1	122	188	..	..	..
	Field work	122	20,961	43,036	10	511	632	..	..	..
	Factory labour	27	6,745	14,643	..	..	..	..	..	..
	Others	61	21,171	28,254	43	2,983	6,741	..	..	13,241
	Total	446	104,263	1,69,152	54	3,616	7,561	..	..	13,241

Table IV—Average monthly expenditure per household

Name of estate	All groups		Food			Fuel and lighting		Housing		Clothing		Miscellaneous	
	Amount		Amount		Percentage total expenditure	Amount	Percentage total expenditure	Amount	Percentage total expenditure	Amount	Percentage total expenditure	Amount	Percentage total expenditure
	Rs.	nP	Rs.	nP		Rs. nP		Rs. nP		Rs. nP		Rs. nP	
1	2		3		4	5	6	7	8	9	10	11	12
Ponmudi ..	137	78	99	61	72·30	8 13	5·90	0 95	0·69	13 44	9·75	15 65	11·36
Bonocode ..	126	21	90	36	71·59	7 08	5·61	2 59	2·05	13 89	11·01	12 29	9 74
Isfield ..	119	76	82	98	69·21	8 37	6·99	2 09	1·75	10 05	8·38	16 28	13·59
St. Marys ..	109	10	72	65	66·59	10 73	9·84	1 44	1·32	9 14	8·38	15 14	13·87
Carmel ..	70	01	45	40	64·85	5 46	7·80	1 55	2·21	8 95	12·78	8 65	12·36
Ambanad ..	98	44	68	09	69·17	5 06	5·14	4 51	4·58	11 75	11·94	9 03	9·17
Kannimalai ..	201	96	142	73	70·67	9 97	4·94	0 58	0·29	19 89	9·85	28 79	14·25
Devicolum ..	188	54	138	55	73·49	8 89	4·72	0 80	0·42	17 93	9·51	22 37	11·86
Munnar ..	117	09	78	84	67·33	7 55	6·45	3 27	2·79	12 89	11·01	14 54	12·42
Choolamalai ..	156	93	99	85	63·63	10 12	6·45	1 98	1·26	21 33	13·59	23 65	15·07
Fairfield ..	228	57	159	54	69·80	8 68	3·80	2 69	1·18	19 72	8·62	37 94	16 60
Pasupara ..	129	68	82	34	63·49	7 49	5·78	1 71	1·32	20 84	16·07	17 30	13·34
Wallardy ..	191	52	119	81	62·56	10 06	5·25	3 35	1·75	19 28	10·07	39 02	20·37
Pasumalai ..	149	55	101	39	67·80	5 38	3·60	1 35	0·90	14 03	9·38	27 40	18·32
Panniyar ..	156	82	99	31	63·33	11 80	7·52	1 28	0·82	20 17	12·86	24 26	15·47
Elappally ..	104	73	74	99	71·60	8 40	8·02	1 51	1·44	8 48	8·10	11 35	10·84
Malakappara ..	116	80	76	29	65·32	5 68	4·86	1 12	0·96	11 96	10·25	21 74	18·61
Varadimala ..	125	68	100	74	80·16	1 69	1·34	0 42	0·33	7 86	6·25	14 97	11·92
Siruvany ..	115	96	81	30	70·11	2 49	2·15	0 52	0·45	10 16	8·76	22 49	18·53
All Estates ..	139	22	95	52	68·61	7 53	5·41	1 77	1·27	14 30	10·27	20 10	14·44

Table V—Average expenditure on food per household

Serial No.	Estate	For 10 days	For a month Rs.	Percentage of monthly expenditure to that of 10 days
1	2	3	4	5
1	Ponmudi	39·02	99·61	255
2	Bonoccord	32·81	90·36	275
3	St. Marys	24·44	72·65	297
4	Isfield	24·39	82·98	340
5	Carmel	17·24	45·40	263
6	Ambanad	16·84	68·09	404
7	Pasuparai	27·11	82·34	304
8	Fairfield	57·46	159·54	277
9	Shoolamalai	39·64	99·85	273
10	Devicolum	47·75	138·55	290
11	Panniar	29·14	99·31	341
12	Elappallay	27·29	74·99	275
13	Kannimalai	42·22	142·74	338
14	Wallardi	36·67	119·81	327
15	Pasumalai	34·92	101·39	290
16	Munnar	35·26	78·84	224
17	Malakkapparai	26·48	76·29	288
18	Sirvani	27·78	81·30	293
19	Varadimalai	33·83	100·74	298
	All Estates	617·29	1,815·78	294

TABLE VI

Distribution of Loans and their purpose

Serial No.	Name of Estate	Purpose							
		Domestic purpose		Capital expenditure		Education		Medical	
		Amount Rs. nP	No.	Amount Rs. nP	No.	Amount Rs. nP	No.	Amount Rs. nP	No.
1	2	3	4	5	6	7	8	9	10
	All Estates ..	17,219 56	163	2,671 63	13	265 00	4	2,094 54	20
1	Ponmudi ..	1,640 00	5	2,000 00	1	150 00	1	..	..
2	Bonoccord ..	1,435 00	10		..	..	..	1,000 00	3
3	Isfield ..	1,173 00	11	95 00	1	..	..	400 00	1
4	St. Marys ..	2,326 00	13	41 63	5	..	..	113 54	2
5	Carmel ..	715 00	10	..	..	..	..	84 00	2
6	Ambanad ..	96 00	4	..	..	25 00	1	35 00	1
7	Kannimala ..	1,790 00	18	300 00	1	..	..	..	..
8	Devicolum ..	3,010 00	9	..	..	..	..	..	..
9	Munnar ..	642 00	16	100 00	2	..	..	150 00	1
10	Choolamala ..	1,244 00	24	..	..	90 00	2	10 00	1
11	Fairfield ..	180 00	3	..	..	..	..	115 00	5
12	Pasuparai ..	945 00	14	24 00	1	..	..	130 00	2
13	Wallardy ..	1,465 00	7	..	..	..	..	..	..
14	Pasumala ..	750 00	3	..	..	..	..	..	..
15	Panniyar ..	200 00	2	..	..	..	..	..	..
16	Elappally ..	548 00	13	..	..	..	..	..	..
17	Malakapara ..	60 00	1	60 00	1	..	..	..	..
18	Varadimala ..	..	..	50 00	1	..	..	47 00	..
19	Sirvani ..	..	..	..	..	..	..	10 00	1

TABLE VI—(*cont.*)

Serial No.	Name of Estate	Purpose							
		Ceremonial		To repay loan		Others		Total	
		Amount Rs. nP	No.	Amount Rs. nP	No.	Amount Rs. nP	No.	Amount Rs. nP	No.
		11	12	13	14	15	16	17	18
	All Estates ..	5,640 00	15	426 00	8	2,601 25	24	30,917 98	247
1	Ponmudi ..	2,115 00	2	..	..	100 00	1	6,005 00	10
2	Bonoccord ..	300 00	1	..	..	..	..	2,735 00	14
3	Isfield ..	550 00	1	..	..	..	..	2,218 00	14
4	St. Marys ..	1,065 00	3	65 00	2	..	..	2,611 73	25
5	Carmel ..	..	..	..	..	..	..	799 00	12
6	Ambanad ..	..	..	..	..	..	..	156 00	6
7	Kannimala ..	300 00	3	..	..	..	..	2,390 00	22
8	Devicolum ..	300 00	1	..	..	..	..	3,310 00	10
9	Munnar ..	..	..	..	..	..	..	892 00	19
10	Choolamala ..	..	..	38 00	3	..	..	1,382 00	30
11	Fairfield ..	..	..	108 00	2	60 00	1	463 00	11
12	Pasuparai ..	60 00	1	..	..	2,000 00	4	3,160 00	22
13	Wallardy ..	880 00	2	..	..	300 00	5	2,615 00	14
14	Pasumala ..	130 00	1	..	..	..	..	850 00	4
15	Panniyar ..	..	..	..	..	..	..	200 00	2
16	Elappally ..	..	..	..	..	91 25	12	639 00	25
17	Malakapara ..	..	..	..	..	50 00	1	170 00	3
18	Varadimala ..	..	..	..	..	..	..	97 00	2
19	Sirvani ..	..	..	215 00	1	..	..	225 00	2

Table VII—Average consumption per adult per day and its constituents

Serial No.	Item	Consumption per adult per day (Ozs.)	Caloritic value	Calcium (Mg.)	Proteine (Gms.)	Iron (Mgms.)
1	2	3	4	5	6	7
1	Rice ..	20·97	2,055·06	62·91	37·75	12·58
2	Other Cereals ..	0·50	49·00	7·00	1·70	0·75
3	Tapioca ..	4·19	188·55	41·90	0·84	0·84
4	Pulses ..	2·20	211·20	118·80	11·44	5·50
5	Green and Kaky Vegetables ..	2·19	..	..	..	..
6	Potatoes ..	1·11	31·08	3·33	0·55	0·22
7	Tubers ..	0·38	10·64	5·70	0·11	0·08
8	Mutton ..	0·34	18·70	14·62	1·80	0·24
9	Beef ..	0·29	9·28	0·87	1·86	0·06
10	Fresh fish ..	0·33	9·24	5·61	2·01	0·23
11	Dry fish ..	0·82	..	..	..	..
12	Oils and Fats ..	0·68	..	..	..	..
13	Milk ..	3·17	57·06	107·78	2·85	0·32
14	Curd ..	0·10	1·40	3·40	0·08	0·01
15	Banana ..	0·11	4·73	0·33	0·04	0·01
16	Other plantains ..	0·32	9·60	0·96	0·10	0·03
17	Sugar ..	0·31	..	..	..	..

Table VII—Average consumption per adult per day and its constituents—(*cont.*)

Serial No.	Item	Consumption per adult per day (Ozs.)	Caloritic value	Calcium (Mg.)	Proteine (Gms.)	Iron (Mgms.)
1	2	2	4	5	6	7
18	Jaggery ..	1·59	173·31	36·57	0·16	5·09
19	Salt ..	1·20	..	..	..	..
20	Turmeric ..	0·08	7·92	3·44	0·14	0·42
21	Chillies green ..	0·22	2·64	1·76	0·18	0·07
22	Chillies dry ..	0·29	20·30	13·05	1·31	0·20
23	Tamarind ..	0·38	..	..	..	..
24	Onions ..	0·85	14·45	8·50	0·43	0·26
25	Garlic ..	0·06	2·40	0·48	0·11	0·02
26	Corriander ..	0·25	20·50	45 00	1·00	0·28
27	Ginger ..	0·04	0·76	0·24	0 03	0 03
28	Pepper ..	0·03	1·29	2·10	0·04	0·02
	Total ..	..	2,899·11	484·35	64·53	28·26

Table VIII—Constituents of certain items of food

Serial No.	Commodity	Protein Gms. (Oz.)	Calcium Mgm. (Oz.)	Iron Mgm. (Oz.)	Caloritic Value (Oz.)
1	2	3	4	5	6
1	Rice ..	1·8	3	0·6	98
2	Wheat ..	3·4	14	1·5	98
3	Tapioca ..	0·2	10	0·2	45
4	Greengram ..	6·8	40	2·4	95
5	Blackgram ..	6·8	60	2·8	99
6	Bengalgram ..	4·9	54	2·8	103
7	Horsegram ..	6·3	80	2·1	91
8	Dhal ..	6·3	40	2·5	95
9	Potatoe ..	0·5	3	0·2	28
10	Tubers ..	0·4	15	0·3	28
11	Mutton ..	5·3	43	0·7	55
12	Beef ..	6·4	3	0·2	32
13	Egg (Hens) ..	3·8	17	0·6	49
14	Egg (Ducks) ..	3·8	20	0·9	51
15	Cocoanut Seed ..	1·4	3	0·5	126
16	Gingelly Seed ..	5·2	410	3·0	160
17	Fish (Fresh) ..	6·1	17	0·7	28

Table VIII—Constituents of certain items of food—(*cont.*)

Serial No.	Commodity	Protein Gms. (Oz.)	Calcium Mgm. (Oz.)	Iron Mgm. (Oz.)	Caloritic Value (Oz.)
1	2	3	4	5	6
18	Milk (Cow) ..	0·9	34	0·1	18
19	Milk (Buffaloes) ..	1·2	6	0·1	33
20	Milk (Goats) ..	1·1	48	0·1	24
21	Curds ..	0·8	34	0·1	14
22	Ghee (Chees) ..	6·8	390	0·4	101
23	Butter Milk ..	0·2	8	0·2	4
24	Contensed Milk (Skimmed) ..	0·7	34	0·1	8
25	Dried Milk (Skimmed powder) ..	10·7	390	0·4	101
26	Banana ..	0·4	3	0·1	43
27	Other Plantains ..	0·3	3	0·1	30
28	Orange ..	0·3	14	0·1	14
29	Mango ..	0·2	3	0·1	14
30	Jack fruit ..	0·5	6	0·1	4
31	Jaggery ..	0·1	23	3·2	109
32	Turmeric ..	1·8	43	5·3	99
33	Chillies (Green) ..	0·8	8	0·3	12

Table VIII—Constituents of certain items of Food—(*cont.*)

Sl. No.	Commodity	Protein Gms. (Oz.)	Calcium Mgm. (Oz.)	Iron Mgm. (Oz.)	Caloritic Value (Oz.)
1	2	3	4	5	6
34	Chillies (Dry) ..	4·5	45	0·7	17
35	Cocoanut ..	1·4	3	0·5	126
36	Tamerind (Pulp) ..	0·9	48	3·1	82
37	Onions ..	0·5	10	0·3	17
38	Garlic ..	1·8	8	0·4	40
39	Coriander ..	4·0	180	5·1	82
40	Ginger ..	0·7	6	0·7	19
41	Pepper (Green) ..	1·4	70	0·7	43
42	Do. (Dry) ..	3·3	130	4·8	87

Source: Public Health Laboratory, Trivandrum.

Table IX—Composition of an actual diet of an adult worker an improved diet and balanced diet

Item	Actual diet of an adult worker		Improved diet		Balanced diet	
	Quantity Ozs.	Value nP.	Quantity Ozs.	Value nP.	Quantity Ozs.	Value nP.
1	2	3	4	5	6	7
Cereals ..	21·47	36	14	27	14	27
Tapioca ..	4·19	2	..	..	..	..
Pulses ..	2·20	6	2	8	3	8
Green and Leafly vegetables ..	2·19	2	8	9	4	4
Root vegetables ..	0·38 }	2	6	5	3	3
Other vegetables ..	1·50 }				2	2
Meat ..	0·63	3	..	.. }	3	10
Fish ..	1·15	3	..	.. }		
Oils and Fats ..	0·68	5	2	13	2	13
Milk and other Milk products ..	3·27	4	4	5	10	12
Sugar and Jaggery ..	1·90	4	2	5	2	5
Other Items ..	†	21	..	..	1 Egg	12
All Items ..	†	88	†	72	†	96

Note.—† The exact quantities cannot be given here.